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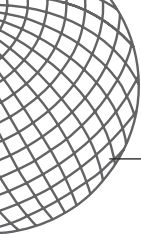
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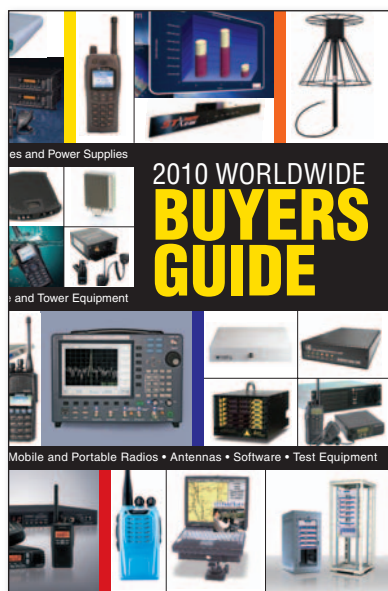


CONTENTS

Vol. 24, No. 3



14 Vietnam Secures Port with Digital System
A new digital network ensures adequate coverage across the port's challenging propagation environment. *By Jerry Ling*



18 2010 Worldwide Buyers Guide

From TETRA and Project 25 (P25) equipment to CAD software to interoperability equipment to mobile-data and asset-tracking technology, the Worldwide Buyers Guide is a veritable resource, featuring nearly 800 companies and the products and services they provide to the global mobile-communications market. Use this handy guide to find all the information you need.

- 18 Manufacturers**
- 26 Software Companies**
- 27 Services Companies and Organizations**
- 28 Distributors**
- 28 Manufacturers' Reps**
- 30 Product Category Index**

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IN EVERY ISSUE

Dispatch 6

If you're updating a network, put our buyers guide to work.
By Sandra Wendelken

World News 8

New Products 47

Events 52



Global Forum 54

The LMR competitive environment is undergoing changes that could alter the long-term landscape.
By Patrick Connolly

READER SERVICES

- Classifieds 49**
- Advertiser Index 53**
- Subscription Form 53**

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A Critical Purchasing Resource

As we move through the first half of 2010, many agencies and companies are upgrading or replacing their networks. There are many reasons for the updates, including interoperability projects, new digital technologies and general needs for updated technology. To that end, the timing of the 2010 Worldwide Buyers Guide couldn't be better.



Unlike any other issue we produce throughout the year, this issue includes the latest buying information for mobile radio technology. The issue has a yearlong shelf life and can be used whether you're buying handheld radios or a new CAD software system. In this issue, we have listings on nearly 800 companies and associations that offer their products in geographic regions around the globe. You'll find company names and Web addresses beginning on Page 18.

All this information is available online as well. Just visit www.RRIimag.com and click on the SuperGUIDE button to find specific manufacturers for more than 150 product categories specific to two-way radio networks.

We hope this guide helps you navigate the many purchasing decisions necessary for your network upgrade or replacement. If you have suggestions for how we can make next year's Worldwide Buyers Guide even more helpful, we're always open to feedback.

Also in this issue, you'll find an important article on port security beginning on Page 14. New digital technologies are helping companies like Singapore-based PSA International enhance security, extend coverage and add features that weren't available with previous technology. The company's selection of NXDN-based FDMA digital technology with 6.25-kilohertz channels helped boost spectrum efficiency as well.

We value your opinions! Please e-mail your feedback to me at swendelken@RRMediaGroup.com.

If you're looking to upgrade to digital, update an analog network or just replace some equip-

ment, use this issue to its full potential. And let us know if we can enhance next year's edition in any way.

Sandra Wendelken, Editor
swendelken@RRMediaGroup.com

RadioResource International delivers wireless voice and data information for mobile and remote mission-critical operations for professionals who reside or do business outside the United States and Canada. The magazine covers private and trunked mobile radio, wireless data, location technologies, public safety communications, microwave radio, satellite, paging/messaging, remote monitoring, and other wireless applications. Editorial content is international in scope and encompasses emerging technologies, industry reports and trends, innovative applications, product information and comparisons, news, standards, and troubleshooting tips.

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DMR Association Announces Interoperability Tests, New Members

The Digital Mobile Radio (DMR) Association announced the first DMR interoperability test session took place in Milan, Italy, the week of April 26. The announcement follows progress defining a list of interoperability tests, suitable test methodology, testing laboratory criteria and a test result verification process for both conventional and trunked modes of operation. The test session will complete phase one of the DMR Association's interoperability program.

The test process also includes the work of the European Telecommunications Standards Institute (ETSI) special task force (STF) during the DMR standardization process from 2004 and 2006

to define test criteria formalized in the documents TS 102 362-1, 2 and 3. The association will provide certifications for equipment that successfully passes the testing process, which will be made public on the association website.

Separately, Hytera became the second company to offer DMR equipment in North America, with the launch of a new DMR line of products in March. The line includes a portable radio (PD782), mobile radio (MD782) and a repeater (RD982). Hytera, headquartered in Shenzhen, China, has been developing and promoting digital products since 2003.

Motorola, Selex Communications, Funkwerk and Radio Activity also offer



Hytera launched a DMR product line earlier this year.

DMR products, and Tait Electronics, Team Simoco and Vertex Standard have announced plans for DMR product lines. Vertex Standard officials said the company's new digital radio series will emerge later in 2010 with a new portable, mobile and repeater. The radios will operate in analog or digital mode without future software upgrades required.

GENEVA — India took over the International Telecommunication Union (ITU) rotating chairmanship from Ghana at its first plenary meeting. R.N. Jha, deputy director-general of India's Department of Telecommunications, is the new chairman.

Meeting six months before the ITU



R.N. Jha

Plenipotentiary Conference, which will take place in Guadalajara, Mexico, 4 – 22 October, the council reviewed the implementation of the union's strategic and financial plans for the 2008 – 2011 period as well as the draft plans for 2012 – 2015.

"This session of council is particularly important as this is the year of the ITU Plenipotentiary Conference. Many issues being discussed here will find their way to the Mexico conference," Jha said in his opening address as chairman.

The council discussed preparations for the ITU Plenipotentiary

Conference, the key event at which ITU member states decide the future role of the organization, thereby determining its ability to influence and affect the development of information and communications technologies (ICT) worldwide. Held every four years, the conference sets the union's general policies, adopts the strategic and financial plans and elects the senior management of the organization, members of the council, and members of the Radio Regulations Board (RRB).

ITU Council will also focus on the World Telecommunication Development Conference (WTDC-10), which will take place in Hyderabad, India, 24 May – 4 June. WTDC-10 will set the telecommunication/ICT agenda for the following four-year cycle.

WICHITA, Kansas, USA —

Aeroflex announced plans to acquire substantially all of the operating assets of Willtek Communications from Wireless Telecom Group for US\$2.75 million in cash and the assumption of certain liabilities. The cash purchase

price is subject to a downward post-closing adjustment if the adjusted net assets sold at the date of closing are less than the adjusted net assets target set forth in the purchase agreement.

"The acquisition of Willtek will help our test solutions group continue to provide our wireless customers superior products and services with the most advanced technology," said Len Borow, Aeroflex's CEO. "We welcome all of the Willtek employees to the Aeroflex team."

The closing of the acquisition is subject to certain customary closing conditions.

MILAN, Italy — MaxTech Networks signed an agreement to collaborate with **Selex Communications**, part of the Finmeccanica Group. The collaboration will provide Selex customers a broader solutions portfolio to build scalable broadband wireless networks capable of delivering next-generation content, including voice, data and video services, company officials said. MaxTech Network's mobile ad-hoc networking technologies and

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GENEVA — The International Telecommunication Union (ITU) Radio Regulations Board (RRB) concluded discussion of interference with radio signals from satellite networks operated by the European Satellite Organization, EUTELSAT.

The Administration of France, on behalf of the EUTELSAT satellite operator, notified the RRB of the interference emanating from the territory of the Islamic Republic of Iran. While also considering correspondence from the Administration of Iran, the RRB determined that EUTELSAT satellite networks, operating in the orbital positions at 9E, 13E, 21.5E and 25.5E, are receiving harmful interference. The board noted, "the interfering signals

appear to be of a nature that is prohibited under radio regulations No. 15.1."

The board concluded that the interference appeared to be emanating from the territory of Iran "based on measurements provided by the Administration of France and having confidence in the measurement techniques and technologies used, because they are recognized in the ITU-R handbook on spectrum monitoring." The interference is reported to have persisted for some time, adversely affecting the operation of several EUTELSAT satellite transponders and channels.

The board urged the Administration of Iran to continue its effort in locating the source of interference and to eliminate it as a matter of the highest priority. The Administration of France and the ITU Radiocommunication Bureau have been called on to assist the Administration of Iran in identifying the source of the interference.

ASIA/PACIFIC

BEIJING — Greg Ballentine, past president of the Association of Public-Safety Communications Officials (APCO) International, led a group of public-safety professionals on a public-safety emergency services delegation to China.

The delegation, which consisted of 10 people, spent two weeks in China visiting three different cities to learn about their public-safety issues and challenges, as well as approaches to solving them. While in China the group visited an emergency service control center, an urban search-and-rescue training center, a fire department, medical center, EMS dispatch service, and a volunteer organization that is dedicated to disaster relief.

"I was pleased to be able to travel to China with such a distinguished group of emergency-services professionals from the United States," Ballentine

EXPERIENCE IN MISSION CRITICAL COMMUNICATIONS



Homeland Security plays a major role in the event of the natural disasters, terrorist attack or other large-scale emergency. To support the different organizations in their effort to a coordinated response and effective recovery, mission critical radio communication is therefore an essential requirement. Public Safety organizations worldwide rely on the equipment supplied by Motorola. ConnectTel, an authorized Distribution Partner of Motorola, has a large customer base within these organizations, amongst them Police Forces, Fire Brigades and Ambulance Services.

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said. "The ability to exchange technical and operational public-safety experiences at this level was beneficial to our delegation and our local hosts in China. Despite the vast cultural and political differences, many of the issues we deal with are similar."

MIDDLE EAST

DOHA, Qatar — EADS Defence & Security and the Ministry of Interior (MoI) of the State of Qatar opened a common TETRA competence center in Doha, the first of its kind in the Middle East, EADS executives said.

The MoI uses the center for training the engineers of its telecommunications department. The goal is to acquire the capacity to fully operate the Qatar Secure TETRA Radio System (QSTRS).

A joint working group defined the scope, the expected trainees' profiles and the details of the training modules.

Wong Presents Keynote at Australasia Conference

Jolly Wong, Hong Kong Police Force chief police telecommunications engineer, gave a keynote presentation to the APCO Australasia Conference



Jolly Wong

and Exhibition in March in Melbourne, Australia. Wong painted a big picture about the digital voice and data communications for the police and emergency service agencies in Hong Kong and the Asia/Pacific region.

An overview of TETRA systems deploying in the region, their business cases and benefits achieved, future potential requirements and challenges to meet growing operational demands were explained.

Major disasters and incidents are reoccurring with greater frequency and increasing devastation around the world. Many command, control and communications systems used to handle such events are largely uncoordinated and still rely on manual procedures. Australia's 2009 bushfires were the worst in the nation's history. It is, however, vital that public-safety officials realize that each event that provides a threat to public safety creates the potential to achieve positive learning outcomes.

APCO Australasia 2010 was a premium learning, networking procurement forum. The audience gained access to the latest public-safety technology and equipment, coupled with world's best practice knowledge and skills to better prepare for the next challenges to the bluelight industry.



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Photos courtesy Kenwood Communications

Vietnam Secures Port with **Digital System**

A new digital network ensures adequate coverage across the port's challenging propagation environment.

By Jerry Ling

Every year, more of the world's goods are transported by container on cargo ships. Ports in Asian countries have been rapidly modernizing during the past 10 years to accommodate increased traffic. Singapore-based PSA International is the second-largest port operator in the world with 28 ports in 16 countries. One of the latest additions to its list of ports is the SP-PSA International Port (SP-PSA) in Vietnam.

The SP-PSA is Vietnam's first deep water container terminal, inaugurated 29 May, 2009. Located south of Ho Chi Minh City in Ba

Ria-Vung Tau Province, this new terminal allows Vietnam to have direct shipping access to the west coast of the United States. At the inauguration, marked by the arrival of Singapore's 288-meter long APL Alexandrite — the largest container vessel to call at any Vietnamese port — Deputy Minister of Transport Tran Doan Tho said, "This is of great significance to the Southern Key Economic Zone and Ba Ria-Vung Tau Province in particular."

The SP-PSA is ideally positioned to serve the fast-growing intermodal container traffic in the region. The

industrial heartland of Vietnam is directly linked by road and inland waterway networks to the port, assuring future expansion of the port facilities. Highway 51 and the inland waterway to Ho Chi Minh City, Dong Nai and surrounding provinces further expand the port's access to southern Vietnam. When work is completed on the port, the terminal will have a projected annual capacity of 2.2 million twenty-foot equivalent units (TEUs). Four container berths will support this capacity, a total quay (dock) length of 1,200 meters and 12 quay cranes.

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NXDN Technical Details

NXDN is the name of the digital air interface protocol and trademark of Kenwood and Icom. In analog systems, as the signal strength decreases in low-coverage areas, noise and dropouts increase, severely degrading intelligibility. However, with the NXDN digital system, which features enhanced forward error correction (FEC), the digitized audio stream is less susceptible to noise, resulting in superior clarity at varying signal strengths. System operators converting from analog to NEXEDGE comment that users now receive calls in areas that were out of range before. NXDN reduces lost or misinterpreted calls and the need for repeat calls, enhancing workforce productivity.

A key element of the NXDN air interface is the AMBE+2 vocoder that digitizes speech while retaining natural voice nuances, performs noise reduction, introduces FEC and compresses this voice data to accommodate land mobile radio data rates. Next, the radio's digital signal processor (DSP) protocol packages the vocoder, signaling, control,



and more FEC data and converts this to a uniquely filtered four-level frequency shift keying (FSK) digital waveform that modulates the transmitter. This results in an unusually low bit-error-rate digital air interface, delivering robust communications even in weak signal strength areas. The NXDN air interface is capable of fitting into both narrow 12.5- and 6.25-kilohertz

bandwidth channels, meeting the tightest spectrum efficiency requirements — 9.6 kilobits per second (kbps) at 8.3 kilohertz and 4.8 kbps at 4 kilohertz occupied bandwidth respectively.

NXDN is an FDMA methodology whereby one user accesses a channel frequency at any one point in time — accesses via the frequency domain. Other digital methods such as TDMA permit more than one user to access the channel frequency via timeslots — accesses via the time domain — but there has to be a tradeoff between coverage and effective transmission rate, because increasing the former means decreasing the latter.

of a 2-kilometer radius was exceeded by more than double with 5-kilometer radius coverage. The port performed a coverage test with the portables and reported that direct communications was possible up to 3 kilometers, and with 5-watt trunking, up to 5 kilometers.

The coverage was achieved without antenna towers and with a 5-watt repeater. The entire SP-PSA system includes 111 radios, both portables and mobiles for vehicles; four antennas; rack-mounted repeaters; duplexers; and a virtual private network (VPN) router. The port determined that 15 talk groups would provide adequate coverage — 15 group IDs and 120 unique IDs.

The port specifically selected FDMA technology, which allows for 6.25-kilohertz narrowband operation and higher spectrum efficiency. The narrowband technology requirement was partially driven by costs; the port did not have to seek additional frequencies to double its voice traffic as the port operations expanded. Using mixed-mode operation, the port can convey analog-to-analog or digital-to-digital voice and data automatically for a smooth migration path from analog to digital. The direct mode provides two 6.25-kilohertz channels with 12.5-kilohertz channel spacing, compared with the TDMA protocol.

It was important for the port to maintain constant voice integrity throughout the facility, without coverage problems or dropouts, so the shift to digital led to greater clarity even in high noise areas. NEXEDGE employs enhanced forward error correction (FEC), resulting in an audio stream that is less susceptible to noise at every level of signal strength. This results in fewer lost or misinterpreted calls, which allows the port to maintain high productivity and efficiency.

The port uses 12.5-kilohertz channel spacing and plans an upgrade to 6.25 kilohertz to double the number of available channels as necessary for personnel and activity expansion.

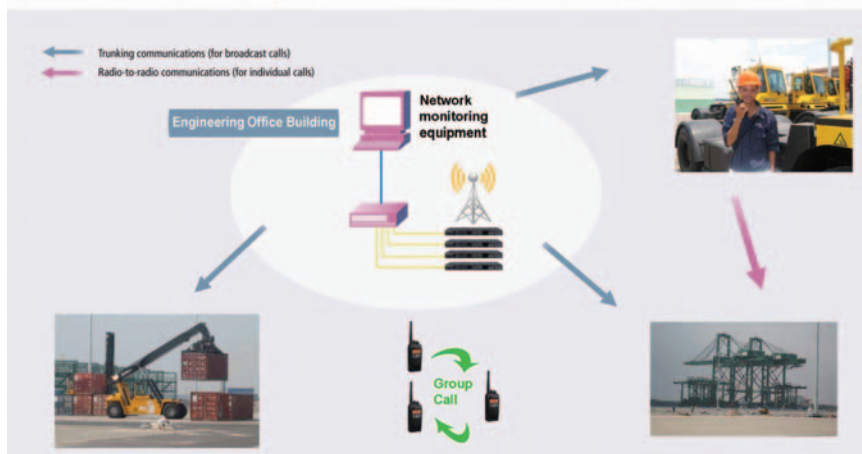
Port Requirements

SP-PSA needed a radio system that would accommodate its staff and facility size, as well as offer further expansion without additional license expenses. After assessing other technologies, port officials decided to deploy a Kenwood NEXEDGE digital two-way radio system throughout the SPA-PSA International Port, marking the first Asian NEXEDGE system.

The terminal has more than 100 employees, requiring 24 x 7 communications for service, safety and security to port users. Specifically, port maintenance, crane operation staff and supervisory control use the NEXEDGE radios. Supervisors use both broadcast and group call features for daily operations.

The budget was tight for the system, and the RF coverage demands were challenging. Stacked containers, enormous metal structures and a large footprint were among the challenges for radio signal propagation. After installation, SP-PSA officials reported that the expected coverage

Stacked containers, enormous metal structures and a large footprint were among the challenges for radio signal propagation.



System operation diagram. Top left to right: terminal entrance, main office, container yard

Because NEXEDGE is a software-driven system, there will be incremental technology improvements and enhancements that will parallel SP-PSA's increased requirements.

As the economy improves throughout the world, the SP-PSA port is positioned to take advantage of increased intermodal traffic, especially with the establishment of the

More Information

■ For more on NEXEDGE, visit <http://nexedge.kenwood.com>

■ For NXDN information, visit <http://www.nxdn-forum.com/>

Vietnam-U.S. route created with this new facility. ■

Editor's note: The use of NEXEDGE technology specifically as it relates to splitting channels in this article isn't permissible under regulatory guidelines in North America.

Jerry Ling is a sales manager for Kenwood Electronics Singapore Communications Department, in charge of sales in Southeast Asian Nations (ASEAN) and South Asia territories. Ling has 10 years of experience in the radio communications industry. E-mail comments to sales@kenwoodaudio.com.

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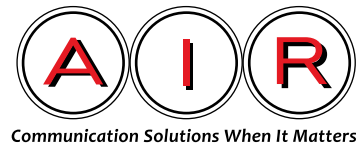
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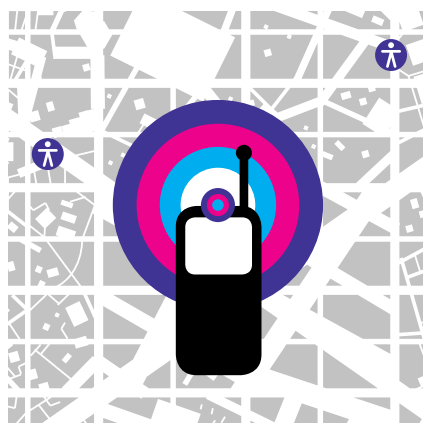
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149g (Without Batt)

new



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136~174MHz
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- Emergency function
- Stun & Revive
- Scrambler & Descrambler
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Product Category Index

CONTENTS

31 Amplifiers	
31-32 Antennas	
32 Base Stations/Repeaters	
32 Battery Equipment (Portable Radio)	
Analizers/Conditioners.....	32
Batteries.....	32
Battery Chargers.....	32
32 Crystals/Channel Elements	
32-33 Dispatch Equipment	
Automatic Call Distributor (ACD).....	32
Dispatch Furniture.....	32
Graphics-Imaging Equipment.....	32
Interconnect.....	32-33
Radio Consoles.....	33
Turnkey Systems (business/industry).....	33
Voice Logging Recorders.....	33
33 Encryption/Scrambling	
33-34 Location Systems Equipment	
ANI/ALI.....	33-34
Asset Tracking/RFID.....	34
AVL/GPS.....	34
Mobile Resource Management.....	34
Modems/Transmitters.....	34
34 Mobile Computing Devices	
Handheld/Tablet Computers.....	34
MDCs/Ruggedized Laptops.....	34
MDTs.....	34
PDA's/Bricks/Radios.....	34
34-36 Mobile-Data Systems Equipment	
Infrared Wireless.....	34
Mesh Networks.....	34
Mobile Printers.....	34
Packet-Radio Systems.....	34-35
Peripherals.....	35
Repeaters/Bridges.....	35
Wireless Broadband.....	35
Wireless Computer Cards.....	35
Wireless LANs.....	35-36
Wireless Modems.....	36
36 Mobile Mounts	
36 Paging/Messaging Equipment	
Pager Receivers.....	36
Transmitters/RF Controllers.....	36
Two-Way Messaging Devices.....	36
Voice Storage/Retrieval Systems.....	36
36 Power Supplies/Equipment	
Backup Systems.....	36
Converters/Inverters.....	36
Generators.....	36
Load-Management Equipment.....	36
Power Supplies.....	36
Solar/Wind Power Equipment.....	36
Uninterruptible Power Supplies.....	36
UPS Batteries.....	36
36-37 PSAP/E9-1-1 Equipment	
CAD Software/Systems.....	36-37
E9-1-1 Location Equipment.....	37

2010 WORLDWIDE BUYERS GUIDE

In-Building.....	37
9-1-1 Call Answering.....	37
TDD.....	37
Time Stamp/Synchronization.....	37
37-39 Public-Safety Communications	
Alarm Systems.....	37
Automated Person Location.....	37
Automatic Notification Systems.....	37
Biometrics/Fingerprinting.....	37
CAD Add-Ons/Enhancements.....	37
Call Boxes.....	37
Early Warning Systems.....	37
Field Reporting.....	37-38
Intelligent Traffic Systems.....	38
Interoperability Equipment/Systems.....	38
Mobile Communications Vehicles.....	38
P25 Software.....	38
Records Management Systems.....	38
Station Alerting.....	38
Surveillance Equipment.....	38
Turnkey Emergency Systems.....	38
Video Surveillance.....	38-39
39-40 Radio Accessories	
Carrying Cases.....	39
Hands-Free Equipment.....	39
Headsets.....	39-40
Labels.....	40
Microphones.....	40
40 Radios	
Mobiles/Portables.....	40
P25 Radios.....	40
TETRA.....	40
40-42 Radio Systems	
ACSB.....	40
Conventional/Trunked.....	40
Microwave.....	40-41
Narrowband (6.25 kHz).....	41
P25 Systems Equipment.....	41
Repeater Controllers.....	41
Simulcast.....	41
Software-Defined Radio.....	41
Spread-Spectrum Radio.....	41
TETRA.....	41
VoIP/RoIP.....	42
42-43 Remote Site Monitoring	
Modems.....	42
Remote Transmitter Units.....	42
SCADA.....	42
Software.....	42

Telemetry.....	42
Transmitters.....	42
Vendor-Specific Protocols.....	42
Video Surveillance.....	42-43
43 Satellite Systems Equipment	
Mobile Data/Voice.....	43
VSAT.....	43
43-45 Site/Tower Equipment	
Alarms/Access Devices.....	43
Beacons.....	43
Cabinets.....	43
Cable.....	43
Cable Fault Locators.....	43
Combiners.....	43-44
Connectors.....	44
Diplexers.....	43-44
Duplexers.....	43-44
Filters.....	43-44
HVAC Control Systems.....	44
Ice Bridges.....	44
Isolators.....	43-44
Lightning-Protection Equipment.....	44
Microwave/MUX Equipment.....	44
Multicouplers.....	43-44
Multiplexers.....	43-44
Preamplifiers.....	44
Racks.....	44
Shelters.....	44
Site-Management Software.....	44
Surge Protectors.....	44
Switches.....	44
Tower Obstruction.....	44
Towers, Fixed/Mobile.....	44-45
Voting Products.....	45
Waveguide.....	45
45-46 Software	
CAD (see PSAP/E9-1-1 Equipment).....	45
Custom.....	45
Dispatch (business/industry).....	45
Engineering.....	45
FCC Licensing.....	45
Field Reporting (business/industry).....	45
GIS Mapping.....	45
Middleware.....	45
Mobile-Data Systems.....	45
Network Management.....	45-46
Operations.....	46
Paging.....	46
Records Management Systems (business/industry).....	46
RF Safety.....	46
Terrain Propagation.....	46
Voice Recognition.....	46
Wireless Internet Applications.....	46
46 Telematics/ITS Equipment	
46 Test Equipment	
46 Tone Signaling Equipment	
46 Wireless Local Loop/Rural Systems	

AMPLIFIERS

(B=bidirectional, L=line driver, RF=RF power, S=signal boosters, T=lower top)

Ace Technologies (B)
Advanced Communication (RF)
Air802 (B, S)
Albrecht Telecommunications (RF, S)
American Wireless (RF)
Andrew (B, RF)
Anritsu (T)
Antcom (RF)
AR RF/Microwave Instrumentation (RF, S)
Austriamicrosystems (B, RF)
Axell Wireless (B)
Barrett Communications (RF)
BHE Bonn Hungary Electronics (B, RF)
Bird Technologies Group (B, S)
Boston Amplifier (B, S)
Broadcast Microwave Services (RF)
Broadcom (RF)
Canamex Communications (RF)
Cellular Specialties Inc. (CSI) (B, S)
Center Systems (RF)
CML Microcircuits (RF)
Codan (RF)
Comprod Communications (B, RF, S, T)
Creowave (B, T)
Crescent Technologies (RF)
Cubic Defense Applications (RF, S)
Datron World Communications (RF)
dbSpectra (B, T)
DX Radio Systems (RF)
EMR (B, RF, S, T)
EMS Technologies (B)
European Telecommunications S.A. (ETSA) (B, RF, S, T)
Fiber-Span (B, S)
Fiplex Communications (B, RF, S, T)
FreeWave Technologies (B, S)
Futurecom Systems Group (B, RF)
GE MDS (RF)
GPS Source (S)
GRE America (RF, S)
HD Communications (B, RF, T)
I.S.C. Technologies (RF)
JEL Communication Recorders (S)
Kathrein, Scala div. (T)
Kathrein Werke KG (B, L, RF, T)
Lone Star Aviation (RF, S)
L-3 Communications, Narda Microwave-East (S)
McDowell Research, an Ultralife co. (RF)
Mimix Broadband (RF, S, T)
Mobat USA (RF)
Mobile Communications (B, S)
Motorola (RF)
Narda Microwave West (L-3 Communications) (RF)
Narda Safety Test Solutions (RF)
Pasternack Enterprises (RF, T)
Polar Electronic Industries (B, T)
Powerwave Technologies (RF, S)
Praxsym (B, RF)
Radio Frequency Systems (RFS) (B, T)
RFI Antennas (B, RF, S, T)
RF Technology (RF)
Richardson Electronics (RF)
Rojone P/L (B, L, RF, S, T)
Sinclair Technologies (B, L, RF, S, T)
Skymasts Antennas (B)
SkyPilot Networks (B, RF)
Sonic Communications International (RF)
Sonik Messaging Systems (RF)
Spectra Engineering (RF)
Spectrum Communications (RF)
Spectrum Communications (RF)
Telewave (T)
Telsate Telecomunicações (B, RF, S)
TPL Communications (RF)
Tunnel Radio of America (B, S)
TX RX Systems Bird Technologies Group (B, S, T)
Vislink (RF)
Webb Industries (RF, T)
Wilson Electronics (B, RF, S)

ANTENNAS

(B=base station, E=embedded, G=GPS, I=in-building, MW=microwave, M=mobile, P=portable, S=satellite, SA=smart/adaptive, W=wireless and mobile data)
Abell Industries (MW, M, P, W)
Access Battery, div. of Alpha Source (P)
Ace Technologies (B, E, G, I, MW, M, P, SA)
Airaya (B, E, W)
Air802 (B, G, I, MW, M, SA, W)
Amphenol Antel (B, I)
Amrel/American Reliance (E, G, M, SA, W)
Andrew (B, I, MW, S, SA, W)
Antcom (B, E, G, I, MW, M, P, S, SA, W)
Antenna Factor (B, E, G, P, W)
Antenna Plus (G, I, M, W)
Antenna World (B, E, G, I, MW, M, P, S, W)
ARC Wireless Solutions (B, E, G, I, MW, M, P, SA, W)
AR RF/Microwave Instrumentation (MW)
Astron Wireless Technologies (B, E, G, I, MW, M, P, S, SA, W)
Atis Calearo Antenne (B, E, G, I, M, S, SA, W)
Avulan (B, E, G, I, M, W)
Barker and Williamson (B&W) (B, P)
Barrett Communications (B, M, P)
Barrett Europe (B, G, M)
Benelec (B, G, I, M, W)
Berkeley Varitronics Systems (MW)
Bird Technologies Group (B)
BlueRadios (W)
BlueTree Wireless Data (E, G, P, W)
BridgeWave (MW, W)
Broadcast Microwave Services (MW)
CalAmp (B, G, W)
C-Com Satellite Systems (S)

Cellular Specialties Inc. (CSI) (I)
CES Wireless (G)
Cobham Antenna Systems, Microwave Antennas (B, E, G, I, MW, M, P, S, SA, W)
Codan (M)
Commtech Wireless (W)
Comprod Communications (B, G, I, MW, M, S, W)
Comsystems (B, M, P, W)
Comtelco (B, E, G, I, MW, M, P, S, W)
Cubic Defense Applications (M)

Data-Linc Group (W)
dbSpectra (B, I, W)
EF Johnson Technologies (M, P, W)
Elektronika Naglic in Drugidno Domzale (B, M, P)
EMR (B, E, I, M, P)
EMS SATCOM (G, M, S)
EMS Technologies (B)
Encom Wireless Data Solutions (M, P, W)
ESE (G, S)
Ethertronics (E, G, W)
4RF Communications (MW)
FreeWave Technologies (B, E, G, I, W)

Furuno USA (G)
GC Protronics (E, G, I, MW, M, P, S, SA, W)
GE MDS (B, E, G, MW, M, W)
Global Mesh Technologies Service (B, G, W)
GN Batteries (G, M, W)
GPS Source (G)
Harris Public Safety and Professional Communications (PSPC) (B, M, P)
Harris RF Communications (B, M, P)

HD Communications (B, G, I, MW, W)
Hughes Network Systems (S)
Hwasin Uni-technology (B, M, P)
I.D. Systems (G, W)
Imark Communications (B, M, P)
Impact (B)
Infinity Gear and Technology (G, P)
IPWireless (W)
I.S.C. Technologies (G)
Jaybeam Wireless (B, E, I, M, P, SA, W)



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Product Category Index

- Kaltman Creations (B, I, MW, W)
 Kantronics (M)
 Kathrein, Scala div. (B, G, I, SA, W)
 Kathrein Werke KG (B, E, G, I, MW, S, SA)
 Kendoo Technology (P)
 Klong Electronics (B, MW, M, P)
 KVH Industries (S)
 Kyocera Solar (B, S, W)
 Laird Technologies (B, E, G, I, M, P, S, W)
 Lea Antenne & Progetti Spa (B, G, I, M, P, W)
 LEDCO-ChargeGuard (W)
 Link Communications (M, P)
 Location Technologies (E, G, W)
 L-3 Communications, Narda Microwave-East (S)
 Lyrtech (B, E, M, P, SA, W)
 Manning Navcomp (G)
 Midland Radio (M, P)
 MiMoMax Wireless (B, SA, W)
 Mobat USA (B, M)
 Mobile Communications (I, M)
 Mobile Mark (B, E, G, I, MW, M, P, S, W)
Mobility Sound Technology (G)
 Motorola (B, E, G, M, P, S)
 MotoSAT (S, W)
 Narda Safety Test Solutions (S)
 NCG Companies (B, M, W)
 Nearson (B, E, G, I, MW, M, P, W)
 New-Tronics Antenna (B, M, P)
 NexTek (G, MW)
 Nutel Wireless (MW)
 Panorama Antennas (E, G, I, M, P, W)
 Paratek Microwave (SA)
 Pasternack Enterprises (B, G, I, M, S)
 PCTEL (B, G, I, MW, M, P, W)
 Pendulum Instruments (B, MW, W)
 Polar Electronic Industries (B, G, I, M, S, W)
 Powerwave Technologies (B, I, SA)
Procom A/S (B, E, G, I, MW, M, P, S, SA, W)
 Proxim Wireless Networks (B, W)
 Pulse Antennas (B, E, G, I, M, P, S, SA, W)
 Radial Firm (B, I, W)
 Radio Frequency Systems (RFS) (B, I, MW)
 Radio Hardware Supplies and PJ International (P)
 RadioMobile, div. of RF Industries (B, G, M, W)
 Radio Waves (MW)
 Raveon Technologies (G)
 Raymar-Telenetics (MW, W)
 Renair Antennae (B, E, G, M, P, S, W)
 RFI Antennas (B, E, G, I, M, W)
 Richardson Electronics (B, E, G, S)
 Rojone P/L (B, E, G, I, MW, M, P, S, SA, W)
 Ross Associates/Covert Systems (MW)
 Samco Antennas (B, S, W)
 Sam Woo Electronics (B, M)
 Shenglu Telecom Tech (B, I, MW, M, P, W)
 Sinclair Technologies (B, E, G, I, MW, M, P, S, SA, W)
 Skymasts Antennas (B, G, I, MW, M, W)
 SkyPilot Networks (E, G, W)
 SkyWave Mobile Communications (E, G, S, W)
 Solomon Technology Solutions (S, W)
 South Midlands Communications (B, M, P)
 Spectrum Instruments (G)
 Sti-Co Industries (M, P)
 Summitek Instruments (P)
 Swissphone Telecom (B)
Team Simoco (B, MW, M) Tekk (P)
Telewave (B, W)
 Telsate Telecomunicações (B, G, I, MW, M, P, W)
 Thales Communications (P)
 TP Radio (E, G, M)
 TracStar Systems (S)
 Trimble (G)
 Tropos Networks (M, W)
 Tunnel Radio of America (B, I)
 TX RX Systems Bird Technologies Group (B)
Unimo Technology (G, P)
 ValuePoint Networks (W)
 Vislink (G, MW, M, P, S, SA, W)
 Wade Antenna/Taco Antennas (B, I, W)
 Webb Industries (B, G, I, MW, M, P, W)
 WEH Manufacturing (M)
 Wilson Electronics (I, W)
- BASE STATIONS/REPEATERS**
(I=building, M=mobile radio, P=paging)
 Ace Technologies (M)
 Airaya (I, M)
 Airspan Networks (M)
 Alligator Communications (M)
 Andrew (I)
 ARC Wireless Solutions (M)
 Ascom (P)
 Avcomm International (M)
 Avulan (I)
 Axell Wireless (I, M)
 Barrett Communications (M)
 Benelec (M)
 BHE Bonn Hungary Electronics (I, M, P)
 BlueRadios (M)
 BridgeCom Systems (I, M)
 CalAmp (M)
 Canamex Communications (P)
 Cellular Specialties Inc. (CSI) (I, M, P)
 Center Systems (I, M, P)
 Codan (M)
 Comsystems (I, M)
 Connect Systems (M)
 CPI Communications (M)
 Creowave (I)
Damm Cellular Systems (I, M)
Daniels Electronics (M, P)
 dbSpectra (I)
 DX Radio Systems (M, P)
 EADS Secure Networks (M)
 EF Johnson Technologies (M)
 Elektronika Naglic in Drugi dno Domzale (I, M)
 EMR (I, P)
 EMS Sky Connect (I)
 Encom Wireless Data Solutions (I, M)
 Etherstack (M)
 European Telecommunications S.A. (ETSA) (I, M)
Fiplex Communications (I)
 Futurecom Systems Group (I, M)
 GE MDS (M)
 Global Mesh Technologies Service (M)
 Harris Public Safety and Professional Communications (PSPC) (M)
 Hwasin Uni-technology (M)
Hytera Communications (M)
 I.D. Systems (M)
 IHM P/S (M, P)
 Imark Communications (M)
 InfoRad Wireless (P)
 Innovative Circuit Technology (ICT) (M)
 Intuicom (M)
 IPMobileNet (M)
 I.S.C. Technologies (P)
 Jaybeam Wireless (I, M)
Kenwood Japan (M)
Kenwood USA, Communications Sector (I, M)
 Lyrtech (M)
 Maxon CIC (M)
 McDowell Research, an Ultralife co. (M)
 Midian Electronics (M, P)
 Midland Radio (I, M)
 Mobat USA (M)
 Motorola (M)
 Niros Communications A/S (M)
 Pacific Crest (I, M)
 Polycom (I)
 Proxim Wireless Networks (I)
 Radio Frequency Systems (RFS) (M)
 RadioMobile, div. of RF Industries (I, M)
 Relm Wireless (I, M)
 Renair Antennae (I, M, P)
 RF DataTech (P)
 RFI Antennas (I, M, P)
 RF Technology (M, P)
 Ritron (I, M)
 Rohde & Schwarz Professional Mobile Radio (I, M)
 Rohill Engineering BV (M)
 Rojone P/L (I, M, P)
 Sinclair Technologies (I, M, P)
 Sonik Messaging Systems (M, P)
 South Midlands Communications (M)
 Spectra Engineering (I, M, P)
 Spectrum Communications (M)
 ST Electronics (Info-Comm Systems) (I)
 Strix Systems (I, M)
 Swissphone Telecom (P)
 Tait Electronics (M)
Team Simoco (M)
 TecNet International (M)
 Tekk (M, P)
 Telsate Telecomunicações (I, M)
Teltronic S.A. Unipersonal (M)
 Thales Communications (M)
 TMC Radio (M)
 TP Radio (M, P)
 Trimax Wireless (M)
 Tunnel Radio of America (I)
 USAlert (I)
 Vertex Standard (M)
 Vertex Standard/Yaesu UK (M)
 Westel Wireless Systems (M)
 WiPath Communications (M, P)
 Wireless Pacific (M)
 Xiamen Puxing Electronics Science and Technology (I, M, P)
- BATTERY EQUIPMENT (Portable Radio) Analyzers/Conditioners**
 Access Battery, div. of Alpha Source
 Advanced Charger Technology
 AdvanceTec Industries
 Antcom
 Axtech Batteries
 BatteryJack
 BatteryZone
 Cadex Electronics
 Cut-Rate Batteries
 Energy Power Solutions
 GN Batteries
 Harris RF Communications
 Honeywell Batteries/Global Technology Systems
 iTech — Intelligent Technologies
 Kendoo Technology
 Maha Energy
 MarathonNorco Aerospace, Christie div.
 McDowell Research, an Ultralife co.
 Midtronics
 Motorola
 Niros Communications A/S
 Priam Technologies
 Radio Hardware Supplies and PJ International
 RFI Antennas
Team Simoco
 TP Radio
 Ultralife Batteries
 Valesco Battery Charger Systems
 W&W Manufacturing
- Batteries**
 Abell Industries
 Access Battery, div. of Alpha Source
 Advantech
 Alpha Industrial Power
 Ampergen
 Aria Industrial
 Axtech Batteries
 Barrett Europe
 BatteryJack
 BatteryZone
 Benelec
 Bomar Crystal
 CAPE
 Cut-Rate Batteries
 EF Johnson Technologies
 Emerging Power
 Energy Power Solutions
 GN Batteries
 Harris Public Safety and Professional Communications (PSPC)
 Communications (PSPC)
 Honeywell Batteries/Global Technology Systems
 Hwasin Uni-technology
 Imark Communications
 Impact Radio Accessories
 Infinity Gear and Technology
 Innovative Circuit Technology (ICT)
 iTech — Intelligent Technologies
 Kendoo Technology
Kenwood Japan
 Klein Electronics
 Lind Electronics
 Lone Star Aviation
 Maha Energy
 MarathonNorco Aerospace, Christie div.
 Maxon CIC
 McDowell Research, an Ultralife co.
 Midland Radio
 Midtronics
 Mobile Expertise
 Motorola
 Niros Communications A/S
 Power Products
 Priam Technologies
 Radio Hardware Supplies and PJ International
- Motorola
 Niros Communications A/S
 Power Products
 Priam Technologies
 Radio Hardware Supplies and PJ International
 Relm Wireless
 RFI Antennas
 SmartComm USA
 Sonic Communications International
 Spectrum Communications
 Tait Electronics
Team Simoco
 TecNet International
 Telsate Telecomunicações
 Thales Communications
 TP Radio
 Ultralife Batteries
Unimo Technology
 Valesco Battery Charger Systems
 Vertex Standard/Yaesu UK
 W&W Manufacturing
 Wireless Pacific
 Xiamen Puxing Electronics Science and Technology
- Battery Chargers**
 Abell Industries
 Access Battery, div. of Alpha Source
 Advantech
 Advanced Charger Technology
 AdvanceTec Industries
 Alpha Industrial Power
 Ampergen
 Analytic Systems
 Aria Industrial
 Astron
 Austriamicrosystems
 Axtech Batteries
 Barrett Europe
 BatteryJack
 BatteryZone
 Benelec
 Cadex Electronics
 CAPE
 CeoTronics
 Cut-Rate Batteries
 EF Johnson Technologies
 Energy Power Solutions
 GN Batteries
 Harris Public Safety and Professional Communications (PSPC)
 Communications (PSPC)
 Harris RF Communications
 Honeywell Batteries/Global Technology Systems
 Hwasin Uni-technology
 IdaTech
 Imark Communications
 Impact Radio Accessories
 Infinity Gear and Technology
 Innovative Circuit Technology (ICT)
 iTech — Intelligent Technologies
 Kendoo Technology
Kenwood Japan
 Klein Electronics
 Lind Electronics
 Lone Star Aviation
 Maha Energy
 MarathonNorco Aerospace, Christie div.
 Maxon CIC
 McDowell Research, an Ultralife co.
 Midland Radio
 Midtronics
 Mobile Expertise
 Motorola
 Niros Communications A/S
 Power Products
 Priam Technologies
 Radio Hardware Supplies and PJ International
- RFI Antennas
 Samlex America
 SmartComm USA
 Spectrum Communications
Team Simoco
 TecNet International
 Telsate Telecomunicações
 Thales Communications
 TP Radio
 Ultralife Batteries
Unimo Technology
 Valesco Battery Charger Systems
 W&W Manufacturing
 WaveKorea
 Wireless Pacific
 Xantrex Technology
 Xiamen Puxing Electronics Science and Technology
- CRYSTALS/CHANNEL ELEMENTS**
 Accute Micro Electronics
 Bomar Crystal
 Frequency Management International
- DISPATCH EQUIPMENT Automatic Call Distributor (ACD)**
 Avaya
 CriSys
 Motorola
 Nortel
 Positron Public Safety Systems, an IPC co.
 ST Electronics (Info-Comm Systems)
 Telargo
 Teltronics
 TP Radio
Zetron
- Dispatch Furniture**
 AFC Industries
 American Wireless
 Center Systems
 Concept Seating
 EADS Secure Networks
 Elma Electronic
 Ergotron
 Evans Consoles
 Innovant
 Middle Atlantic Products
 Motorola
 NLnovalink
 South Midlands Communications
 Watson Dispatch
 Winsted
 Wright Line
Zetron
- Graphics-Imaging Equipment**
 C4i
 Matrox Graphics
 Raveon Technologies
 Tech Global
- Interconnect**
 American Wireless
 Artevea Digital
 Avcomm International
 CES Wireless
 C4i
 Communications-Applied Technology
 Compuquest
 Connect Systems
 DX Radio Systems
 Elma Electronic
 GAI-Tronics
 Hoag Electronics
 Intrado
Kolibri Systems
 Lyrtech
 Midian Electronics
 MoniVox - Control Service

Motorola
Omnitronics
 Pantel International
 Penta
 ST Electronics
 (Info-Comm Systems)
 Strix Systems
 TP Radio
 Voicelnterop
Zetron

Radio Consoles

Albrecht
 Telecommunications
 American Wireless
 APD Communications
 Artevea Digital
 Avcomm International
 Avtec
 BridgeCom Systems
 Catalyst Communications
 Technologies
 C4i
 Communication Plus
 CPI Communications
 Etherstack
 GAI-Tronics
 Harris Public Safety and
 Professional
 Communications (PSPC)
 IDA
 IHM P/S
 IPC
 Jotto Desk
 Microvoice
 Midian Electronics
 MoniVox - Control Service
 Motorola
Omnitronics
 Pantel International
 Peiker Acoustic
 Penta
 Samdale
 South Midlands
 Communications
 ST Electronics
 (Info-Comm Systems)
Team Simoco
 Tech Global
 TechMer
 Telex Radio Dispatch
 Telsate Telecomunicações
 TP Radio
Zetron

Turnkey Systems (business/industry)

Amrel/American Reliance
 Artevea Digital
 BridgeCom Systems
 Cellxion,
 div. of Sabre Industries
 C4i
 Compuquest
 DX Radio Systems
 EADS Secure Networks
 Frequentis
 GE MDS
 GlenMartin
 IHM P/S
 InterAct Public Safety
 Systems
 Intergraph
 IPC
 Lyrtech
 McDowell Research,
 an Ultralife co.
 Motorola
 Nortel
Omnitronics
 Penchant Software
 Penta
 Positron Public Safety
 Systems, an IPC co.
 RadioMobile,
 div. of RF Industries
 Raytheon JPS
 Communications
 Rescom Sales

Rohde & Schwarz
 Professional Mobile Radio
 Samdale
 Sinclair Technologies
 SolaCom Technologies
 Special Electronics
 and Designs
 ST Electronics
 (Info-Comm Systems)
 Swissphone Telecom
 Tait Electronics
 TechMer
 Telargo
 Telex Radio Dispatch
 3T Communications
 TP Radio
 Trilogy USA
 USAlert
Zetron

Voice Logging Recorders

ASC Telecom
 Atis Systems
 Center Systems
 CML Microcircuits
 CriSys
 CVDS
 CyberTech
 Dees Communications
 Digital Acoustics
 Dynamic Instruments
 Etherstack
 Eventide
 Exacom
 Frequentis
 HigherGround
 IPC
 JEI Communication
 Recorders
Kolibri Systems
 Magnasync
 Microvoice
 MoniVox - Control Service
 Motorola
 Multisuns
 Nice Systems
 Omnicron Electronics
 OrecX
 Pantel International
 Positron Public Safety
 Systems, an IPC co.
 Recollect Recording
 Record/Play Tek (RPT)
 Red Box Recorders
 Signal Intelligence
 South Midlands
 Communications
 Spescom
 Stancil
 Stancil Solutions
 ST Electronics
 (Info-Comm Systems)
 TechMer
 Telex Radio Dispatch
 Telsate Telecomunicações
 Verint Systems
 Versadial Solutions
 Vidicode Datacommunicatie
 Voice Print International (VPI)

DISTRIBUTORS/REPS (See Distributors/Reps Index, Page 28)

ENCRYPTION/SCRAMBLING

Albrecht
 Telecommunications
 Amrel/American Reliance
 BlueRadios
 Cimarron Technologies
 Codan
 Communications Specialists
 Comsystems
 Cromack Industries
 Encore Networks
 Etherstack
 Global Technologies Group
 Inc. (GTGI)

Harris Public Safety and
 Professional
 Communications (PSPC)
 Harris RF Communications
 HV Sistemas S.L.
 Imark Communications
 InfoRad Wireless
 Kantronics
 Kavir Electronics Industries
 Lyrtech
 Maxon CIC
 Midian Electronics
 Mobat USA
 Niros Communications A/S
 NorComm
 Nortel

Nucomm, RF Extreme div.
 Penchant Software
 Radio IP Software
 Sectra
 South Midlands
 Communications
Team Simoco
 Tekk
 Telsate Telecomunicações
Teltronic S.A. Unipersonal
 Thales Communications
 TP Radio
 Transcript International
 Vertex Standard/Yaesu UK
 Westel Wireless Systems

INDUSTRY SERVICES (See Industry Services Indices, Pages 27-28)

LOCATION SYSTEMS EQUIPMENT

ANI/ALI
 APD Communications
 Benelec
 CES Wireless
 Cimarron Technologies
 Cobham Surveillance
 Control Signal
 EMS Sky Connect
 Exacom
 Hoag Electronics

HV Sistemas S.L.
 InterAct Public Safety
 Systems
 Intergraph
 Intrado
 IPC
 Location Technologies
 Midian Electronics
 Motorola
 Penta
 Positron Public Safety
 Systems, an IPC co.
 Raveon Technologies
 South Midlands
 Communications

SmarTrunk Systems, Inc.

Instant access!
 No control channel
 No call Collect Tone
 No special
 licences!

New ST-858 SmarTrunk Xpress Base Radio Controller
 Backwards compatible with SmarTrunk II

**Fly Faster with
 SmarTrunk Xpress Technology**

Over 20 years of experience in Radio Trunking equipment had lead us to design and develop a completely innovative controller and logic board series. **SmarTrunk Xpress** is the latest technology in trunking equipment for LMR

SmarT Reasons For Choosing SmarTrunk Xpress™

- ✓ Most conventional repeaters, and even digital ones can be trunked
- ✓ Most popular radio brands are compatible with SmarTrunk logic boards
- ✓ **Instant channel acquisition (150ms), independently on the quantity of channels in the site!**
- ✓ **It may work either in 25KHz, 12.5KHz, or 6,25KHz channel bandwidth**
- ✓ Doesn't need dedicated equipment, and it is possible to re-use existing equipment
- ✓ It is faster, and more reliable and versatile than the obsolete SmarTrunk II protocol
- ✓ **SmarTrunk Xpress** can host old SmarTrunk II logic boards, thus upgrades from ST-II to ST-X can be performed gradually
- ✓ Supports Multi-Site roaming by adding any of the ST-310/510LT/510Full Wide Area Network Switches for SmarTrunk Xpress
- ✓ Improves the channel usage effectiveness, allowing the delivery of a wide range of features to a big number of subscribers at a minimum cost
- ✓ The ST-965D logic board series, offers GPS vehicle location, mapping, and tracking using the same radio network
- ✓ In addition, with the ST-965D series, remote control & monitoring options are available
- ✓ Logic boards can send and receive predefined SMS (available for some models), and they can store up to 64 received messages!



**SmarTrunk
 Systems, Inc.**

867 Bowsprit Road Chula Vista (East Lake),
 CA 91914. United States of America
 Tel.: +1 619 426 3781 - Fax: 619 426 3788

Website: www.smartrunk.com - E-mail: salesinfo@smartrunk.com - Support: techsupport@smartrunk.com

Product Category Index

- ST Electronics (Info-Comm Systems)
Syscan International
Telargo
TeleCommunication Systems (TCS)
Telsate Telecomunicações
Teltronics
TP Radio
TruePosition
Zetron
- Asset Tracking/RFID**
Amrel/American Reliance
APD Communications
Ascom
Astron Wireless Technologies
Benelec
CES Wireless
Cobham Surveillance
Comm-Net 2000
Manufacturing
Computer Resources
EMS Sky Connect
Global Mesh Technologies
Service
Helicomm
I.D. Systems
In Motion Technology
InStock Wireless
Components
Intuicom
Location Technologies
Mobile Mark
Motorola
Nortel
Panorama Antennas
Raveon Technologies
Rojone P/L
Safemobile
Skymasts Antennas
SkyWave Mobile
Communications
Solomon Technology
Solutions
Syscan International
Telargo
Tracker Radio
Trimax Wireless
Tunnel Radio of America
- AVL/GPS
(A=AVL, G=GPS)**
AC/DC Industries (G)
AirIQ (G)
Amrel/American Reliance (G)
Andrew (G)
Antcom (G)
Antenna Plus (A, G)
APD Communications (A, G)
Aplicom (A)
ARC Wireless Solutions (G)
Artevea Digital (A)
Astron Wireless
Technologies (A, G)
Benelec (A, G)
BlueTree Wireless Data (A, G)
Bradshaw Consulting
Services (BCS) (A, G)
Broadcom (G)
CalAmp (A, G)
Center Systems (A)
CES Wireless (A, G)
CML Microcircuits (G)
Cobham Surveillance (A, G)
Codan (A)
Comm-Net 2000
Manufacturing (A, G)
Communication Plus (A, G)
Computer Resources (G)
Cushing Technologies (A, G)
Data911 Mobile Computer
Systems (A)
DX Radio Systems (G)
EMS SATCOM (A, G)
EMS Sky Connect (A, G)
Fortek Computers (G)
Furuno USA (G)
Fylde Micro Systems (A, G)
- Garmin (G)
GE MDS (A, G)
Global Mesh Technologies
Service (A, G)
GPS Source (A, G)
Harris Public Safety
and Professional
Communications (PSPC)
(G)
Hoag Electronics (A, G)
HV Sistemas S.L. (A, G)
IDA (A, G)
I.D. Systems (G)
IHM P/S (A, G)
Imark Communications (A)
Impact (A, G)
Infinity Gear and
Technology (G)
In Motion Technology (A, G)
InStock Wireless
Components (G)
Integrated Tracking
Solutions (A, G)
InterAct Public Safety
Systems (G)
Intergraph (A)
Intuicom (A, G)
IPMobileNet (G)
Kantronics (A, G)
Kenwood Japan (A, G)
Kenwood USA,
Communications Sector
(A, G)
Kolibri Systems (A)
Lea Antenne & Progetti Spa
(A, G)
LocatioNet Systems (G)
Location Technologies (A, G)
Locus Location Systems
(A, G)
Logistic Systems (A, G)
Lone Star Aviation (G)
Manning Navcomp (A)
Maxon CIC (A, G)
Mentor Engineering (A, G)
Midland Radio (A)
Mobat USA (A, G)
Mobile Expertise (G)
Mobile Mark (A, G)
Mobility Sound Technology
(G)
Motorola (A, G)
NeoTerra Systems (A, G)
Niros Communications A/S
(G)
Nortel (A)
Ortivus (A)
Pacific Crest (G)
Panorama Antennas (G)
Pantel International (A)
Penchant Software (A, G)
Pendulum Instruments (G)
Positron Public Safety
Systems, an IPC co. (A, G)
Pryme Radio Products (A, G)
QSI (A, G)
Radar 911 Systems (A)
Radio IP Software (G)
RadioMobile, div. of RF
Industries (A, G)
Raveon Technologies (A, G)
Renair Antennae (G)
RFI Antennas (A, G)
Rohde & Schwarz
Professional Mobile Radio
(A)
Rojone P/L (A, G)
Safemobile (A, G)
SCI Distribution (A, G)
Signal Intelligence (G)
Skymasts Antennas (A, G)
SkyWave Mobile
Communications (A, G)
SmarTrunk Systems (A)
Solomon Technology
Solutions (A, G)
South Midlands
Communications (A, G)
Spectrum Instruments (G)
- ST Electronics (Info-Comm
Systems) (A, G)
Tait Electronics (A, G)
Team Simoco (A)
TecNet International (A, G)
Telargo (A, G)
Telsate Telecomunicações (G)
Teltronics (G)
Teltronic S.A. Unipersonal
(A, G)
Thales Communications (G)
308 Systems (G)
TMC Radio (A, G)
TP Radio (A, G)
Trimble (A, G)
TriTech Software Systems
(A, G)
TruePosition (A, G)
Unimo Technology (A, G)
Webb Industries (G)
WiPath Communications
(A, G)
Xiamen Puxing Electronics
Science and Technology (G)
- Mobile Resource
Management**
APD Communications
Bradshaw Consulting
Services (BCS)
CalAmp
Computer Resources
EMS SATCOM
EMS Sky Connect
Fortek Computers
GE MDS
Global Mesh Technologies
Service
Helicomm
I.D. Systems
In Motion Technology
Intergraph
IPC
Location Technologies
Locus Location Systems
Solutions
Mentor Engineering
General Dynamics Itronix
Getac
GN Batteries
IHM P/S
Mentor Engineering
Microbus
Motorola
Panasonic Computer
Solutions
Penchant Software
QSI
RadioMobile,
div. of RF Industries
RAM Mounting Systems
Rugged Notebooks
Xplore Technologies
- Modems/Transmitters**
Antenna Factor
Antenna Plus
Austriamicrosystems
BlueRadios
BlueTree Wireless Data
CalAmp
CES Wireless
CML Microcircuits
Comm-Net 2000
Manufacturing
Compuquest
Elektronika Naglic in Drugi
dno Domzale
EMS SATCOM
EMS Sky Connect
FreeWave Technologies
GE MDS
GPS Source
HAL Communications
HV Sistemas S.L.
IDA
I.D. Systems
Impact Radio Accessories
In Motion Technology
Intuicom
I.S.C. Technologies
Kantronics
Kenwood Japan
Location Technologies
- L-3 Communications Nova
Engineering
Maxon CIC
Mentor Engineering
Midland Electronics
Midland Radio
Mobile Expertise
Nucomm, RF Extreme div.
Pacific Crest
Positron Public Safety
Systems, an IPC co.
RAD Data Communications
Radiocrafts
RadioMobile,
div. of RF Industries
Raveon Technologies
Ritron
Sierra Wireless
Solomon Technology
Solutions
Spectra Engineering
Strix Systems
TecNet International
Tekk
Telargo
Telsate Telecomunicações
Teltronic S.A. Unipersonal
TP Radio
Trident Micro Systems
Unimo Technology
Vislink
- MOBILE COMPUTING
DEVICES**
**Handheld/Tablet
Computers**
APD Communications
Austriamicrosystems
BatteryJack
CAD North
Clearstone Telecom
Comsystems
CriSys
Dell
DRS Tactical Systems
General Dynamics Itronix
Getac
GN Batteries
IHM P/S
Mentor Engineering
Microbus
Motorola
Panasonic Computer
Solutions
Penchant Software
QSI
RadioMobile,
div. of RF Industries
RAM Mounting Systems
Rugged Notebooks
Xplore Technologies
- MDCs/Ruggedized Laptops**
Amrel/American Reliance
APD Communications
CAD North
Clearstone Telecom
Comsystems
CriSys
Data911 Mobile Computer
Systems
Datron World
Communications
Dell
DRS Tactical Systems
General Dynamics Itronix
Getac
JEI Communication
Recorders
Location Technologies
Logistic Systems
Mentor Engineering
Motorola
Panasonic Computer
Solutions
Positron Public Safety
Systems, an IPC co.
QSI
- RadioMobile,
div. of RF Industries
RAM Mounting Systems
Rugged Notebooks
ST Electronics
(Info-Comm Systems)
308 Systems
TP Radio
Xplore Technologies
- MDTs**
Amrel/American Reliance
APD Communications
Aplicom
CAD North
Center Systems
CES Wireless
Clearstone Telecom
Comm-Net 2000
Manufacturing
CriSys
Critical Response Systems
Data911 Mobile Computer
Systems
DX Radio Systems
Hitech Systems
IDA
I.D. Systems
Kenwood USA,
Communications Sector
Location Technologies
Logistic Systems
Manning Navcomp
Mentor Engineering
Microbus
Motorola
Northrop Grumman
Positron Public Safety
Systems, an IPC co.
QSI
RadioMobile,
div. of RF Industries
RAM Mounting Systems
SkyWave Mobile
Communications
TP Radio
Trimble
Tunnel Radio of America
USAlert
WiPath Communications
Xplore Technologies
Zetron
- PDAs/Bricks/Radios**
APD Communications
Austriamicrosystems
BlueRadios
Clearstone Telecom
CML Microcircuits
CriSys
Critical Response Systems
DX Radio Systems
Fylde Micro Systems
General Dynamics Itronix
Getac
GN Batteries
Hwasin Uni-technology
Location Technologies
Motorola
Panasonic Computer
Solutions
Penchant Software
RAM Mounting Systems
Research In Motion (RIM)
Rugged Notebooks
Solomon Technology
Solutions
Teltronic S.A. Unipersonal
Thales Communications
TP Radio
USAlert
Zetron
- MOBILE-DATA SYSTEMS
EQUIPMENT**
Infrared Wireless
Amrel/American Reliance
Elma Electronic
Location Technologies
- Rojone P/L
Safety Vision
SCI Distribution
- Mesh Networks**
Airaya
Air802
Airspan Networks
Applied Global Technologies
(AGT)
BridgeWave
Carlson Wireless
Technologies (CWT)
CelPlan Technologies
C4i
CoCo Communications
Data-Linc Group
Elektronika Naglic in Drugi
dno Domzale
Elma Electronic
Encom Wireless Data
Solutions
Federal Signal
Firetide
Flash Technology, SPX div.
GE MDS
Global Mesh Technologies
Service
Helicomm
I.D. Systems
IPMobileNet
Location Technologies
L-3 Communications Nova
Engineering
Motorola
Northrop Grumman
Proxim Wireless Networks
Radiocrafts
Radio IP Software
RFI Antennas
Rohde & Schwarz
Professional Mobile Radio
Safety Vision
SkyPilot Networks
Solectek
Solomon Technology
Solutions
ST Electronics
(Info-Comm Systems)
Strix Systems
TracStar Systems
Transcript International
Trident Micro Systems
Trimax Wireless
ValuePoint Networks
Vecima Networks
- Mobile Printers**
CES Wireless
Data911 Mobile Computer
Systems
Gamber-Johnson
Location Technologies
Pentax Imaging
Sato America
308 Systems
TP Radio
- Packet-Radio Systems**
BlueRadios
CalAmp
CES Wireless
C4i
Clearstone Telecom
CML Microcircuits
Elektronika Naglic in Drugi
dno Domzale
Elma Electronic
EMS SATCOM
Etherstack
4RF Communications
GE MDS
Harris Public Safety
and Professional
Communications (PSPC)
HM-Funktechnik
HV Sistemas S.L.
I.D. Systems

Intuicom
IPMobileNet
Kantronics
Location Technologies
L-3 Communications Nova
Engineering
Maxon CIC
Microvoice
MiMOMax Wireless
Mobile Expertise
Motorola
Nortel
Radio IP Software
RadioMobile,
div. of RF Industries
Raveon Technologies
RF DataTech
RF Neulink, div. of RF
Industries
Solomon Technology
Solutions
TecNet International
Tekk
Telepoint
Telsate Telecomunicações
Teltronic S.A. Unipersonal
TP Radio
WiPath Communications

Peripherals

Air802
Albrecht
Telecommunications
BlueRadios
CES Wireless
C4i
Compuquest
Data911 Mobile Computer
Systems
Gamber-Johnson
GN Batteries

iKey
Location Technologies
Motorola
Panasonic Computer
Solutions
Pentax Imaging
Plantronics
Racom Products
Renair Antennae
Rojone P/L
SkyWave Mobile
Communications
TP Radio

Repeaters/Bridges

Airaya
Air802
Alligator Communications
Andrew
Avulan
Bayly/Coastcom
BlueRadios
BridgeCom Systems
CalAmp
CelPlan Technologies
CoCo Communications
Comm-Net 2000
Manufacturing
Data-Linc Group
DX Radio Systems
EF Johnson Technologies
Elektronika Naglic in Drugi
dno Domzale
Encom Wireless Data
Solutions
Etherstack
Futurecom Systems Group
GE MDS
GPS Source

Harris Public Safety
and Professional
Communications (PSPC)
Harris RF Communications
HV Sistemas S.L.
Location Technologies
L-3 Communications Nova
Engineering
M.B. International
McDowell Research,
an Ultralife co.
Midian Electronics
MiMOMax Wireless
Motorola
Penta
Proxim Wireless Networks
RAD Data Communications
RadioMobile,
div. of RF Industries
Raveon Technologies
RF Neulink,
div. of RF Industries
RF Technology
Ritron
Rojone P/L
Satel
Solectek
Solomon Technology
Solutions
South Midlands
Communications
Spectra Engineering
Telepoint
Telsate Telecomunicações
Teltronic S.A. Unipersonal
TP Radio
ValuePoint Networks
Zetron

Wireless Broadband

Airaya

Air802
Airspan Networks
Amrel/American Reliance
ARC Wireless Solutions
Astron Wireless
Technologies
Avulan
Bayly/Coastcom
BlueTree Wireless Data
BridgeWave
CalAmp
Carlson Wireless
Technologies (CWT)
CelPlan Technologies
C4i
Cleartone Telecom
CoCo Communications
Conxx
Data-Linc Group
Data911 Mobile Computer
Systems
EMS SATCOM
Encom Wireless Data
Solutions
Exalt Communications
Firetide
Flash Technology, SPX div.
4RF Communications
GE MDS
Global Mesh Technologies
Service
Harris Public Safety
and Professional
Communications (PSPC)
HD Communications
Hughes Network Systems
Intuicom
IPWireless
Location Technologies
Mentor Engineering
MiMOMax Wireless

Mobile Mark
Motorola
MotoSAT
Nortel
Penchant Software
Proxicast
Proxim Wireless Networks
RAD Data Communications
Radio IP Software
RadioMobile,
div. of RF Industries
Rojone P/L
Rugged Notebooks
Safety Vision
Sierra Wireless
SkyPilot Networks
Solectek
Solomon Technology
Solutions
Strix Systems
TracStar Systems
Trimax Wireless
ValuePoint Networks
Vecima Networks

Wireless Computer Cards

Ace Technologies
Air802
Amrel/American Reliance
ARC Wireless Solutions
Avulan
CelPlan Technologies
Cisco Systems
Data-Linc Group
Encom Wireless Data
Solutions
ESTeem Wireless Modems
HD Communications
Location Technologies
Motorola
Proxim Wireless Networks

Rugged Notebooks
Safety Vision
Sierra Wireless
Solomon Technology
Solutions
308 Systems

Wireless LANs

Ace Technologies
Air802
Airspan Networks
Amrel/American Reliance
ARC Wireless Solutions
Astron Wireless
Technologies
Avulan
Berkeley Varitronics Systems
BlueRadios
CalAmp
CelPlan Technologies
Cisco Systems
Cleartone Telecom
CoCo Communications
CommScope
Conxx
Data-Linc Group
Data911 Mobile Computer
Systems
Encom Wireless Data
Solutions
Firetide
4RF Communications
GE MDS
GRE America
HD Communications
HM-Funktechnik
In Motion Technology
Kaltman Creations
KVH Industries
Location Technologies

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Product Category Index

L-3 Communications Nova Engineering
Motorola
Nortel
Northrop Grumman
Panorama Antennas
Penchant Software
Proxim Wireless Networks
Radio IP Software
RadioMobile,
div. of RF Industries
Rojone P/L
Safety Vision
Solectek
South Midlands
Communications
Strix Systems
Telepoint
Telsate Telecomunicações
308 Systems
TP Radio
TracStar Systems
Transcript International
Trimax Wireless
Tropos Networks
ValuePoint Networks

Wireless Modems

Airbiquity
Albrecht
Telecommunications
Alligator Communications
Avulan
BlueRadios
BlueTree Wireless Data
CalAmp
Cellular Specialties Inc. (CSI)
CalPlan Technologies
CES Wireless
CML Microcircuits
Codan
Data-Linc Group
Datron World
Communications
DragonWave
Encom Wireless Data
Solutions
ESTeem Wireless Modems
Etherstack
Flash Technology, SPX div.
FreeWave Technologies
GE MDS
Global Mesh Technologies
Service

HAL Communications

HM-Funktechnik
HV Sistemas S.L.
Intuicom
IPMobileNet
iVWireless
Kantronics
Location Technologies
L-3 Communications Nova Engineering
Manning Navcomp
Maxon CIC
Mentor Engineering
Midian Electronics
Mobile Expertise
Mobile Mark
Motorola
Proxicast
Radiocrafts
Radio IP Software
RadioMobile,
div. of RF Industries
Research In Motion (RIM)
RF DataTech
RF Neulink,
div. of RF Industries
Ritron
Rugged Notebooks
Safety Vision
Satel
SCI Distribution
Sierra Wireless
SkySweep Technologies
SkyWave Mobile
Communications

Solomon Technology
Solutions
Strix Systems
TecNet International
Telsate Telecomunicações
308 Systems
TP Radio
Tunnel Radio of America
Vecima Networks

MOBILE MOUNTS

AF Datalink Telecom
Case-Tech
Comprod Communications
Comsystems
Concept Seating
Data911 Mobile Computer
Systems
Ergotron
Gamber-Johnson
Havis
Jotto Desk
Klong Electronics
LEDCCO-ChargeGuard
Location Technologies
McDowell Research,
an Ultralife co.
Mentor Engineering
Mobile Communications
MotoSAT
NCG Companies
Nucomm, RF Extreme div.
PanaVise Products
Precision Mounting
Technologies
RadioMobile,
div. of RF Industries
RAM Mounting Systems
Renair Antennae
RFI Antennas
Signal Measurement
Sinclair Technologies
SkyWave Mobile
Communications
Solomon Technology
Solutions
Wade Antenna/
Taco Antennas

PAGING/MESSAGING EQUIPMENT

Pager Receivers
Alertus Notification Beacons
Ascom
Canamex Communications
CML Microcircuits
Commtech Wireless
Critical Response Systems
Digital Paging Co./Golden
Sab Inc. (DPC/GSI)
DX Radio Systems
I.S.C. Technologies
Motorola
Niros Communications A/S
RF DataTech
SCA
Sonik Messaging Systems
Swissphone Telecom
Unimo Technology
USAlert
Veetronix
WiPath Communications

Transmitters/ RF Controllers

Ace Technologies
Antenna Factor
Ascom
Berkeley Varitronics Systems
Canamex Communications
Center Systems
CML Microcircuits
Commtech Wireless
Connect Systems
Daniels Electronics
Digital Paging Co./Golden
Sab Inc. (DPC/GSI)
DX Radio Systems
Etherstack

IHM P/S
InfoRad Wireless
I.S.C. Technologies
Midian Electronics
Motorola
NHRC Repeater Controllers
Penta
Radiocrafts
RF DataTech
RFI Antennas
RF Technology
Ritron
Sonik Messaging Systems
Sonik Engineering
Spectrum Communications
Spectrum Communications
Swissphone Telecom
Tait Electronics
Tekk
Telepoint
TP Radio
WiPath Communications
Zetron

Two-Way

Messaging Devices

Alertus Notification Beacons
Ascom
Center Systems
Cimarron Technologies
CML Microcircuits
Compuquest
Critical Response Systems
Digital Acoustics
DX Radio Systems
EADS Secure Networks
EMS SATCOM
Helicomm
HME
I.D. Systems
I.S.C. Technologies
Leathersmith
Location Technologies
Manning Navcomp
Mentor Engineering
Mobat USA
Motorola
NHRC Repeater Controllers
Radiocrafts
RadioMobile,
div. of RF Industries
Rohde & Schwarz
Professional Mobile Radio
SkyWave Mobile
Communications
Sonik Messaging Systems
Swissphone Telecom
Telargo
TP Radio
Tunnel Radio of America
WiPath Communications

Voice Storage/ Retrieval Systems

CML Microcircuits
Commtech Wireless
CVDS
Digital Acoustics
DX Radio Systems
Dynamic Instruments
Etherstack
Exacom
I.S.C. Technologies
Link Communications
Location Technologies
Midian Electronics
Motorola
Multisuns
NHRC Repeater Controllers
Nortel
Omnicron Electronics
Record/Play Tek (RPT)
Rohill Engineering
Sonik Messaging Systems
Stancil
Vidicode Datacommunication

POWER SUPPLIES/ EQUIPMENT

Backup Systems

Active Power
Alpha Industrial Power
Antcom
Dupont Building
Emerson Network Power
FWT
Generation PV
GFRC Shelters
GlenMartin
Imark Communications
Lone Star Aviation
Spectrum Instruments
VFP
Winco
Load-Management Equipment
AC/DC Industries
Amrel/American Reliance
Comm-Net 2000
Manufacturing
I.S.C. Technologies
LEDCCO-ChargeGuard
Lind Electronics
P21
Tripp Lite
Power Supplies
Air802
Amrel/American Reliance
Analytic Systems
Astrodyne
B&K Precision
Benelec
DuraComm
Eaton
Elektronika Naglic in Drugi
dno Domzale
GE MDS
GN Batteries
Hwasin Uni-technology
Imark Communications
Innovative Circuit
Technology (ICT)
iStar USA
Kyocera Solar
LEDCCO-ChargeGuard
Lind Electronics
Lone Star Aviation
Majorpower
McDowell Research,
an Ultralife co.
Newmar
Radio Hardware Supplies
and PJ International
RFI Antennas
RF Technology
Rohde & Schwarz
Professional Mobile Radio
Samlex America
Spectra Engineering
Tripp Lite
Winco
Wright Line

Converters/Inverters (C=converters, I=inverters)

Air802 (C)
Alpha Industrial Power (C, I)
Analytic Systems (C, I)
Astrodyne (C, I)
Astron (C, I)
Carmanah Technologies
(C, I)
DuraComm (C, I)
DX Radio Systems (C)
Elektronika Naglic in Drugi
dno Domzale (C)
Emerson Network Power
(C, I)
Exeltech (C, I)
Generation PV (I)
GlenMartin (C)
GN Batteries (I)
Imark Communications (C, I)
Innovative Circuit
Technology (ICT) (C)
Kyocera Solar (I)
LEDCCO-ChargeGuard (C, I)
Lind Electronics (C, I)
Lone Star Aviation (C, I)
Majorpower (C, I)
Motorola (C)
Newmar (C, I)
Pioneer Energy Products
(PEPRO) (C, I)
RFI Antennas (I)
Samlex America (C, I)
Solarcraft (C, I)
SunWize Technologies (I)
Telsate Telecomunicações
(C, I)
Tripp Lite (I)
Wilmore Electronics (C, I)
Xantrex Technology (C, I)

Generators

Active Power
Alpha Industrial Power
Antcom
Dupont Building
Emerson Network Power
FWT
Generation PV
GFRC Shelters
GlenMartin
Imark Communications
Lone Star Aviation
Spectrum Instruments
VFP
Winco

Load-Management Equipment

AC/DC Industries
Amrel/American Reliance
Comm-Net 2000
Manufacturing
I.S.C. Technologies
LEDCCO-ChargeGuard
Lind Electronics
P21
Tripp Lite

Power Supplies

Air802
Amrel/American Reliance
Analytic Systems
Astrodyne
B&K Precision
Benelec
DuraComm
Eaton
Elektronika Naglic in Drugi
dno Domzale
GE MDS
GN Batteries
Hwasin Uni-technology
Imark Communications
Innovative Circuit
Technology (ICT)
iStar USA
Kyocera Solar
LEDCCO-ChargeGuard
Lind Electronics
Lone Star Aviation
Majorpower
McDowell Research,
an Ultralife co.
Newmar
Radio Hardware Supplies
and PJ International
RFI Antennas
RF Technology
Rohde & Schwarz
Professional Mobile Radio
Samlex America
Spectra Engineering
Tripp Lite
Winco
Wright Line

Solar/Wind

Power Equipment

Alpha Industrial Power
Analytic Systems
Astrodyne
BatteryJack
Carmanah Technologies
DuraComm
Funk-Electronic Piciorgros
Generation PV
GlenMartin
IdaTech
Imark Communications
Innovative Circuit
Technology (ICT)
Kyocera Solar
Lind Electronics
Lone Star Aviation
McDowell Research,
an Ultralife co.
RFI Antennas
Ritron

Solarcraft
Spectrum Communications
SunWize Technologies
Winco
Xantrex Technology

Uninterruptible

Power Supplies

Active Power
Alpha Industrial Power
C&D Technologies
Carmanah Technologies
Comm-Net 2000
Manufacturing
DuraComm
DX Radio Systems
Eaton
Electro Power Systems
Emerson Network Power
Exeltech
Generation PV
GlenMartin
GN Batteries
IdaTech
Innovative Circuit
Technology (ICT)
LEDCCO-ChargeGuard
Lone Star Aviation
Majorpower
McDowell Research,
an Ultralife co.
Newmar
RFI Antennas
Rohde & Schwarz
Professional Mobile Radio
Solarcraft
SunWize Technologies
Transtector Systems
Tripp Lite
VFP
Wilmore Electronics
Wright Line

UPS Batteries

Access Battery,
div. of Alpha Source
Alpha Industrial Power
Antenna Factor
BatteryJack
C&D Technologies
Carmanah Technologies
DX Radio Systems
Eaton
Emerson Network Power
Etherstack
Generation PV
GN Batteries
Honeywell Batteries/Global
Technology Systems
Hwasin Uni-technology
Innovative Circuit
Technology (ICT)
Laird Technologies
Lind Electronics
Lone Star Aviation
Motorola
Newmar
RFI Antennas
SmartComm USA
Solarcraft
Sonic Communications
International
Spectrum Communications
Telsate Telecomunicações
Tripp Lite
VFP

PSAP/E9-1-1 EQUIPMENT

CAD Software/Systems

Antcom
APD Communications
Artevea Digital
CAD North
Center Systems
Communication Plus
CrisSys
Cushing Technologies
Data911 Mobile Computer
Systems

EDX Wireless
Frequentis
Genesis Group
Hitech Systems
IDA
IHM P/S
Impact
InfoRad Wireless
InterAct Public Safety
Systems
Intergraph
Intrado
IPC
Location Technologies
Logistic Systems
Lyrtech
Mentor Engineering
Midian Electronics
Motorola
Northrop Grumman
Ortivus
Pantel International
Positron Public Safety
Systems, an IPC co.
PowerPhone
Radar 911 Systems
Radio Engineering Services
RadioMobile,
div. of RF Industries
ST Electronics
(Info-Comm Systems)
Stratus Technologies
Telargo
Teltronics
Teltronic S.A. Unipersonal
Tiburón
TriTech Software Systems
Voicelnterop

E9-1-1 Location Equipment

Andrew
Cisco Systems
Dynamic Instruments
GPS Source
Location Technologies
Locus Location Systems
MapInfo
Microvoice
Motorola
Radar 911 Systems
Spectrum Instruments
Tech Global
TeleCommunication
Systems (TCS)
Teltronics
Teltronic S.A. Unipersonal
Tiburón
TruePosition
Wireless Telecom Group
Zetron

In-Building

Andrew
Ascom
Bird Technologies Group
Center Systems
Communications-Applied
Technology
Fiber-Span
GPS Source
Laird Technologies
Powerwave Technologies
RCC Consultants
RFI Antennas
Rojone P/L
Survey Technologies Inc.
(STI)
TX RX Systems Bird
Technologies Group

9-1-1 Call Answering

Avaya
CriSys
EADS Secure Networks
Intrado
IPC
MapInfo
Nortel
Pantel International

Penta
Plantronics
Portrait Software Public
Safety
Positron Public Safety
Systems, an IPC co.
PowerPhone
Radar 911 Systems
Spescom
TeleCommunication
Systems (TCS)
Zetron

TDD

CriSys
CVDS
Intergraph
Motorola
Penta
Positron Public Safety
Systems, an IPC co.
Zetron

Time Stamp/ Synchronization

CriSys
Dynamic Instruments
ESE
Eventide
FEI-Zyfer
GPS Source
Hitech Systems
Locus Location Systems
Motorola
Pantel International
RadioMobile,
div. of RF Industries
Rojone P/L
Spectracom
Spectrum Instruments
Telargo

PUBLIC SAFETY COMMUNICATIONS

Alarm Systems

Alarmsoft T
American Wireless
Ascom
Benelec
BlueRadios
Bosch Security Systems
Canamex Communications
Carlson Wireless
Technologies (CWT)
Center Systems
C4i
Cimarron Technologies
CML Microcircuits
Commtech Wireless
Connect Systems
CriSys
DPS Telecom
Fial
Flash Technology, SPX div.
IHM P/S
Intergraph
I.S.C. Technologies
Keltron
Location Technologies
Lone Star Aviation
Midian Electronics
Midland Radio
Mi-Jack Systems &
Technology
MoniVox - Control Service
Motorola
NeoTerra Systems
Pantel International
RAD Data Communications
Safemobile
Satel
Signal Intelligence
Sonik Messaging Systems
South Midlands
Communications
Special Electronics
and Designs
Spectrum Communications

ST Electronics
(Info-Comm Systems)
Teltronics
TP Radio
Trident Micro Systems
Veebronix
WiPath Communications
XCell Controls
Zetron

Automated Person Location

APD Communications
Ascom
CES Wireless
C4i
Data911 Mobile Computer
Systems
EMS Sky Connect
LocatioNet Systems
Location Technologies
Locus Location Systems
Lone Star Aviation
Mobility Sound Technology
Motorola
NeoTerra Systems
Raveon Technologies
Ritron
Rojone P/L
Safemobile
Samdale
Swissphone Telecom
3T Communications
Trident Micro Systems
Trimax Wireless
Wireless Pacific

Automatic Notification Systems

Alarmsoft T
American Wireless
Ascom
BlueRadios
Bosch Security Systems
CAD North
Canamex Communications
CeoTronics
CES Wireless
C4i
Cimarron Technologies
CML Microcircuits
Compuquest
CriSys
Digital Acoustics
Everbridge
Exacom
Flash Technology, SPX div.
I.D. Systems
InfoRad Wireless
Intrado
I.S.C. Technologies
Location Technologies
Mentor Engineering
Midian Electronics
Mi-Jack Systems &
Technology
Mobility Sound Technology
MoniVox - Control Service
Motorola
NeoTerra Systems
Pantel International
Racom Products
Radar 911 Systems
Ritron
Rojone P/L
Safemobile
Samdale
SolaCom Technologies
ST Electronics
(Info-Comm Systems)
Syntech Systems
TP Radio
Trimax Wireless
Vidicode Datacommunication
XCell Controls
Zetron

Biometrics/Fingerprinting
Afix Technologies

Amrel/American Reliance
BIO-key International
Cimarron Technologies
Cromack Industries
Data911 Mobile Computer
Systems
Hitech Systems
I.D. Systems
Location Technologies
Logistic Systems
Motorola
Neurotechnology
Positron Public Safety
Systems, an IPC co.
Realtime North America
ST Electronics
(Info-Comm Systems)

CAD Add-Ons/ Enhancements

Albrecht
Telecommunications
Bradshaw Consulting
Services (BCS)
CAD North
CES Wireless
C4i
Communication Plus
CriSys
Cushing Technologies
Data911 Mobile Computer
Systems
Intergraph
Location Technologies
Mentor Engineering
Northrop Grumman
Information Systems
Positron Public Safety
Systems, an IPC co.
PowerPhone
Priority Dispatch

Radar 911 Systems
RadioMobile,
div. of RF Industries
Telargo
TriTech Software Systems

Call Boxes

Alertus Notification Beacons
American Wireless
CriSys
GAI-Tronics
IHM P/S
Lone Star Aviation
Ritron
Special Electronics
and Designs
ST Electronics
(Info-Comm Systems)
Tekk

Early Warning Systems

Alarmsoft T
Alertus Notification Beacons
American Wireless
CAD North
CeoTronics
CML Microcircuits
Compuquest
Cromack Industries
Cubic Defense Applications
Federal Signal
Flash Technology, SPX div.
Intuicom
Kyocera Solar
Location Technologies
Lone Star Aviation
Lyncole XIT Grounding
Pantel International
Racom Products
Samdale
SolaCom Technologies

Sonik Messaging Systems
ST Electronics
(Info-Comm Systems)
Strix Systems
TP Radio
Voicelnterop
Whelen Engineering

Field Reporting

Amrel/American Reliance
Bayly/Coastcom
BlueRadios
Codan
CriSys
Cushing Technologies
Data911 Mobile Computer
Systems
Hitech Systems
Impact
InterAct Public Safety
Systems
Intergraph
IPC
I.S.C. Technologies
Location Technologies
Logistic Systems
L-3 Communications Nova
Engineering
McDowell Research,
an Ultralife co.
Mentor Engineering
Mi-Jack Systems &
Technology
Mobat USA
Motorola
NeoTerra Systems
Northrop Grumman
Northrop Grumman
Information Systems
Positron Public Safety
Systems, an IPC co.

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Product Category Index

Radar 911 Systems
Samdale
ST Electronics
(Info-Comm Systems)
Syntech Systems
Telargo
Tiburon
TP Radio
Trancite Logic Systems
Trident Micro Systems
TriTech Software Systems
Vislink

Intelligent Traffic Systems

Aluma Tower
Astron Wireless Technologies
Atlantic Scientific
Center Systems
CML Microcircuits
Conxx
Data911 Mobile Computer Systems
Encom Wireless Data Solutions
Frequentis
GE MDS
Intuicom
Kycocera Solar
Location Technologies
Logistic Systems
Lone Star Aviation
Mentor Engineering
Mobile Mark
Motorola
Nortel
Northrop Grumman
Information Systems
Radar 911 Systems
ST Electronics
(Info-Comm Systems)
Sti-Co Industries
Strix Systems
Telargo
TP Radio
Trimax Wireless

Interoperability Equipment/Systems

Aeroflex
Aluma Tower
American Wireless
Applied Global Technologies (AGT)
Ascom
Astron Wireless Technologies
Avcomm International
Benelec
BlueRadios
BridgeCom Systems
CalAmp
Catalyst Communications Technologies
Cellular Specialties Inc. (CSI)
C4i
Clear-Com Communication Systems
CoCo Communications
Communication Plus
Communications-Applied Technology
Connect Systems
Conxx
CPI Communications
Critical RF
Daniels Electronics
Datron World
Communications
EF Johnson Technologies
Etherstack
Federal Signal
Frequentis
Futurecom Systems Group
General Dynamics Satcom Technologies
Global Mesh Technologies Service
Harris Public Safety and Professional Communications (PSPC)

Harris RF Communications
HME
In Motion Technology
Intergraph
Intrado
IPC
Kenwood USA, Communications Sector
Link Communications
Locus Location Systems
Lyrtch
McDowell Research, an Ultralife co.
Mentor Engineering
Microvoice
Midian Electronics
Midland Radio
Mobat USA
Motorola
New Communications Solutions (NCS)
Nortel
Omnitronics
Penta
Quintron Systems
RAD Data Communications
Radio IP Software
Raytheon JPS Communications
ReIm Wireless
Ritron
Rohde & Schwarz Professional Mobile Radio
Signal Intelligence
Solomon Technology Solutions
Special Electronics and Designs
Spectrum Instruments
ST Electronics (Info-Comm Systems)
Strix Systems
TechMer
Telargo
TeleCommunication Systems (TCS)
Telewave
Telex Radio Dispatch
Thales Communications
TracStar Systems
Trident Micro Systems
Trilogy USA
Trimax Wireless
Twisted Pair Solutions
Vertex Standard
Vislink
VoiceInterop
Westel Wireless Systems
Wireless Pacific
Zetron

Mobile Communications Vehicles

Aluma Tower
Amrel/American Reliance
Applied Global Technologies (AGT)
Astron Wireless Technologies
Avcomm International
Benelec
Bickford Broadcast Vehicles
BlueRadios
Bradshaw Consulting Services (BCS)
Broadcast Microwave Services
CAD North
CalAmp
Catalyst Communications Technologies
C4i
Cleartone Telecom
CML Microcircuits
CoCo Communications
Connect Systems
Data911 Mobile Computer Systems
ESTeem Wireless Modems
Etherstack

Frequentis
FWT
Gamber-Johnson
GE MDS
Gentex
GlenMartin
Global Mesh Technologies Service
GPS Source
Harris Public Safety and Professional Communications (PSPC)
Hitech Systems
HME
I.D. Systems
IHM P/S
In Motion Technology
Intuicom
Kantronics
Kenwood USA, Communications Sector
Location Technologies
L-3 Communications Nova Engineering
McDowell Research, an Ultralife co.
Mentor Engineering
Mobile Concepts by Scotty
Mobile Specialty Vehicles
Motorola
MotoSAT
Proxim Wireless Networks
Radio IP Software
RadioMobile, div. of RF Industries
Sepura
Setcom
Shelter One
Sierra Wireless
Signal Measurement
SkyWave Mobile Communications
SolaCom Technologies
Solomon Technology Solutions
South Midlands Communications
Special Electronics and Designs
Spectrum Communications
ST Electronics (Info-Comm Systems)
Strix Systems
Telargo
Telnetron S.A. Unipersonal
308 Systems
Tiburon
TP Radio
Trilogy USA
Trimble
Vecima Networks
Vislink
WiPath Communications

P25 Software

Catalyst Communications Technologies
CoCo Communications
Digital Voice Systems Inc. (DVS)
Etherstack
Genesis Group
Harris Public Safety and Professional Communications (PSPC)
Location Technologies
Locus Location Systems
Motorola
Positron Public Safety Systems, an IPC co.
Raytheon JPS Communications
Solomon Technology Solutions
Thales Communications

Records Management Systems

Artevea Digital

CriSys
Cushing Technologies
Data911 Mobile Computer Systems
EHS
Hitech Systems
I.D. Systems
Impact
InterAct Public Safety Systems
Intergraph
IPC
Logistic Systems
MapInfo
Mentor Engineering
Mi-Jack Systems & Technology
Motorola
Multisuns
Northrop Grumman
Northrop Grumman Information Systems
OrecX
Positron Public Safety Systems, an IPC co.
Priority Dispatch
Radar 911 Systems
ST Electronics (Info-Comm Systems)
Syntech Systems
Tiburon
TP Radio
Trident Micro Systems
Trimble
TriTech Software Systems

Station Alerting

Benelec
Cushing Technologies
Data911 Mobile Computer Systems
Exacom
Location Technologies
Midian Electronics
Mi-Jack Systems & Technology
Motorola
Sonik Messaging Systems
US Digital Designs
WiPath Communications
Zetron

Surveillance Equipment

AC/DC Industries
Aluma Tower
Ascom
Astron Wireless Technologies
Benelec
Broadcast Microwave Services
Carmanah Technologies
CelPlan Technologies
GeoTronics
Comprod Communications
Compuquest
Comsystems
Conexant Systems
Cubic Defense Applications
Digital Acoustics
Digital Ally
DPS Telecom
EHS
Energy Power Solutions
Firetide
GE MDS
Global Mesh Technologies Service
Harris Public Safety and Professional Communications (PSPC)
ICOP Digital
Impact Radio Accessories
Intuicom
JDI Jing Deng Industrial
JEI Communication Recorders
Klein Electronics
Kycocera Solar

Location Technologies
Lone Star Aviation
Lyrtch
Motorola
Nice Systems
Nortel
Omnicron Electronics
Optoelectronics
Phonak Communications
Racom Products
Radio Hardware Supplies and PJ International
Rescom Sales
Ross Associates/Covert Systems
Safety Vision
Sepura
Signal Intelligence
Solomon Technology Solutions
Sonic Communications International
South Midlands Communications
Special Electronics and Designs
Spescom
ST Electronics (Info-Comm Systems)
Strix Systems
Swann Communications
Tactical Command Industries
TechMer
Technotrend
Telsate Telecommunicações
308 Systems
TP Radio
Trilogy USA
Trimax Wireless
TwitCo Distributing (ParMarLow)
Verint Systems
Vidicore Datacommunication
Vislink
Wireless Pacific

Turnkey Emergency Systems

Aluma Tower
American Wireless
APD Communications
Artevea Digital
Avocent
Bradshaw Consulting Services (BCS)
Canamex Communications
CelPlan Technologies
Center Systems
Ceragon Networks
C4i
Conxx
CriSys
Critical Response Systems
DPS Telecom
Exacom
Federal Signal
Fortek Computers
Frequentis
Hitech Systems
IHM P/S
InterAct Public Safety Systems
Intergraph
IPC
Location Technologies
Logistic Systems
Lyncolex XIT Grounding
Lyrtch
McDowell Research, an Ultralife co.
Mobat USA
Motorola
Northrop Grumman
Northrop Grumman Information Systems
Pantel International
Positron Public Safety Systems, an IPC co.

Raytheon JPS Communications
Rohde & Schwarz Professional Mobile Radio
Solomon Technology Solutions
Sonik Messaging Systems
South Midlands Communications
ST Electronics (Info-Comm Systems)
Strix Systems
Swissphone Telecom
Tait Electronics
TechMer
Telepoint
308 Systems
TP Radio
Trilogy USA
Trimax Wireless
Vislink
Wireless Pacific
Zetron

Video Surveillance

Airaya
Allcom Products
Atis Calearo Antenne
Atlantic Scientific
Bosch Security Systems
Broadcast Microwave Services
Carlson Wireless Technologies (CWT)
CelPlan Technologies
Center Systems
GeoTronics
Cobham Surveillance
CoCo Communications
Conxx
CriSys
Data911 Mobile Computer Systems
Digital Ally
Dotworkz Systems
EF Johnson Technologies
EHS
Firetide
Frequentis
GE MDS
GlenMartin
Global Mesh Technologies Service
Harris Public Safety and Professional Communications (PSPC)
Harris RF Communications
Intergraph
Intuicom
IPWireless
Lone Star Aviation
Lyrtch
Maxon C4C
M.B. International
Mobile Mark
Motorola
Nice Systems
Nortel
Quintron Systems
RAD Data Communications
Raytheon JPS Communications
Rescom Sales
Ross Associates/Covert Systems
SkyPilot Networks
Solomon Technology Solutions
South Midlands Communications
Special Electronics and Designs
ST Electronics (Info-Comm Systems)
Strix Systems
Swann Communications
Tech Global
TechMer
Telex Radio Dispatch

Telsate Telecomunicações
Trilogy USA
Trimax Wireless
Vecima Networks
Verint Systems
Vislink

RADIO ACCESSORIES

Carrying Cases

Abell Industries
Access Battery,
div. of Alpha Source
Avcomm International
A.W. Enterprises
Axtex Batteries
Benelec
CAPE
Case-Tech
Datron World
Communications
EF Johnson Technologies
GN Batteries
Harris Public Safety
and Professional
Communications (PSPC)
Harris RF Communications
Hwasin Uni-technology
Hytera Communications
Imark Communications
Impact Radio Accessories
Infinity Gear and Technology
Kendoo Technology

Kenwood USA, Communications Sector

Klein Electronics
Leathersmith
Link Communications
Maxon CIC
McDowell Research,
an Ultralife co.
Midland Radio
Mobile Expertise
Motorola
Niros Communications A/S
Nucomm, RF Extreme div.
Peter Jones (ILG)
Pouch Manufacturing
Power Products
Radio Hardware Supplies
and PJ International
RAM Mounting Systems
Research In Motion (RIM)
Ritron
SmartComm USA
South Midlands
Communications
Spectrum Communications
TecNet International
Tekk
Thales Communications
TP Radio
Unimo Technology
Vertex Standard
Vertex Standard/Yaesu UK
WaveKorea
Xiamen Puxing Electronics
Science and Technology

Hands-Free Equipment

Abell Industries
Access Battery,
div. of Alpha Source
Advantech
AdvanceTec Industries
Amrel/American Reliance
Avcomm International
Axtex Batteries
Benelec
BlueRadios
CAPE
GeoTronics
C4i
Communications-Applied
Technology
Comsystems
Comufrance
Con-Space Communications
David Clark
Eartec

EF Johnson Technologies
Energy Power Solutions
GN Batteries
Guardian Safety Systems
Hanics Technology
Harris Public Safety
and Professional
Communications (PSPC)
Harris RF Communications
Hytera Communications
Imark Communications
Impact Radio Accessories
Infinity Gear and Technology
Invisio Headsets
Klein Electronics
Lowe Electronics
Maxon CIC
Merry Electronics (USA)
Midland Radio
Mobile Expertise
Mobility Sound Technology
Motorola
Niros Communications A/S
Oy Stop Noise Finland
Phonak Communications
Radio Hardware Supplies
and PJ International
Rescom Sales
Ritron
Savox Communications
(ProComm Americas)
Setcom
Sonic Communications
International
Special Electronics
and Designs
Surefire
Technotrend
TecNet International
Tekk
Telsate Telecomunicações
TP Radio
TwitCo Distributing
(ParMarLow)
WaveKorea
Xiamen Puxing Electronics
Science and Technology

Headsets

Abell Industries
Advantech
Avcomm International
Axtex Batteries
BatteryJack
Benelec
BlueRadios
Blue Star Radios
CAPE
CavCom
GeoTronics
C4i
CML Microcircuits
Comfort
Telecommunications
Communications-Applied
Technology
Comufrance
Con-Space Communications
David Clark
Eartec
EF Johnson Technologies
EHS
Energy Power Solutions
GN Batteries
Guardian Safety Systems
Hanics Technology
Harris Public Safety
and Professional
Communications (PSPC)
Hwasin Uni-technology
Hytera Communications
Imark Communications
Impact Radio Accessories
Imtradex
Infinity Gear and Technology
Invisio Headsets
JDI Jing Deng Industrial
Kendoo Technology

**Kenwood USA,
Communications Sector**
Klein Electronics
Klong Electronics
Lowe Electronics

Maxon CIC
McDowell Research,
an Ultralife co.
Merry Electronics (USA)
Midland Radio

Motorola
New Communications
Solutions (NCS)
Niros Communications A/S
OTTO

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Phonak Communications
Plantronics
Procom A/S
Pryme Radio Products



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- > Full P25 encryption
- > Stealth & Tactical packaging
- > Support all frequency bands + crossbanding



Product Category Index

- Radio Hardware Supplies
and PJ International
Rescom Sales
Ritron
Rohde & Schwarz
Professional Mobile Radio
Savox Communications
(ProComm Americas)
Setcom
Sonic Communications
International
Special Electronics
and Designs
Stone Mountain
Surefire
Tactical Command Industries
TecNet International
Tekk
Telex Radio Dispatch
Telsate Telecomunicações
Thales Communications
3M Peltor
TP Radio
TwitCo Distributing
(ParMarLow)
Unimo Technology
Vertex Standard/Yaesu UK
WaveKorea
Wireless Pacific
Xiamen Puxing Electronics
Science and Technology
XTechnics Group
Zetron
- Labels**
Abell Industries
BatteryJack
Benelec
Hytera Communications
Infinity Gear and Technology
Maxon CIC
Motorola
Niros Communications A/S
Sato America
Savox Communications
(ProComm Americas)
TecNet International
Telsate Telecomunicações
WS Packaging Group –
Advanced Labeling
Solutions
Xiamen Puxing Electronics
Science and Technology
- Microphones**
Advantech
Aria Industrial
Avcomm International
Axtech Batteries
BatteryJack
Benelec
BlueRadios
Blue Star Radios
CAPE
CeoTronics
CES Wireless
Communications-Applied
Technology
Comsystems
Comufrance
Con-Space Communications
Datron World
Communications
David Clark
EF Johnson Technologies
EHS
Elma Electronic
Gentex
GN Batteries
Guardian Safety Systems
Hanics Technology
Harris Public Safety
and Professional
Communications (PSPC)
Hwasin Uni-technology
Hytera Communications
Imark Communications
Impact Radio Accessories
Infinity Gear and Technology
- Invisio Headsets
JDI Jing Deng Industrial
Kendoo Technology
Kenwood Japan
Kenwood USA,
Communications Sector
Klein Electronics
Klong Electronics
Lowe Electronics
Maxon CIC
Merry Electronics (USA)
Midian Electronics
Midland Radio
Mobile Expertise
Mobility Sound Technology
Motorola
Niros Communications A/S
OTTO
Oy Stop Noise Finland
Peiker Acoustic
Phonak Communications
Procom A/S
Pryme Radio Products
Radio Hardware Supplies
and PJ International
Rescom Sales
Ritron
Rohde & Schwarz
Professional Mobile Radio
Savox Communications
(ProComm Americas)
Setcom
SmartComm USA
Sonic Communications
International
Special Electronics
and Designs
Spectra Engineering
Spectrum Communications
Stone Mountain
Surefire
Tactical Command Industries
Technotrend
TecNet International
Tekk
Telex Radio Dispatch
Telsate Telecomunicações
TP Radio
TwitCo Distributing
(ParMarLow)
Unimo Technology
Vertex Standard/Yaesu UK
WaveKorea
Wireless Pacific
Xiamen Puxing Electronics
Science and Technology
XTechnics Group
Zetron
- RADIOS**
Mobiles/Portables
(MA=mobiles analog,
MD=mobiles digital,
M6.25=mobiles 6.25 kHz,
PA=portables analog,
PD=portables digital,
P6.25=portables 6.25 kHz)
Abell Industries (MA, PA)
Ascom (MD, PD)
Astron Wireless
Technologies (MD, PD)
Avcomm International (MA)
Benelec (MA, MD, PA, PD)
Blue Star Radios (MA, PA)
Broadcom (MA, MD)
CAPE (PA)
CeoTronics (MD)
Ceracon Networks (MD)
C4i (MA, MD, PA, PD)
CML Microcircuits
(MA, MD, PA, PD)
Codan (MA, MD, PA, PD)
Communications-Applied
Technology (PA, PD)
Comsystems
(MA, MD, PA, PD)
Connect Systems
(MA, M6.25, PA, PD)
- Datron World
Communications
(MA, MD, PA, PD)
DX Radio Systems (MA, PA)
Eartec (PA, PD)
EF Johnson Technologies
(MA, MD, PA, PD)
Elektronika Naglic in Drugi
dno Domzale
(MA, MD, PA, PD)
Elma Electronic
(MA, MD, PA, PD)
Etherstack (MA, MD, PA, PD)
Fylde Micro Systems
(MA, PA)
GRE America
(MA, MD, PA, PD)
Harris Public Safety and
Professional Communications
(PSPC) (MA, MD,
M6.25, PA, PD, P6.25)
Harris RF Communications
(MA, MD, PA, PD)
Holzberg Communications
(MA, MD, PA, PD)
HYT (MA, MD, PA, PD)
Hytera Communications
(MA, MD, M6.25, PA,
PD, P6.25)
Icom (MA, MD, M6.25, PA,
PD, P6.25)
IHM P/S (MA, MD, PA, PD)
Imark Communications
(MA, PA)
Infinity Gear and
Technology (PA)
Intuicomm (MD)
Kenwood Japan
(MA, MD, PA, PD)
Kenwood USA, Commu-
nications Sector (MA, MD,
M6.25, PA, PD, P6.25)
Kirisun Electronics (MA, PA)
Klein Electronics (PA, PD)
Link Communications
(MA, MD, PA, MD, PA, PD)
Maxon CIC (MA, MD, PA, PD)
Mentor Engineering
(MA, MD)
Midland Radio
(MA, MD, PA, PD)
Mobat USA
(MA, MD, PA, PD)
Mobile Expertise (MA, PA)
Motorola (MA, MD, M6.25,
PA, PD, P6.25)
Niros Communications A/S
(MA, MD, PA, PD)
Pacific Crest (PA, PD)
Raveon Technologies (MD)
Relm Wireless
(MA, MD, PA, PD)
Rescom Sales
(MA, MD, PA, PD)
Ritron (MA, PA)
Satel (MA, PA)
Sepura (MD, PD)
SmartComm USA (PA, PD)
South Midlands
Communications
(MA, MD, PA, PD)
Special Electronics
and Designs
(MA, MD, PA, PD)
Spectrum Communications
(MA, MD, PA, PD)
ST Electronics
(Info-Comm Systems)
(MA, MD, PA, PD)
Tactical Command
Industries (PA, PD)
Tait Electronics
(MA, MD, PA, PD)
Team Simoco
(MA, MD, PA, PD)
TecNet International
(MA, PA)
Tekk (MA, PA)
Telsate Telecomunicações
- (MA, MD, PA, PD)
Teltronic S.A. Unipersonal
(MA, MD, PA, PD)
Thales Communications
(PA, PD)
3M Peltor (PA, PD)
TMC Radio (MA, MD, PA, PD)
TP Radio (MA, MD, PA)
Tunnel Radio of America
(MA, MD, PA, PD)
Unimo Technology (MA, PA)
USAlert (MA, MD, PA, PD)
Vertex Standard
(MA, MD, PA, PD)
Vertex Standard/Yaesu UK
(MA, MD, PA, PD)
Vislink (MA, MD, PA, PD)
Xiamen Puxing Electronics
Science and Technology
(MA, M6.25, PA)
- P25 Radios**
Benelec
C4i
CML Microcircuits
Datron World
Communications
DX Radio Systems
EADS Secure Networks
EF Johnson Technologies
Etherstack
GRE America
Harris Public Safety
and Professional
Communications (PSPC)
Harris RF Communications
Icom
Kenwood USA,
Communications Sector
Link Communications
Midland Radio
Motorola
Relm Wireless
ST Electronics
(Info-Comm Systems)
Tait Electronics
Team Simoco
Thales Communications
TMC Radio
USAlert
Vertex Standard
Vertex Standard/Yaesu UK
Westel Wireless Systems
Wireless Pacific
- TETRA**
Artevea Digital
CML Microcircuits
Comsystems
EADS Secure Networks
Etherstack
Funk-Electronic Piciorgros
Harris Public Safety
and Professional
Communications (PSPC)
HYT
IHM P/S
Kenwood USA,
Communications Sector
Motorola
Niros Communications A/S
Panorama Antennas
Rohde & Schwarz
Professional Mobile Radio
Samdale
Sepura
South Midlands
Communications
Syntech Systems
Team Simoco
Teltronic S.A. Unipersonal
Unimo Technology
- RADIO SYSTEMS**
ACSB
Motorola
- Conventional/Trunked**
(CA=conventional analog,
CD=conventional digital,
TA=trunked analog,
TD=trunked digital)
Abell Industries (CA)
Alligator Communications
(TA, TD)
American Wireless (CA)
Andrew (TA)
APD Communications
(TA, TD)
Artevea Digital (TD)
Ascom (TD)
Aviat Networks (TD)
Axell Wireless (TA, TD)
Benelec (CA, CD, TA, TD)
BridgeCom Systems
(CA, TA)
CalAmp (CA, TA)
Center Systems
(CA, CD, TA, TD)
Ceracon Networks (CD, TD)
C4i (CA, CD)
CML Microcircuits
(CA, CD, TA, TD)
Codan (CA)
Comsystems
(CA, CD, TA, TD)
Connect Systems
(CA, CD, TA)
Cubic Defense Applications
(CA)
Dalman Technical Services
(CA, CD)
Daniels Electronics
(CA, CD, TA, TD)
Datron World
Communications (CA, CD)
dbSpectra (TA, TD)
DX Radio Systems
(CA, TA, TD)
EADS Secure Networks
(TD)
EF Johnson Technologies
(CA, CD, TA, TD)
Elektronika Naglic in Drugi
dno Domzale (CA, CD)
Elma Electronic (TA)
Encom Wireless Data
Solutions (CA, CD)
Etherstack (CA, CD, TA, TD)
4RF Communications
(TA, TD)
FreeWave Technologies
(CA, CD)
Frequentis (TA, TD)
Fylde Micro Systems
(TA, TD)
GE MDS (CA, CD)
Harris Public Safety
and Professional
Communications (PSPC)
(CA, CD, TA, TD)
Harris RF Communications
(CA)
HM-Funktechnik (CA)
Hoag Electronics (TA, TD)
Holzberg Communications
(CA, CD, TA, TD)
HYT (TA, TD)
Idyltek (CA, TA)
IHM P/S (CA, CD, TA, TD)
Imark Communications (CA,
TA)
IPMobileNet (CD)
Kenwood Japan (CA, TA, TD)
Kenwood USA,
Communications Sector
(CA, CD, TA, TD)
Kirisun Electronics (CA, TA)
Lyrtech (TA, TD)
Maxon CIC (CA, TA)
M.B. International (TD)
Microvoice (TA, TD)
Midland Radio (CA, TA, TD)
Motorola (CA, TA, TD)
Omnitronics (CA, TA)
Pacific Crest (CA, CD)
- Pantel International
(CA, TA, TD)
Penta (CA, CD, TA, TD)
RAD Data Communications
(TD)
Radiocrafts (TA, TD)
Radio IP Software (CD, TD)
RadioMobile,
div. of RF Industries (CA)
Raveon Technologies (CD)
Relm Wireless (CA, CD)
RF Technology (CA, CD, TA)
Ritron (CA, TA, TD)
Rohde & Schwarz
Professional Mobile Radio
(CA, TA, TD)
Rohill Engineering BV
(TA, TD)
SmarTrunk Systems (TD)
Sonik Messaging Systems
(CA, CD)
South Midlands
Communications
(CA, TA, TD)
Spectra Engineering
(CA, CD, TA)
Spectrum Communications
(CA, TA)
Spectrum Communications
(TA)
Spescom (TA)
ST Electronics (Info-Comm
Systems) (TA, TD)
Strix Systems (TD)
Tait Electronics (CA, CD, TA)
Team Simoco (CA, TA, TD)
TecNet International (CA, TA)
Tekk (CA)
Telepoint (CA, CD, TA, TD)
Telsate Telecomunicações
(CA, TA)
Teltronic S.A. Unipersonal
(CA, TA, TD)
Thales Communications (CA)
TP Radio (CA, CD, TA, TD)
Trident Micro Systems
(CA, CD, TA, TD)
Tunnel Radio of America
(CA, CD)
USAlert (TA, TD)
Vertex Standard (CA)
Vertex Standard/Yaesu UK
(CA, CD, TA)
Westel Wireless Systems
(CA, CD, TD)
Zetron (CA, TA, TD)
- Microwave**
Adtran
Alligator Communications
American Wireless
Andrew
Anritsu
Aviat Networks
BlueRadios
Carlson Wireless
Technologies (CWT)
Ceracon Networks
Codan
DragonWave
Exalt Communications
4RF Communications
GE MDS
Lyrtech
Mimix Broadband
Nucomm, RF Extreme div.
Nutel Wireless
Pantel International
Radio Waves
Raymar-Telenetics
Rohde & Schwarz
Professional Mobile Radio
Rojone P/L
Ross Associates/Covert
Systems
Sinclair Technologies
Solectek
ST Electronics
(Info-Comm Systems)

Telsate Telecomunicações
Vecima Networks
Vislink
Wireless Telecom Group

Narrowband (6.25 kHz)

Connect Systems
GE MDS
Harris Public Safety
and Professional
Communications (PSPC)
Kenwood Japan
Kenwood USA,
Communications Sector
Motorola
Xiamen Puxing Electronics
Science and Technology

P25 Systems Equipment

Aeroflex
Axell Wireless
Benelec
CalAmp
Catalyst Communications
Technologies
CML Microcircuits
Dalman Technical Services
Daniels Electronics
Datron World
Communications
DX Radio Systems
EADS Secure Networks
EF Johnson Technologies
Etherstack
Futurecom Systems Group
Harris Public Safety
and Professional
Communications (PSPC)
IPMobileNet
Kenwood USA,
Communications Sector
Microvoice
Midland Radio
Motorola
Pantel International
Penta
Raytheon JPS
Communications
Reim Wireless
RF Technology
Spectra Engineering
ST Electronics
(Info-Comm Systems)
Tait Electronics
Team Simoco
Thales Communications
Trident Micro Systems
Vertex Standard
Westel Wireless Systems
Wireless Pacific
Wireless Telecom Group
Zetron

Repeater Controllers

Airspan Networks
Benelec
BHE Bonn Hungary
Electronics
BridgeCom Systems
Center Systems
C4i
Communications Specialists
Comsystems
Connect Systems
Encom Wireless Data
Solutions
Etherstack
Fiplex Communications
I.D. Systems
Idylltek
Midian Electronics
Nortel
Rojone P/L
See Telecom
Solomon Technology
Solutions
Strix Systems
Telsate Telecomunicações

Simulcast

Albrecht Telecommunications
Benelec
Center Systems
Comsystems
Dalman Technical Services
DX Radio Systems
EF Johnson Technologies
Etherstack
Harris Public Safety
and Professional
Communications (PSPC)
Harris RF Communications
IHM P/S
Midian Electronics
Motorola
Pantel International
Penta
Racom Products
RF Technology
Sonik Messaging Systems
Spectra Engineering
Tait Electronics
Team Simoco
TP Radio

Software-Defined Radio

Alligator Communications
American Wireless
Andrew
Axell Wireless
BHE Bonn Hungary
Electronics
CalAmp
CelPlan Technologies
CML Microcircuits
Communications Research
Centre (CRC)
Comsystems
Cubic Defense Applications
DragonWave
DX Radio Systems
EF Johnson Technologies
Elma Electronic
Encom Wireless Data
Solutions
Etherstack
GE MDS
Green Hills Software
Harris Public Safety
and Professional
Communications (PSPC)
Lyrtech
Mobat USA
Motorola
Multiple Access
Communications (MAC)
Pantel International
Positron Public Safety
Systems, an IPC co.
Solomon Technology
Solutions
Thales Communications
TP Radio
Westel Wireless Systems

Spread-Spectrum Radio

Adtran
Air802
Albrecht Telecommunications
Alligator Communications
Andrew
Aviat Networks
BHE Bonn Hungary
Electronics
BlueRadios
CalAmp
Carlson Wireless
Technologies (CWT)
CelPlan Technologies
Communications-Applied
Technology
Data-Linc Group
Eartec
Encom Wireless Data
Solutions
FreeWave Technologies
GRE MDS
GRE America

Great Fortress
Harris RF Communications
Intuicom
Location Technologies
L-3 Communications Nova
Engineering
Lyrtech
Nutel Wireless
Pantel International
Radio IP Software
Solarcraft
Solomon Technology
Solutions
Telsate Telecomunicações
Trio Datacom
Vecima Networks

TETRA

Aeroflex
APD Communications
Artevea Digital
Axell Wireless
BHE Bonn Hungary
Electronics
Center Systems
Clearstone Telecom
CML Microcircuits
Comsystems
Damm Cellular Systems
EADS Secure Networks
Etherstack

European
Telecommunications S.A.
(ETSA)
Funk-Electronic Piciorgros
Harris Public Safety
and Professional
Communications (PSPC)
HYT
IHM P/S
Kenwood USA,
Communications Sector
Lyrtech
Motorola
Panorama Antennas
RAD Data Communications

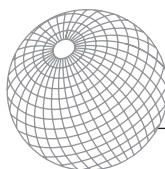
Radio IP Software
Rohde & Schwarz
Professional Mobile Radio
Samdale
See Telecom
Sinclair Technologies
South Midlands
Communications
Spescom
Spinner
Syntech Systems
Team Simoco
Teltronic S.A. Unipersonal
3T Communications
Wireless Telecom Group

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Airspan Networks
American Wireless
Ascom
Avtec
BlueRadios
BridgeCom Systems
Catalyst Communications Technologies
C4i
CoCo Communications
Communication Plus
Communications-Applied Technology
Connect Systems
Critical RF
Cubic Defense Applications
Dalman Technical Services
Daniels Electronics
DX Radio Systems
EF Johnson Technologies
Elma Electronic
EMR
Etherstack
Firetide
4RF Communications
Frequentis
GE MDS
Harris Public Safety and Professional Communications (PSPC)
IHM P/S
IPC

Kolibri System

Link Communications
Lyrtech
Microvoice
Midland Radio
Motorola
Nortel
Omnitronics
Pantel International
Penta
RAD Data Communications
Raytheon JPS Communications
Ritron
Samdale
SmarTrunk Systems
Solectek
Solomon Technology Solutions
Spectra Engineering
ST Electronics
(Info-Comm Systems)
Syntech Systems
Telepoint
3T Communications
TP Radio
TracStar Systems
Trilogy USA
Tunnel Radio of America
Twisted Pair Solutions

Unimo Technology

Voicelnterop
Westel Wireless Systems
Zetron

REMOTE SITE MONITORING

Modems

Albrecht Telecommunications
Asentria
Barnett Engineering
BlueRadios
BlueTree Wireless Data
CalAmp
Carlson Wireless Technologies (CWT)
Cellular Specialties Inc. (CSI)
CML Microcircuits
Compuquest
Cromack Industries
Data-Linc Group
DX Radio Systems
Elektronika Naglic in Drugi dno Domzale
Encom Wireless Data Solutions
Etherstack

Flash Technology, SPX div.
FreeWave Technologies
GE MDS
HV Sistemas S.L.
Location Technologies
L-3 Communications Nova Engineering
Maxon CIC
Midian Electronics
Motorola
Pacific Crest
Proxicast
RAD Data Communications
Radiocrafts
Radio IP Software
Raveon Technologies
Raymar-Telenetics
RF DataTech
Ritron
Rojone P/L
Satel
Sierra Wireless
Tait Electronics
TC Communications
TecNet International
Telargo
Telewave
TP Radio
Trident Micro Systems
Trio Datacom
Tunnel Radio of America
Vecima Networks
Voicelnterop

Remote Transmitter Units

Alligator Communications
Aluma Tower
American Wireless
Antenna Factor
Asentria
Astron Wireless Technologies
Barnett Engineering
Berkeley Varitronics Systems
BlueRadios
Broadcast Microwave Services
CalAmp
CeoTronics
C4i
CML Microcircuits
Commtech Wireless
Compuquest
CriSys
Dataprobe
DPS Telecom
DX Radio Systems
Encom Wireless Data Solutions
Firetide
Flash Technology, SPX div.
4RF Communications
GE MDS
HV Sistemas S.L.
Intuicom
Keltron
Kyocera Solar
Location Technologies
Maxon CIC
Midian Electronics
Midland Radio
MiMOMax Wireless

Mobility Sound Technology

Motorola
NexTek
PageTek
Proxicast
Radiocrafts
Raveon Technologies
Ritron
Rojone P/L
Samdale
Satel
Sentor Monitoring Systems and Services
Solarcraft
Solomon Technology Solutions
Spectra Engineering
TCC Industries

Team Simoco

Tekk
Telargo
Telsate Telecomunicações
TP Radio
Tracker Radio
Trimax Wireless
Tunnel Radio of America
Vislink
WaveKorea
Zetron

SCADA

Alligator Communications
Aluma Tower
American Wireless
Asentria
Astron Wireless Technologies
Bayly/Coastcom
BlueRadios
BlueTree Wireless Data
CalAmp
Carlson Wireless Technologies (CWT)
Carmanah Technologies
Center Systems
CML Microcircuits
CriSys
Cromack Industries
CTI Products
Data-Linc Group
Dataprobe
DPS Telecom
Emerson Network Power
Encom Wireless Data Solutions
Encore Networks
Federal Signal
Fial
4RF Communications
FreeWave Technologies
GE MDS
Green Hills Software
Hughes Network Systems
HV Sistemas S.L.
Intuicom
Kantronics
Kyocera Solar
Location Technologies
Maxon CIC
Motorola
NexTek
Pacific Crest
PageTek
Pantel International
Proxicast
RAD Data Communications
Raveon Technologies
RF DataTech
RF Neulink, div. of RF Industries
Ritron
Satel
Sentor Monitoring Systems and Services
SkyWave Mobile Communications
Spectra Engineering
Spectrum Communications
Tait Electronics
TCC Industries
TecNet International
Tekk
Telepoint
TP Radio
Trimax Wireless
Vecima Networks
Zetron

Software

Andrew
Asentria
Astellia
BHE Bonn Hungary Electronics
BlueRadios
BlueTree Wireless Data
CeoTronics
CoCo Communications

Commtech Wireless
Compuquest
CriSys
Data-Linc Group
DPS Telecom
Elektronika Naglic in Drugi dno Domzale
Emerson Network Power
Encom Wireless Data Solutions
Etherstack
Federal Signal
Fial
Flash Technology, SPX div.
Funk-Electronic Piciorgros
Green Hills Software
HV Sistemas S.L.
I.D. Systems
InfoRad Wireless
In Motion Technology
Inquire
Integrated Tracking Solutions
Intergraph
Kantronics
Location Technologies
Microvoice
Mi-Jack Systems & Technology
Motorola
NeoTerra Systems
Omnitronics
OrecX
PageTek
Powerwave Technologies
Radio IP Software
Raveon Technologies
RF Neulink, div. of RF Industries
Safemobile
Samdale
Sentor Monitoring Systems and Services
Sierra Wireless
Signal Intelligence
Solarcraft
Spectra Engineering
Summitek Instruments
TAL Technologies
Team Simoco
Telargo
Teltronic
Vidicore Datacommunication
Voicelnterop
XCell Controls
Zetron

Telemetry

Alligator Communications
Aluma Tower
American Wireless
ARC Wireless Solutions
Asentria
Astron Wireless Technologies
Benelec
BHE Bonn Hungary Electronics
BlueRadios
BlueTree Wireless Data
CalAmp
Carlson Wireless Technologies (CWT)
Carmanah Technologies
Cellular Specialties Inc. (CSI)
CeoTronics
CML Microcircuits
Cobham Surveillance
Commtech Wireless
Cromack Industries
Data-Linc Group
Dataprobe
Digital Paging Co./Golden Sab Inc. (DPC/GSI)
DPS Telecom
Eaton Powerware – Pulizzi Products
Elektronika Naglic in Drugi dno Domzale

Flash Technology, SPX div.
4RF Communications
FreeWave Technologies
GE MDS
Helicomm
HV Sistemas S.L.
IDA
I.D. Systems
In Motion Technology
Intuicom
Kantronics
Kyocera Solar
Link Communications
Location Technologies
Maxon CIC
Midland Radio
Mobile Mark
Motorola
Pacific Crest
PageTek
Panorama Antennas
Positron Public Safety Systems, an IPC co.
Proxicast
Radiocrafts
Raveon Technologies
RF DataTech
RF Neulink, div. of RF Industries
Ritron
Rojone P/L
Safemobile
Samdale
Satel
Sentor Monitoring Systems and Services
SkyWave Mobile Communications
Solarcraft
Solomon Technology Solutions
Sonik Messaging Systems
Spectra Engineering
Spectrum Communications
Tait Electronics
TCC Industries
TecNet International
Tekk
Telargo
Telewave
Telsate Telecomunicações
TP Radio
Tracker Radio
WiPath Communications
Zetron

Transmitters

Alligator Communications
Aluma Tower
American Wireless
Antenna Factor
Asentria
Astron Wireless Technologies
Berkeley Varitronics Systems
BlueRadios
Broadcast Microwave Services
CalAmp
CeoTronics
CML Microcircuits
Cobham Surveillance
Commtech Wireless
CriSys
CTI Products
Cubic Defense Applications
Data-Linc Group
DPS Telecom
DX Radio Systems
Firetide
4RF Communications
GE MDS
Harris RF Communications
HV Sistemas S.L.
I.D. Systems
Intuicom
I.S.C. Technologies
Location Technologies
Maxon CIC
Midland Radio

Motorola
Pacific Crest
Proxicast
Radiocrafts
Raveon Technologies
Raymar-Telenetics
RF DataTech
RF Neulink, div. of RF Industries
RF Technology
Ritron
Satel
Sinclair Technologies
Spectra Engineering
Spectrum Communications
Spectrum Communications
Tail Electronics
Team Simoco
TecNet International
Tekk
Telargo
Telepoint
Telsate Telecomunicações
TP Radio
Tracker Radio
Tunnel Radio of America
Vislink

Vendor-Specific Protocols

Asentria
Bayly/Coastcom
Carlson Wireless Technologies (CWT)
CoCo Communications
Commtech Wireless
Cromack Industries
CTI Products
Daniels Electronics
Dataprobe
DPS Telecom
Fial
HV Sistemas S.L.
I.D. Systems
Kathrein, Scala div.
Keltron
Lea Antenne & Progetti Spa
Location Technologies
Lyncole XIT Grounding
Motorola
Radiocrafts
Radio IP Software
Raveon Technologies
Solomon Technology Solutions
Telargo
TP Radio
XCell Controls

Video Surveillance

Airaya
Allcom Products
Atlantic Scientific
BlueRadios
BlueTree Wireless Data
Bosch Security Systems
Broadcast Microwave Services
Carlson Wireless Technologies (CWT)
Center Systems
CeoTronics
Cobham Surveillance
CoCo Communications
CriSys
Data-Linc Group
Dotworkz Systems
EHS
Firetide
4RF Communications
GE MDS
Harris Public Safety and Professional Communications (PSPC)
Intergraph
Intuicom
Mi-Jack Systems & Technology
Motorola
NexTek

Nice Systems
Nortel
Northrop Grumman
Information Systems
Proxicast
RAD Data Communications
Raytheon JPS
Communications
Ross Associates/Covert
Systems
Solarcraft
Solomon Technology
Solutions
Strix Systems
Swann Communications
Technotrend
Telex Radio Dispatch
Telsate Telecomunicações
Trimax Wireless
Verint Systems
Vislink

SATELLITE SYSTEMS EQUIPMENT

Mobile Data/Voice (MD=mobile data, MV=mobile voice)

Andrew (MD, MV)
Astron Wireless
Technologies (MD, MV)
C-Com Satellite Systems
(MD)
CES Wireless (MD)
CML Microcircuits (MD)
Codan (MD, MV)
CPI Communications (MV)
Cushing Technologies (MD)
Data911 Mobile Computer
Systems (MD)
EMS SATCOM (MD, MV)

EMS Sky Connect (MD, MV)
Fortek Computers (MD, MV)
Harris RF Communications
(MD, MV)
Hughes Network Systems
(MD, MV)
KVH Industries (MD, MV)
McDowell Research,
an Ultralife co. (MD, MV)
Microvoice (MD, MV)
Proxicast (MD)
Motorola (MD, MV)
MotoSAT (MD, MV)
Proxicast (MD)
Radio IP Software (MD)
RadioMobile, div. of RF
Industries (MD, MV)
Satel (MD)
Solomon Technology
Solutions (MD, MV)
Strix Systems (MD, MV)
TeleCommunication
Systems (TCS) (MD, MV)
308 Systems (MD, MV)
TracStar Systems (MD, MV)
Vislink (MD, MV)
WiPath Communications
(MD)

VSAT

AAE Systems
C-Com Satellite Systems
Cepoint Networks
Encore Networks
Hughes Network Systems
Kycocera Solar
McDowell Research,
an Ultralife co.
MotoSAT
Radio IP Software

Solomon Technology
Solutions
Swissphone Telecom
TeleCommunication
Systems (TCS)
TracStar Systems
Vislink

SITE/TOWER EQUIPMENT

Alarms/Access Devices

Bosch Security Systems
CML Microcircuits
Compuquest
CTI Products
DPS Telecom
EMR
Fial
Flash Technology, SPX div.
GN Batteries
I.S.C. Technologies
Location Technologies
Midian Electronics
Mi-Jack Systems &
Technology
Motorola
PageTek
Quintron Systems
Racom Products
Ritron
Rojone P/L
XCell Controls
Zetron

Beacons

Carmanah Technologies
Citel
CML Microcircuits
Flash Technology, SPX div.
Nello

Sabre Site Solutions,
div. of Sabre Industries
SoundOff Signal
TWR Lighting
XCell Controls

Cabinets

American Wireless
Atlantic Scientific
Cellxion,
div. of Sabre Industries
CommScope
Comsystems
dbSpectra
Dupont Building
DX Radio Systems
Eaton Powerware –
Pulizzi Products
Elma Electronic
Emerson Network Power
Imark Communications
I.S.C. Technologies
iStar USA
Middle Atlantic Products
Midland Radio
Oldcastle Precast
Pioneer Energy Products
(PEPRO)
Powerwave Technologies
PTMW
Sabre Towers and Poles,
div. of Sabre Industries
Shelter One
Solarcraft
Sonik Messaging Systems
Spectrum Communications
Telewave
Tripp Lite
Tunnel Radio of America
VFP

Winsted

Cable

AF Datalink Telecom
Air802
Allcom Products
Andrew
Antcom
ARC Wireless Solutions
Astron Wireless Technologies
Atis Calearo Antenne
Benelec
BroadWave Technologies
CommScope
Comtelco
Elma Electronic
Encom Wireless Data
Solutions
4RF Communications
GE MDS
Harger Lightning
and Grounding
Hus-Tsan Group
I.S.C. Technologies
LEDCO-ChargeGuard
Mobot USA
Motorola
NK Communications
Pasternack Enterprises
Polar Electronic Industries
Pomona Electronics
Radio Frequency Systems
(RFS)
Radio Waves
Renair Antennae
Response Microwave
RFI Antennas
Rojone P/L
Skymasts Antennas
Spinner

SV Microwave
Telewave
Times Microwave Systems
Trilogy Communications
Tripp Lite
Webb Industries

Cable Fault Locators

Anritsu
Bird Technologies Group
Motorola
TX RX Systems Bird
Technologies Group
Willtek Communications
Wireless Telecom Group

Combiners/Duplexers/ Duplexers/Filters/Isolators/ Multicouplers/Multiplexers (C=combiners, DI=duplexers, DU=duplexers, F=filters, I=isolators, MC=multi- couplers, MP=multiplexers)

Accute Micro Electronics
(DI, F)
Ace Technologies
(C, DI, DU, F, I, MC, MP)
Adtran (MP)
Andrew (DI, F)
Antcom (F, I)
Axell Wireless
(C, DI, DU, F, I, MC, MP)
Bayly/Coastcom (MP)
Benelec
(C, DI, DU, F, MC, MP)
BHE Bonn Hungary
Electronics (DI, DU, F, MP)
Bird Technologies Group
(C, DU, F, I, MC)



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- BroadWave Technologies (C)
Cellular Specialties Inc. (CSI) (C, DI, DU, F, MC)
Center Systems (C, DI, MC)
C4i (MP)
Comprod Communications (C, DI, DU, F, I, MC, MP)
Comtelco (DI, DU, MC)
Creowave (C, DI, DU, F)
dbSpectra (C, DI, DU, F, I, MC, MP)
DX Radio Systems (C, DU, F, I, MC)
Emerson Network Power (F)
EMR (C, DI, DU, F, I, MC, MP)
European Telecommunications S.A. (ETSA) (DI, DU, F, MC)
Fiplex Communications (C, DI, DU, F, I, MC, MP)
4RF Communications (C)
GE MDS (F, MP)
GPS Source (C, MC)
GRE America (MP)
Great Fortress (MP)
Harris RF Communications (MP)
Imark Communications (DU, MC)
Innovative Circuit Technology (ICT) (F)
InStock Wireless Components (C)
Jaybeam Wireless (C, DI, DU, F)
JFW Industries (C)
Kathrein, Scala div. (C, DI, DU, F, I, MC, MP)
Kathrein Werke KG (MC, MP)
Lea Antenne & Progetti Spa (DI, DU, F, MC, MP)
Lone Star Aviation (F)
L-3 Communications, Narda Microwave-East (C, DU, F, I, MC)
Midland Radio (DU)
MiMoMax Wireless (DI, F)
Motorola (C, DU, F)
Narda Microwave West (L-3 Communications) (C, DI, DU, F, I, MP)
NexTek (F)
Nucomm, RF Extreme div. (MP)
Paratek Microwave (F)
Pasternack Enterprises (C, I, MC)
Polar Electronic Industries (C, DI, DU, F, I, MC, MP)
Positron Public Safety Systems, an IPC co. (I)
Powerwave Technologies (C, DI, DU, F)
Procom A/S (C, DI, DU, F, I, MC, MP)
RAD Data Communications (MP)
Radial Firm (C, DI, DU, F, I, MC)
Radio Frequency Systems (RFS) (C, DI, DU, F, I, MC)
Response Microwave (C, DI, DU, F, I, MC, MP)
RFI Antennas (C, DI, DU, F, I, MC)
Richardson Electronics (MC, MP)
Rojone P/L (C, DI, DU, F, I, MC, MP)
Sinclair Technologies (C, DI, DU, F, I, MC, MP)
Skymasts Antennas (C, DI, DU, F)
Sonik Messaging Systems (F, I)
- South Midlands Communications (DU)
Spectra Engineering (DI, DU)
Spectrum Communications (DU, F)
Spinner (C, DI, DU, F, MP)
Sti-Co Industries (MC)
TC Communications (MP)
Telewave (C, DU, F, I, MC)
Telsate Telecomunicações (C, DI, DU, F)
Temwell (C, DI, DU, F)
TP Radio (C, DI, DU, F, I)
Trak Microwave (C, DI, DU, F, I, MC, MP)
Tunnel Radio of America (MC, MP)
TX RX Systems Bird Technologies Group (C, DU, F, I, MC)
Webb Industries (C, DU, F, I, MC, MP)
Willtek Communications (DI, MP)
Wireless Telecom Group (C, DI, F, MC, MP)
Zetron (MP)
- Connectors**
Ace Technologies
AF Datalink Telecom
Air802
Allcom Products
Andrew
Anritsu
Antcom
ARC Wireless Solutions
Astron Wireless Technologies
Benelec
Bomar Interconnect Products
BroadWave Technologies
Cellular Specialties Inc. (CSI)
CommScope
Comprod Communications
Comtelco
D.W. Electrochemicals
DX Radio Systems
Electric Railway Improvement Co. (ERICO)
EMR
European Telecommunications S.A. (ETSA)
GE MDS
GN Batteries
Harger Lightning and Grounding
Huada Connectors
Hus-Tsan Group
Nearson
NK Communications
Pasternack Enterprises
Pomona Electronics
Procom A/S
Radio Frequency Systems (RFS)
Renair Antennae
Response Microwave
RF Connectors, div. of RF Industries
RFI Antennas
Rojone P/L
Sabre Site Solutions, div. of Sabre Industries
Sinclair Technologies
Skymasts Antennas
Spinner
SV Microwave
TCC Industries
Telewave
Times Microwave Systems
Trilogy Communications
Tripp Lite
TX RX Systems Bird Technologies Group
Webb Industries
- HVAC Control Systems**
Bard Manufacturing
Compuquest
Emerson Network Power
Jaybeam Wireless
Pioneer Energy Products (PEPRO)
VFP
- Ice Bridges**
Fred A. Nudd
GlenMartin
Nello
Rohn Products
Sabre Site Solutions, div. of Sabre Industries
VFP
Wireless Telecom Group
- Lightning-Protection Equipment**
ACData – Raycap
Ace Technologies
Air802
Allcom Products
Alltec
Astron Wireless Technologies
Atlantic Scientific
Benelec
Cellular Specialties Inc. (CSI)
Citel
Comprod Communications
Electric Railway Improvement Co. (ERICO)
Emerson Network Power
Encom Wireless Data Solutions
4RF Communications
GE MDS
GlenMartin
GN Batteries
Harger Lightning and Grounding
Imark Communications
Jaybeam Wireless
Lightning Eliminators and Consultants
Lightning Master
Lightning Prevention Systems
L-3 Communications, Narda Microwave-East
Lyncole XIT Grounding
Mobat USA
NexTek
NK Communications
Pasternack Enterprises
Pioneer Energy Products (PEPRO)
Polar Electronic Industries
PolyPhaser
Powerwave Technologies
Radio Frequency Systems (RFS)
Renair Antennae
RFI Antennas
Rojone P/L
Sabre Site Solutions, div. of Sabre Industries
Skymasts Antennas
Sonik Messaging Systems
Transtector Systems
Tripp Lite
VFP
Webb Industries
Zetron
- Microwave/MUX Equipment**
Antcom
Astron Wireless Technologies
Aviat Networks
Bayly/Coastcom
BHE Bonn Hungary Electronics
Broadcast Microwave Services
Cepoint Networks
Ceracon Networks
- Codan
DX Radio Systems
4RF Communications
GE MDS
GRE America
Harris RF Communications
Mimix Broadband
Praxsym
Procom A/S
RAD Data Communications
Raymar-Telenetics
Rojone P/L
Sinclair Technologies
Trak Microwave
Vislink
Zetron
- Preamplifiers**
Axell Wireless
BHE Bonn Hungary Electronics
Bird Technologies Group
Center Systems
Comprod Communications
dbSpectra
EMR
Fiplex Communications
GPS Source
Kathrein, Scala div.
Kathrein Werke KG
Mimix Broadband
Motorola
Polar Electronic Industries
Praxsym
Procom A/S
Radial Firm
Radio Frequency Systems (RFS)
Rojone P/L
Telewave
Telsate Telecomunicações
TX RX Systems Bird Technologies Group
- Racks**
American Wireless
Comprod Communications
Comsystems
dbSpectra
DX Radio Systems
Eaton Powerware – Pulizzi Products
Elma Electronic
Emerson Network Power
EMR
Fylde Micro Systems
GE MDS
iKey
iStar USA
Kyocera Solar
Middle Atlantic Products
NLNovalink
Pioneer Energy Products (PEPRO)
Powerwave Technologies
Procom A/S
Radio Frequency Systems (RFS)
Sinclair Technologies
Solarcraft
Spinner
Telewave
Tripp Lite
Tunnel Radio of America
VFP
Winsted
- Shelters**
Alltec
Aluma Tower
Atlantic Scientific
Cellxion, div. of Sabre Industries
Dupont Building
Enviro Buildings
FWT
GFRC Shelters
GlenMartin
Imark Communications
- Oldcastle Precast
Pioneer Energy Products (PEPRO)
Powerwave Technologies
PTMW
Shelter One
Sinclair Technologies
TowerWorx
VFP
Webb Industries
- Site-Management Software**
Avocent
CelPlan Technologies
Center Systems
Codan
Commtech Wireless
Compuquest
Computer Resources
Comsystems
CriSys
DPS Telecom
Federal Signal
Fylde Micro Systems
Kathrein Werke KG
Location Technologies
LS telcom
Midian Electronics
Mi-Jack Systems & Technology
Motorola
PageTek
Powerwave Technologies
Radio Frequency Systems (RFS)
Rohde & Schwarz Professional Mobile Radio
Signal Intelligence
SoftWright
Strix Systems
Survey Technologies Inc. (STI)
- Surge Protectors**
ACData – Raycap
AC/DC Industries
Ace Technologies
Allcom Products
Alltec
Antcom
Atlantic Scientific
Citel
DX Radio Systems
Eaton Powerware – Pulizzi Products
Elma Electronic
Emerson Network Power
EMR
Fylde Micro Systems
GE MDS
Improvement Co. (ERICO)
Emerson Network Power
Encom Wireless Data Solutions
GE MDS
Harger Lightning and Grounding
Innovative Circuit Technology (ICT)
iStar USA
Lightning Eliminators and Consultants
Lightning Master
Lone Star Aviation
Lyncole XIT Grounding
Middle Atlantic Products
NexTek
NK Communications
Nucomm, RF Extreme div.
Pasternack Enterprises
Polar Electronic Industries
Positron Public Safety Systems, an IPC co.
Radio Frequency Systems (RFS)
Response Microwave
RFI Antennas
Rojone P/L
Signal Measurement
Sinclair Technologies
Skymasts Antennas
Solarcraft
Spinner
- TCC Industries
Telsate Telecomunicações
Transtector Systems
Tripp Lite
VFP
Webb Industries
- Switches**
Ace Technologies
Center Systems
Cisco Systems
Dataprobe
Elma Electronic
Encom Wireless Data Solutions
Frequentis
Fylde Micro Systems
GE MDS
IHM P/S
JFW Industries
Motorola
Pasternack Enterprises
Quintron Systems
RAD Data Communications
Rohde & Schwarz Professional Mobile Radio
Rojone P/L
SolaCom Technologies
Spinner
Strix Systems
Team Simoco
Technotrend
Teltronics
3T Communications
Trak Microwave
VFP
Zetron
- Tower Obstruction**
Carmanah Technologies
Flash Technology, SPX div.
GlenMartin
Kyocera Solar
Rohn Products
Sam Woo Electronics
Sinclair Technologies
TWR Lighting
Webb Industries
XCell Controls
- Towers, Fixed/Mobile (F=fixed towers, M=mobile towers)**
Aluma Tower (F, M)
Applied Global Technologies (AGT) (M)
ARC Wireless Solutions (F)
Barker and Williamson (B&W) (M)
Comsystems (F, M)
Fred A. Nudd (F)
FWT (F, M)
GlenMartin (F, M)
Imark Communications (F)
Nello (F, M)
Pioneer Energy Products (PEPRO) (M)
Rohn Products (F)
Sabre Site Solutions, div. of Sabre Industries (F)
Sabre Towers and Poles, div. of Sabre Industries (F, M)
Sam Woo Electronics (F, M)
Sinclair Technologies (F, M)
Skymasts Antennas (F, M)
South Midlands Communications (F, M)
Strix Systems (F, M)
Tower Innovations (F)
Tower Solutions (M)
TowerWorx (F, M)
TWR Lighting (F)
Valmont Structures (F)
Wade Antenna /Taco Antennas (F)
Webb Industries (F, M)
Winco (M)
XCell Controls (F)

Voting Products

Center Systems
CTI Products
Dalman Technical Services
DX Radio Systems
Midian Electronics
Motorola
RF Technology
South Midlands
Communications
Spectra Engineering
Team Simoco
TP Radio

Waveguide

Andrew
Antcom
GlenMartin
Nello
Pasternack Enterprises
Pioneer Energy Products
(PEPRO)
Radio Frequency Systems
(RFS)
RFI Antennas
Rohn Products
Rojone P/L
Sabre Site Solutions,
div. of Sabre Industries
Spinner
Trak Microwave
Valmont Structures
VFP

SOFTWARE

CAD Software/Systems
(See PSAP/E9-1-1
Equipment)

Custom

Airbiquity
Albrecht Telecommunications
Amrel/American Reliance
Antcom
Aplicom
Ascom
BlueRadios
BlueTree Wireless Data
Bradshaw Consulting
Services (BCS)
BridgeCom Systems
Broadcom
Cadex Electronics
CAD North
Catalyst Communications
Technologies
CelPlan Technologies
Center Systems
C4i
Cobham Surveillance
CoCo Communications
Compuquest
Computer Resources
Comsystems
Data911 Mobile Computer
Systems
Digital Voice Systems Inc.
(DVS)
DPS Telecom
Etherstack
Fial
Fortek Computers
Fylde Micro Systems
Genesis Group
Giga-Tronics
Global Mesh Technologies
Service
Green Hills Software
Hoag Electronics
HV Sistemas S.L.
I.D. Systems
IHM P/S
InfoRad Wireless
Integrated Tracking Solutions
InterAct Public Safety
Systems
IPC
Lifeline Management
Systems

Location Technologies
Locus Location Systems
Lyrtech
Magnasync
Manning Navcomp
MapInfo
Maxon CIC
Mentor Engineering
Microvoice
Middle Atlantic Products
MoniVox - Control Service
Multiple Access
Communications (MAC)
NeoTerra Systems
NeuStar
Northrop Grumman
Northrop Grumman
Information Systems
PageTek
Penchant Software
Penta
Portrait Software Public
Safety
Radar 911 Systems
RadioMobile,
div. of RF Industries
RadioSoft
Realtime North America
Recollect Recording
Safemobile
Samdale
Signal Intelligence
SoftWright
Solomon Technology
Solutions
Strix Systems
Team Simoco
Telargo
Telcordia Technologies
TeleCommunication
Systems (TCS)
Telesoft International
Tiburon
TP Radio
Ventyx
Voicelnterop
Willtek Communications
Winsted
Zetron

Dispatch

(business/industry)
Abell Industries
Antenna Software
APD Communications
Artevea Digital
Bradshaw Consulting
Services (BCS)
Catalyst Communications
Technologies
Communication Plus
Compuquest
CriSys
Critical Response Systems
Data911 Mobile Computer
Systems
Etherstack
Fylde Micro Systems
GeoConcept S.A.
Harris Public Safety
and Professional
Communications (PSPC)
IDA
IHM P/S
Impact
InterAct Public Safety
Systems
Intergraph
IPC
Keltron
Lifeline Management
Systems
Location Technologies
Logistic Systems
Mentor Engineering
Microvoice
Midian Electronics
MoniVox - Control Service
Motorola

NeoTerra Systems
Omnitronics
Ortivirus
Penchant Software
Penta
Positron Public Safety
Systems, an IPC co.
Priority Dispatch
Radar 911 Systems
RadioMobile,
div. of RF Industries
Rohde & Schwarz
Professional Mobile Radio
Rohill Engineering
Safemobile
Signal Intelligence
SolaCom Technologies
Swissphone Telecom
Team Simoco
TechMer
Telargo
Telex Radio Dispatch
Teltronic S.A. Unipersonal
TETRAsim
3T Communications
TP Radio
Trimble
TriTech Software Systems
Ventyx
Voicelnterop
Voice Print International
(VPI)
WiPath Communications
Zetron
Zoll Data Systems

Engineering

Abell Industries
Airbiquity
Amrel/American Reliance
Astron Wireless Technologies
Berkeley Varitronics Systems
BlueRadios
BridgeCom Systems
CelPlan Technologies
C4i
Comsearch
Comsystems
Cromack Industries
DPS Telecom
DX Radio Systems
EDX Wireless
Elektronika Naglic in Drugi
dno Domzale
Etherstack
Green Hills Software
Hoag Electronics
Lifeline Management
Systems
Location Technologies
LS telcom
Lyrtech
Mentor Engineering
Microvoice
Motorola
Radio Engineering Services
RadioSoft
RCC Consultants
Signal Intelligence
SoftWright
Solomon Technology
Solutions
Telesoft International
Teltronic S.A. Unipersonal
3T Communications
TP Radio
Voicelnterop

FCC Licensing
Abell Industries
CelPlan Technologies
Comsearch
Lifeline Management
Systems
RadioSoft

Field Reporting
(business/industry)
Abell Industries

Amrel/American Reliance
Antenna Software
APD Communications
CriSys
Data911 Mobile Computer
Systems
Impact
Inquire
Integrated Tracking Solutions
InterAct Public Safety
Systems
Intergraph
Lifeline Management
Systems
Location Technologies
Locus Location Systems
Mi-Jack Systems &
Technology
NeoTerra Systems
Northrop Grumman
Northrop Grumman
Information Systems
Radar 911 Systems
Syntech Systems
TAL Technologies
Telargo
Trancite Logic Systems
Ventyx
Zetron
Zoll Data Systems

GIS Mapping

Amrel/American Reliance
APD Communications
Bradshaw Consulting
Services (BCS)
CAD North
CelPlan Technologies
CES Wireless
Comsearch
CriSys
Data911 Mobile Computer
Systems
DX Radio Systems
Environmental Systems
Research Institute (ESRI)
Erdas
Fortek Computers
Garmin
GeoConcept S.A.
Hitech Systems
Impact
Infinity Gear and Technology
Integrated Tracking
Solutions
InterAct Public Safety
Systems
Intergraph
IPC
LocatioNet Systems
Location Technologies
Locus Location Systems
Logistic Systems
LS telcom
MapInfo
Maxon CIC
Mobility Sound Technology
NeoTerra Systems
Northrop Grumman
Northrop Grumman
Information Systems
Ortivirus
Penchant Software
Positron Public Safety
Systems, an IPC co.
Radar 911 Systems
RadioMobile,
div. of RF Industries
Raveon Technologies
SkyPilot Networks
SoftWright
Solomon Technology
Solutions
South Midlands
Communications
Survey Technologies (STI)
Swissphone Telecom
Telargo
3T Communications

Tiburon
TP Radio
Trancite Logic Systems
Trimble
TriTech Software Systems
Ventyx

Middleware

Amrel/American Reliance
APD Communications
Aplicom
Avaya
CalAmp
CelPlan Technologies
CES Wireless
C4i
Data911 Mobile Computer
Systems
GE MDS
Global Technologies Group
Inc. (GTGI)
Green Hills Software
InfoRad Wireless
Integrated Tracking Solutions
Intrado
Intuicom
LocatioNet Systems
Location Technologies
Locus Location Systems
Lyrtech
Manning Navcomp
Mentor Engineering
Motorola
Portalify
Positron Public Safety
Systems, an IPC co.
Quintron Systems
Radar 911 Systems
Radio IP Software
RadioMobile,
div. of RF Industries
724 Solutions
Solomon Technology
Solutions
TAL Technologies
Telargo
TP Radio
Transcrypt International
Twisted Pair Solutions
Ventyx
Voicelnterop

Mobile-Data Systems

Airbiquity
Albrecht Telecommunications
Amrel/American Reliance
Antenna Software
APD Communications
Avaya
Avocent
BlueRadios
Bradshaw Consulting
Services (BCS)
CalAmp
CelPlan Technologies
Center Systems
CES Wireless
Cleartone Telecom
CoCo Communications
Communication Plus
Compuquest
Connx
CriSys
Critical Response Systems
Data911 Mobile Computer
Systems
Etherstack
Evolved Intelligence
Fortek Computers
Fylde Micro Systems
Global Mesh Technologies
Service
Green Hills Software
Harris RF Communications
Hitech Systems
HV Sistemas S.L.
IDA
I.D. Systems
Impact

InterAct Public Safety
Systems
Intergraph
Intuicom
IPC
IPMobileNet
IPWireless
Kantronics
Kolibri Systems
LocatioNet Systems
Location Technologies
Logistic Systems
Manning Navcomp
Mentor Engineering
Motorola
MotoSAT
NeoTerra Systems
Northrop Grumman
Northrop Grumman
Information Systems
Ortivirus
Penchant Software
Portalify
Positron Public Safety
Systems, an IPC co.
Proteus
Radar 911 Systems
Radio IP Software
RadioMobile,
div. of RF Industries
Raveon Technologies
Raytheon JPS
Communications
RF DataTech
Safemobile
Safety Vision
Samdale
724 Solutions
SkySweep Technologies
SoftWright
Solarcraft
Solomon Technology
Solutions
South Midlands
Communications
Spescom
Tait Electronics
TAL Technologies
Telargo
Telcordia Technologies
TeleCommunication
Systems (TCS)
Telesoft International
3T Communications
Tiburon
TP Radio
Trimble
TriTech Software Systems
Tunnel Radio of America
Twisted Pair Solutions
Ventyx
WiPath Communications
Zoll Data Systems

Network Management

Andrew
Anritsu
Artevea Digital
Astellia
Avaya
Aviat Networks
Axell Wireless
Bayly/Coastcom
BlueRadios
BlueTree Wireless Data
CalAmp
Cisco Systems
CoCo Communications
Compuquest
Comsearch
Connx
Dalman Technical Services
Datron World
Communications
DPS Telecom
Etherstack
Fial
Fylde Micro Systems
GE MDS

Product Category Index

Genesis Group

Green Hills Software
Harris Public Safety and Professional Communications (PSPC)
Harris RF Communications
Intergraph
Intrado
Intuicom
Location Technologies
Locus Location Systems
LS telcom
Motorola
NeuStar
Nortel
Northrop Grumman Information Systems
PageTek
Powerwave Technologies
RAD Data Communications
Radio IP Software
RadioMobile, div. of RF Industries
RCC Consultants
Rohde & Schwarz Professional Mobile Radio
Rohill Engineering
Samdale
Signal Intelligence
Strix Systems
Summitek Instruments
Survey Technologies Inc. (STI)
Telcordia Technologies
Telesoft International
Teltronics
Teltronic S.A. Unipersonal
3T Communications
TP Radio
Transcrypt International
Trident Micro Systems
Tripp Lite
Twisted Pair Solutions

Operations

APD Communications
Artevea Digital
Avaya
Avocent
Bradshaw Consulting Services (BCS)
Catalyst Communications Technologies
Computer Resources
CriSys
Federal Signal
Harris RF Communications
Lifeline Management Systems
Location Technologies
Manning Navcomp
Motorola
NeoTerra Systems
NeuStar
Penchant Software
RCC Consultants
Telcordia Technologies
3T Communications
TP Radio
Trident Micro Systems
Ventyx

Paging

Ascom
Avaya
CAD North
Canamex Communications
Center Systems
Commtech Wireless
Compuquest
Computer Resources
CriSys
Critical Response Systems
Digital Acoustics
Digital Paging Co./Golden Sab Inc. (DPC/GSI)
DPS Telecom
DX Radio Systems
Fial

I.D. Systems
IHM P/S
InfoRad Wireless
Intergraph
IPC
Lifeline Management Systems
Location Technologies
Microvoice
Midian Electronics
Motorola
NeoTerra Systems
Penchant Software
Penta
RF DataTech
Sonik Messaging Systems
Swissphone Telecom
WiPath Communications
Zetron

Records Management Systems

(business/industry)
Avaya
Cadex Electronics
Computer Resources
CriSys
Data911 Mobile Computer Systems
EHS
Global Technologies Group Inc. (GTGI)
Hitech Systems
Impact
InterAct Public Safety Systems
Intergraph
IPC
Lifeline Management Systems
Location Technologies
Logistic Systems
MapInfo
Mentor Engineering
MoniVox - Control Service
Motorola
NeuStar
Penchant Software
Positron Public Safety Systems, an IPC co.
Radar 911 Systems
RadioMobile, div. of RF Industries
Signal Intelligence
SoftWright
Syntech Systems
TP Radio
Trident Micro Systems
Trimble
TriTech Software Systems

RF Safety

Antenna Factor
Locus Location Systems
Narda Safety Test Solutions
RCC Consultants

Terrain Propagation

CelPlan Technologies
Comsearch
DX Radio Systems
EDX Wireless
Harris Public Safety and Professional Communications (PSPC)
LS telcom
Motorola
Multiple Access Communications (MAC)
NeoTerra Systems
Radio Engineering Services
RadioSoft
RCC Consultants
SkyPilot Networks
SoftWright
Sonik Messaging Systems
Survey Technologies Inc. (STI)

Voice Recognition

ASC Telecom
Avaya
Green Hills Software
Location Technologies
MoniVox - Control Service
Motorola
Nortel
OrecX
Raytheon JPS Communications
Spescom
Telcordia Technologies
Voice Print International (VPI)

Wireless Internet Applications

Amrel/American Reliance
Avaya
BlueRadios
Catalyst Communications Technologies
Cellular Specialties Inc. (CSI)
CelPlan Technologies
Ceragon Networks
CES Wireless
Cisco Systems
CoCo Communications
Communication Plus
Compuquest
CriSys
Digital Voice Systems Inc. (DVS)
Encorn Wireless Data Solutions
Etherstack
Green Hills Software
Harris RF Communications
HD Communications
HV Sistemas S.L.
I.D. Systems
Intergraph
Lifeline Management Systems
LocationNet Systems
Location Technologies
Manning Navcomp
MapInfo
MoniVox - Control Service
Motorola
Nortel
Penchant Software
Proteus
Radio IP Software
Research In Motion (RIM)
724 Solutions
SISTEC, SARL
Solomon Technology Solutions
Strix Systems
TAL Technologies
Telcordia Technologies
TeleCommunication Systems (TCS)
Telesoft International
Trimble
TriTech Software Systems
ValuePoint Networks
Voicelnterop

TELEMATICS/ITS EQUIPMENT

AirIQ
Aplicom
Astron Wireless Technologies
BlueTree Wireless Data
Dataprobe
Harris Public Safety and Professional Communications (PSPC)
Hughes Telematics
Laird Technologies
Location Technologies
Mobile Mark
Radio IP Software
Rojone P/L
Trimble

WiPath Communications

TEST EQUIPMENT

(D=direction finders, FS=field strength meters, FC=frequency counters, P=power monitors, RF=RF monitors, SM=service monitors, SA=spectrum analyzers, V=voltmeters/wattmeters)

Abell Industries (D, FC, P, SA, V)
Aeroflex (FC, P, RF, SM, SA)
Albrecht Telecommunications (SM)
Amrel/American Reliance (P, V)
Anritsu (D, FS, FC, P, RF, SM, SA, V)
Astellia (SM)
B&K Precision (FS, FC, SA)
Berkeley Varitronics Systems (D, P, SA)
Bird Technologies Group (FS, P, RF, SM, SA, V)
Cobham Surveillance (D)
Communications Research Centre (CRC) (SA)
Comprod Communications (P, RF)
Cubic Defense Applications (D)
dbSpectra (P)
Doppler Systems (D)
EMR (P)
Etherstack (RF)
General Dynamics Satcom Technologies (P, SM, SA, V)
GN Batteries (P)
Inquirere (P)
Kaltman Creations (FS, RF, SA)
Link Communications (SM, SA)
Locus Location Systems (RF)
L-3 Communications, Narda Microwave-East (P, SA)
Lyncolex XIT Grounding (P)
Midtronics (SM)
Motorola (SM, SA)
Multiple Access Communications (MAC) (FS, P, RF)
Narda Safety Test Solutions (D, P, RF)
Nucomm, RF Extreme div. (SA)
Optoelectronics (FC)

Pendulum Instruments (FC, RF, SA)
Polar Electronic Industries (P, RF)
Praxsym (FS, P, RF, SM, V)
RadioMobile, div. of RF Industries (RF, SA)
Rohde & Schwarz Professional Mobile Radio (D, FS, FC, P, RF, SM, SA, V)
Rojone P/L (RF)
Sinclair Technologies (FC, P, RF)
Smith Myers Communications (SM)
Summitek Instruments (D, SA)
Survey Technologies (STI) (FS, P, RF, SM, SA)
Telewave (P, V)
Telsate Telecomunicações (D, FS, RF)
Times Microwave Systems (RF, SM, SA)
TX RX Systems Bird Technologies Group (P, RF, SA, V)
Willtek Communications (RF, SM, SA)
Wireless Telecom Group (P, RF, V)
Zetron (P)

TONE SIGNALING EQUIPMENT

Albrecht Telecommunications
Alertus Notification Beacons
American Wireless
Antenna Factor
Austriamicrosystems
Avtec
Benelec
Canamex Communications
CES Wireless
Cimarron Technologies
Communication Plus
Communications Specialists
Compuquest
Connect Systems
Control Signal
Critical Response Systems
Cromack Industries
DX Radio Systems
Etherstack
GAI-Tronics
Hoag Electronics
HV Sistemas S.L.
IDA
Location Technologies
Lyrtch
Maxon CIC

Midian Electronics
Motorola
NorComm
Nucomm, RF Extreme div.
OmniTronics
Optoelectronics
Pantel International
Penta
Racom Products
RF Technology
Spectra Engineering
Spectrum Communications
Spectrum Instruments
Thales Communications
TP Radio
Veetronix
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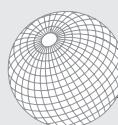
P25

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TETRA Products

Hytera Communications will exhibit its TETRA portfolio, including the PT580



portable, the MT680 mobile and the DT600 data modem at this year's TETRA

World Congress. The products offer better audio quality, longer battery life and more efficient communications than previous products, Hytera executives said. The company also unveiled a line of digital mobile radios in March.

www.hytera.us

Wireless Data Links

Wavesight demonstrated technology capable of delivering high bandwidth video transmission over low-power, unlicensed wireless bridges. Using the company's data compression technology in addition to high levels of data security, the wireless links provide low latency, high-quality

video links ideally suited for modern security and surveillance installations, company executives said. The WaveSprint, WaveFlow and WaveMax systems provide secure communications on unlicensed 2.4 and 5 GHz bands. WaveSprint provides short-distance wireless bridging with data rates up to 54 Megabits per second (Mbps) at distances up to 1 kilometer (km). WaveFlow meets requirements for wider area communications at distances up to 5 km with data rates up to 108 Mbps in turbo mode. WaveMax offers the same data rates at distances up to 40 km.

www.wavesight.com

TETRA and Wi-Fi Testing

Willtek Communications introduced the 2305 Stabilock specifically designed to test TETRA measurements. The tester



supports repair and Go/NoGo testing for mobile

radios and base stations. The instrument can test base stations with separate antenna connectors for the transmitter and receiver and can take measurements at a transmit power of up to 100 watts. The Stabilock series features a large display, weighs 4 kilograms and is fitted with the optional battery.

The 1491 Wi-Fi Connectivity Test Package from Willtek Communications satisfies requirements for wireless LAN (WLAN) device testing. The product can be used for easy Go/NoGo testing of Wi-Fi-enabled devices including smart phones and routers. The package recognizes faulty from intact Wi-Fi devices, and a test protocol provides adequate documentation of the results. The associated test software guides the user through a simple connectivity test. Along with a pass/fail verdict, the product provides additional technical information such as the MAC address and several transmit and receive parameters.

www.willtek.com

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New Products

Indoor Antenna

The PCPI xHCP-DP/TETRA from **Pro-com A/S** is the latest antenna program for indoor coverage. The antenna covers the TETRA band (380 – 420 MHz) and is left- or right-hand circular polarized to reduce out-of-phase signals. The low-



profile antenna is suitable for installation in environ-

ments with iron and concrete where reflections are more probable, company officials said. The antenna covers about 50 megahertz with a radiation of approximately 7 dBi and can be mounted on walls and ceilings.

www.procom.dk

Satellite Antenna

The StarPack from **Starling Advanced Communications** is a single case, fly-away antenna providing two-way, high-speed Ku broadband satellite communications from anywhere in the world. The antenna operates in a full range of scenarios, such as frontline military, homeland security and disaster relief. A satellite-based system requiring no land infrastruc-



ture, the antenna provides seamless communications delivering heavy video, voice and data files. The self-contained system

consists of an antenna panel, positioner, all RF units and amplifier and is available in a portable, wheeled carry-on. The system ensures fast, easy deployment by a single operator, and the unit instantly acquires and tracks the satellite, resulting in instantaneous video, voice and data transmission.

www.starling-com.com

Yagi Antenna

MiMoMax Wireless announced the Quad-Array Loop Yagi Antenna as an alternative to the company's Compact Loop Yagi Antenna. The antenna features the ability to transmit horizontally



and vertically polarized high-performance multiple input multiple output (MIMO) signals. The antenna enhances signal

gain by up to 6 dB when compared with the Compact Loop Yagi. In most uses, the antenna will be positioned at both ends of a link, which increases path gain by up to 12 dB, company officials said.

www.mimomax.com

Ceiling Mount Antenna

Panorama Antennas launched an ultra wideband ceiling mount antenna, the CMWB-038-6, for in-building coverage. The antenna was designed to support a



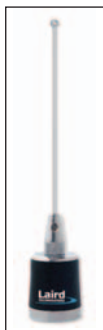
multiservice, multi-operator wireless environment and operates on the

full wireless spectrum from 380 MHz to 6 GHz. Any number or combination of services are supported, including TETRA, UHF, GSM 400, AWS 700 MHz, quad-band GSM, 2.4 GHz, WLAN, Long Term Evolution (LTE) and WiMAX. The antenna enables mobility for in-building service providers and distributed antenna system (DAS) installers.

www.panorama-antennas.com

Load Coil Antennas

Laird Technologies released two wide-band mobile load coil antennas. The B1322W features a field-tunable frequency



range of 132 – 174 MHz and allows users to obtain a lower voltage standing wave ratio (VSWR) than 2:1 at a desired center frequency. The B1360W doesn't require tuning and covers 136 – 174 MHz with a maximum VSWR of 2:1. Both antennas feature omnidirectional patterns with vertical polarization and a maxi-

mum power of 10 watts. The antennas include one-piece solid brass inserts, durable ABS injection-molded housing and weather-tight bases with built-in O-rings.

www.lairdtech.com

Antenna Mount

Royal Communications International introduced the Swing-A-Way Antenna Mount (SWAM) removable antenna mount. The universal mounting system was designed for canister-style antenna tuners



such as the Micom or Codan HF-SSB automatic whip antennas.

The product

mounts in a standard 2-inch receiver-style hitch, includes grounding strap and allows for full access to the rear of the vehicle in the open position. The mount features a power-coated box steel design for maximum strength and durability, company officials said.

www.royal-communications.com

Analysis Modules

Syntech Systems enhanced its Airwave Call Detail Records (CDR) Analysis and Reporting Tool for the Airwave TETRA network with two new modules. The billing



module is for auditing Airwave's charging mechanism that now encompasses data from

voice and data service CDRs. Users can analyze and report the key billing parameters of busy hour, 90-day rolling average and peak 90-day rolling average. The Data Service Analysis Module assesses the use of status messages, short data service (SDS) messages and will soon feature IP sessions to allow users to understand how data is being used and charged for.

www.syntechsystems.com

Correction

Incorrect information was published with Midian Electronics RIC-2 in "New Products" in the Quarter 2 issue. The adapter generates 2175 hertz high-level guard tone. *RadioResource International* regrets the error.

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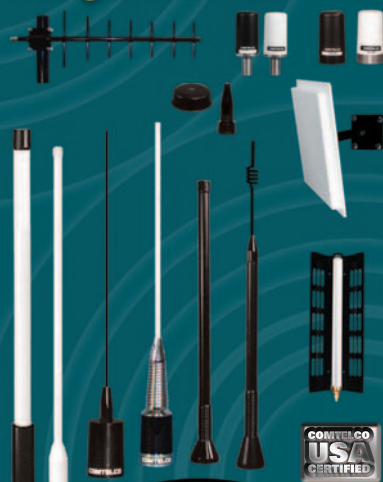
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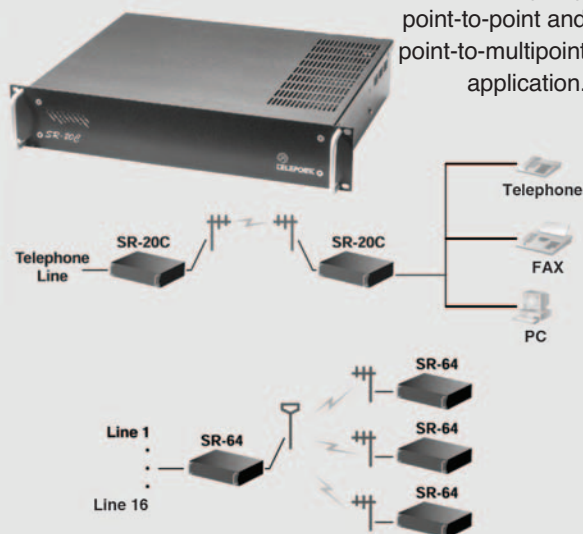
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16 – 19 May: Vehicular Technology Conference (VTC) Spring, Taipei, Taiwan.
VTC: vtc@ictsgroup.com, www.ieeevtc.org/vtc2010spring/index.php

23 – 27 May: IEEE International Conference on Communications (ICC), Cape Town, South Africa. IEEE Communications Society: h.sweeney@comsoc.org, www.ieee-icc.org/2010

24 May – 4 June: World Telecommunication Development Conference (WTDC-10), Hyderabad, India. International Telecommunication Union (ITU): Sanjay Acharya, +41 22 730 6039, sanjay.acharya@itu.int, www.itu.int/ITU-D/conferences/wtdc/2010/index.html

25 – 27 May: TETRA World Congress 2010, Singapore. TETRA World Congress: +44 20 7017 7878, enquiries@tetraworldcongress.com, www.tetraworldcongress.com

2 – 3 June: Train Conference Systems

2010, London. BWCS: +44 8700 500 257, www.traincomms2010.com

7 – 8 June: International Software Radio, London. SMI Group: Teri Arri, +44 (0) 20 7827 6162, tarri@smi-online.co.uk, www.smi-online.co.uk/2010/softwareradio20.asp

15 – 18 June: CommunicAsia 2010, Singapore. Singapore Exhibition Services: +65 6233 6638, www.communicasia.com

23 – 25 June: European Reconfigurable Radio Technologies Workshop and Product Exposition, Mainz, Germany. Software Defined Radio (SDR) Forum: sdrforum.org/2010EuropeWorkshop

29 – 30 June: CBRN Resilience, London. Defence IQ: +44 20 73689301, enquire@defenceiq.com, www.cbrnresilience.com

1 – 4 August: APCO 76th Annual Conference and Trade Show, Houston, USA. Association of Public Safety Communications Officials (APCO) International:

www.apco2010.org

4 – 22 October: ITU Plenipotentiary Conference 2010, Guadalajara, Mexico. International Telecommunication Union (ITU): Sanjay Acharya, +41 22 730 6039, pressinfo@itu.int, www.itu.int/newsroom/press_releases/2009/NP05.html

26 – 29 October: EUTC Annual Conference, London. European Utilities Telecom Council (EUTC): +32 2 645 26 77, www.eutc.org

15 – 18 November: APCO Canada, Vancouver. Association of Public Safety Communications Officials (APCO) Canada: Niesa Silzer, +1 403 277 7377, nsilzer@detailsinc.ca, www.apcocanadainconference.ca

23 – 25 November: PMRExpo, Cologne, Germany. www.pmrexpo.com

9 – 11 March 2011: IWCE 2011, Las Vegas, Nevada, USA. Penton Media: www.iwceexpo.com

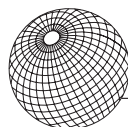
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www.danelec.com		www.mobilitysound.com.tw		www.teamsimoco.com	
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www.fiplex.com		www.omnitronicsworld.com		www.telewave.com	
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www.halcomm.com		www.RRImag.com		www.unimo.co.kr/eng	
Hytera	13	Radio & Trunking Distributors International	31	WORLD NEWS	43
www.hytera.us		www.radioandtrunking.com		www.RRImag.com	
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☐ C Commercial Trunked Radio and Other Wireless Service Providers
☐ D Government/Public Safety/Military
☐ E Business/Industrial/Transportation User
☐ F Communications Manufacturer/OEM/Software Developer
☐ G Engineering and Consulting Firm
☐ Z Other—please specify _____

3. What is your function?

- ☐ A Corporate Management
☐ B Operations/Administration Management
☐ C Technical/Engineering Management
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- ☐ A Yes ☐ B No

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- ☐ A Yes ☐ B No

6. In what area of the world do you do most of your business? (mark only one)

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☐ B Eastern Europe ☐ G Mexico/Central and South America
☐ C Middle East ☐ H United States/Canada
☐ D Asia ☐ Z Other _____
☐ E Australia/New Zealand

7. What wireless technologies does your organization plan to use/buy over the next 2 years? (check all that apply)

- ☐ A Conventional Two-Way ☐ H Location Technologies
☐ B Cellular/Personal Communications ☐ I Tone Signaling (ANI, Encryption, etc.)
☐ C Paging/Messaging ☐ J Interconnect
☐ D Mobile Data ☐ K Satellite
☐ E SCADA/Telemetry ☐ L CAD
☐ F Microwave radio ☐ M Wireless Broadband
☐ G Trunking ☐ Z Other _____



New LMR Competitive Landscape

By Patrick Connolly

The LMR competitive environment is undergoing changes that could alter the long-term landscape. The competitive environment has remained relatively unchanged for the past three years. Motorola remains the dominant worldwide manufacturer. In the analog market, Motorola continues to maintain a huge market share, reinforced by the acquisition of Vertex Standard. In the digital world, Digital Mobile Radio (DMR) shipments provided growth for Motorola in 2008 and 2009. However, a mixture of new entrants, new technologies and the arrival of commercial-off-the shelf (COTS) equipment are beginning to alter the face of LMR.

Digital Technologies

Project 25 (P25) and TETRA are the leading open standards worldwide, and the competitive environment in both markets is relatively mature and stable. However, the P25 market is expected to go through a phase of new development with multiband and Phase 2-compatible terminals and infrastructure expected from multiple manufacturers during the next five years. Manufacturers without immediate plans to support the updated standards are at risk of losing market share.

The TETRA market is attempting to move to the next generation of devices, with a greater focus on supporting a variety of high-speed data/broadband services. The immediate need for these services, coupled with difficulties surrounding the rollout of dedicated LMR high-speed data networks, has created an opportunity for COTS equipment. PSS data networks will be supported by device announcements relating to high-speed data, and ultimately, broadband support.

Low-cost digital represents the biggest threat to companies offering

equipment solely in the high-end market. Motorola, Kenwood and Icom are seeing significant shipments of low-cost digital equipment. Selex Communications has a simulcast DMR Tier II solution, which it deployed during the 2009 G8 summit in Italy. Hytera (formerly HYT) launched a full portfolio of DMR equipment across Tiers II and III. IMS Research expects a number of other manufacturers to launch equipment in late 2010 or early 2011, including Tait, Vertex Standard and Team Simoco. A licensed digital Private Mobile Radio (dPMR) solution has yet to be launched on the market. It will be interesting to see whether Icom and Kenwood decide to continue with proprietary solutions or support the emerging dPMR standard.

Two new local low-cost digital standards are being developed to meet high-end PSS requirements and low-end business/industrial requirements in China. This will limit the total available market and create pressure on device selling prices. Companies that have failed to see success in high-end digital now have an opportunity to carve out a future market. If existing digital manufacturers fail to address this space, they may well become increasingly marginalized.

COTS Equipment

Companies that develop solutions for consumer markets with limited presence in the LMR industry have seen growing success during 2009. This gap in the market is created by a growing need for high-speed data applications and functionality and the increasing use of commercial networks as primary or secondary modes of communications. With a move toward IP-based technology enabling higher levels of interoperability, the market is increasingly adopting consumer-grade technologies and equipment. This is

also creating new markets for specialist companies, such as Radio IP Software, which develops secure virtual private network (VPN) technologies that allow multiple wireless data connections to be used concurrently.

IMS Research expects this trend toward COTS equipment to accelerate as the PSS market moves toward broadband data capability via a mixture of dedicated and commercial systems and for an increasing number of LMR companies to launch in-house broadband solutions during the next two years. However, they will face increasing competition from COTS broadband equipment providers.

Push-to-talk (PTT)/cellular voice networks is another area that has quietly undergone a renewed resurgence during the past two years. There is potential for commercial PTT in other emerging regions, such as China and India. Looking longer term, this could open the door to cellular networks playing a greater part in voice communications for this industry.

IMS Research doesn't expect the LMR competitive environment to change overnight. With the onset of disruptive technologies such as SDR, IP-based equipment and increasing demand for high-speed data/broadband capability, the opportunities are there, but it will take time for these to become commonplace. It remains to be seen if the market leaders can continue to move with the market or whether new entrants can seize the opportunity. ■

Patrick Connolly is the director of IMS Research's mobile radio and GPS group. His focus is on the worldwide licensed and unlicensed mobile radio markets, autonomous and network-based/assisted GPS solutions for cellular and portable devices, and emerging location technologies to be used in conjunction with GPS. E-mail comments to patrick.connolly@imsresearch.com.



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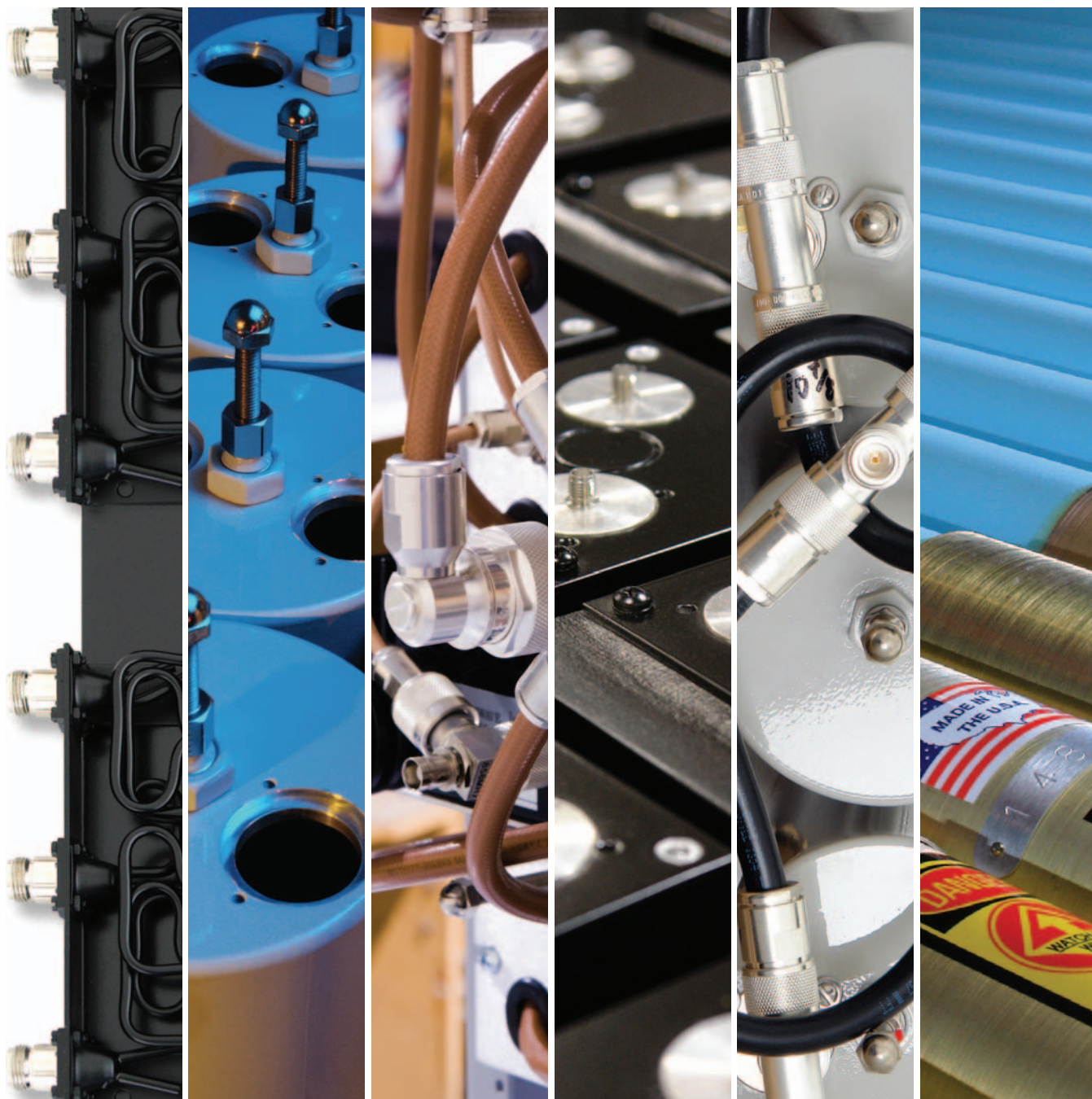
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