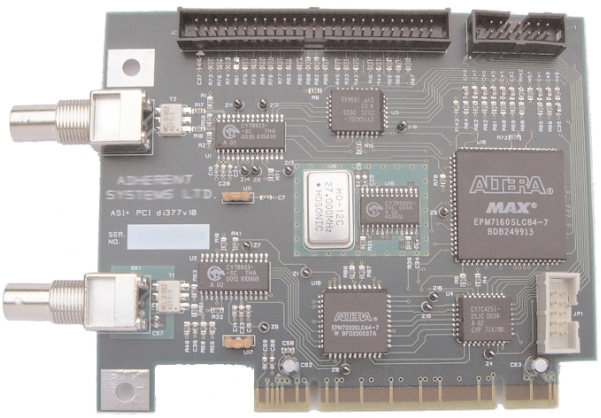
Interface Cards



ASI Interface Card.

ASI+

Designed for product developers, program providers and broadcasters, SV/AT970, AD95x-II and AD991 now have the ability to interface to MPEG-2 compressed digital video data streams directly from high-speed serial interfaces.

The Asynchronous Serial Interface adapter (ASI+) greatly simplifies interconnection to digital video systems and allows direct interconnection with third party equipment.

Functionality

The ASI+ adapter consists of a daughter card PCB for the AD95x-II, SV/AT970 and AD991 main MPEG processing card.

The ASI contains the processing electronics to allow a digital video transport stream to be fed at baseband directly to the MPEG processing system.

An ASI interconnect physically consists of two nodes: a transmitting node and a receiving node. This unidirectional copper coaxial cable carrying data from the transmitting node to the receiving node is referred to as a link. The link is used by the interconnected ports to perform communication. It is a point-to-point link system. Physical equipment such as video or audio compressors, multiplexers, modulators, etc., can be interconnected through these links.

Configuration

Once the ASI+ adapter is fitted, the AD95x-II will automatically detect the card on power-up. The Asynchronous Serial Interface settings may then be configured from both the Player and Monitor/Recorder programs.

On SV/AT970 installation, the unit will default on power-up to ASI receive, as transmit packet settings are not necessary on this monitoring unit.

The clock can be set to calculate the playout clock rate from the PCR Fields in the playout file or the clock rate to be entered directly as either the Bit Rate or Byte Rate frequency.

Features & Benefits

ASI+ For Use as Interface on AD95x-II Analyzers, SV/AT970 Monitoring System and AD991 MPEG Signal Source

- Allows Connection to Equipment with the Divicom M2S Interface and Provides Burst Mode Packet Transmission
- Interface Specification Fully Compliant with DVB A010 ASI-C Interface Specification
- Built-in Self Test Data Sequences (BIST) Can Also Confidence-check External Cable and Equipment Paths (loopthrough)

L-Band+ Input Interface Used on SV/AT970 Monitoring System and AD95x-II Analyzers for Direct Connection to RF Satellite Feeds

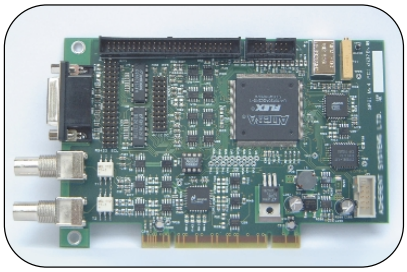
- Monitor Off Air QPSK Modulated Signals From 1 to 45 Msymbol/s

General Purpose Serial Interface (GPSI) for use with AD95x-II Analyzer, SV/AT970 Monitoring System and AD991 MPEG Signal Source

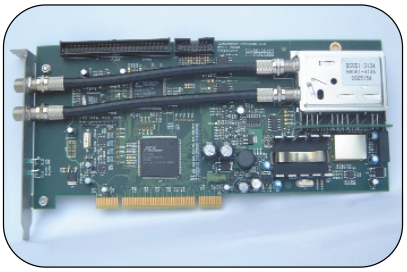
- SMPTE 310M Synchronous Serial Interface
- ECL Serial DC and AC
- DHEI
- RS422/RS485
- Synchronous Serial Interface

The ASI+ Adapter Has Four Optional Mode Settings:

- **ASI –** The operating mode of the standard ASI
- **ASI Burst –** Data is transmitted in bursts of 1, 2, 3 or 4 transport stream packets. The number of packets in each burst is specified in the Packets field
- **ASI Forced Error –** Causes an error byte to be transmitted in position 15 of each packet
- **M2S –** Selects Divicom M2S compatible mode



GPSI Interface Card.



L-Band Interface Card.

Self-test

This adapter card has a Built-in Self Test (BIST) function which can be used to troubleshoot the ASI interface and any connected serial link components.

It can be set to generate a special Pseudo Random Binary Stream (PRBS) test sequence and report the error rate detected.

GPSI

Designed for product developers, program providers and broadcasters, the AD95x-II, SV/AT970 and AD991 now have the ability to interface to MPEG-2 compressed digital video data streams directly from high-speed serial interfaces.

This greatly simplifies interconnection to digital video systems and allows direct interconnection with third party equipment via Tektronix's General Purpose Serial Interface (GPSI).

Functionality

The GPSI consists of a daughter card PCB for the AD991, AD95x-II, SV/AT970 and AD991 main MPEG processing card. The GPSI contains the processing electronics to allow a digital video transport stream to be fed at baseband directly to the MPEG processing system. It is able to internally recover or generate the clock signal on bi-phase interfaces with on-board PLL and LSI logic. High precision clock references support 8-VSB and 16-VSB bit rates.

Configuration

The GPSI is selected via the AD95x-II, SV/AT970 and AD991 user interface with the facility to select various clock sources, bit rates and other settings.

L-Band+

Designed for product developers, program providers and broadcasters, the SVAD95x-II and SV/AT970 now have the ability to monitor, record and analyze DVB and ATSC data streams directly from the RF L-Band.

This greatly simplifies interconnection of ATSC/DVB/MPEG systems and allows off air monitoring direct from satellite feeds and before upconversion at transmission stations.

Functionality

The L-Band interface consists of a daughter card PCB for the AD95x-II and SV/AT970 main MPEG processing card. The L-Band interface contains a QPSK demodulator and the processing electronics to allow an MPEG transport stream to be fed at baseband directly to the SV/AT970 and AD95x-II DVB/MPEG processing system. On the SV/AT970 this allows TR101 290 measurements*[1] to be performed in real time on RF feeds, with up to four channels monitored independently.

Configuration

The user inputs a set of parameters: Satellite frequency; LO frequency; symbol rate; Viterbi rate; DC power/Polarization (off/13 V/18 V); 22 kHz tone switching. A set of preconfigured channels can be stored allowing the user to switch conveniently between them.

Bit Error Measurement

The L-Band interface card measures the post-Viterbi Bit Error Rate (BER). SV/AT970 displays the pre-Viterbi BER calculated from this measurement according to TR 101 290.

*[1] With the exception of T_STD Buffer Model.

► Ordering Information

ASI – ASI+ Interface with M2S (Divicom) capability.

GPSI – GPSI-II Interface Card (SMPTE 310M, RS422 Serial, DVB SSI, DHEI Receive only).

GP/PL – GPSI-II+ with DHEI transmit (but maximum one card per AD95x-II).

LBND – L-Band Interface Card.

Contact Tektronix

ASEAN Countries (65) 356-3900

Australia & New Zealand 61 (2) 9888-0100

Austria, Central Eastern Europe, Greece, Turkey, Malta & Cyprus +43 2236 8092 0

Belgium +32 (2) 715 89 70

Brazil and South America 55 (11) 3741-8360

Canada 1 (800) 661-5625

Denmark +45 (44) 850 700

Finland +358 (9) 4783 400

France & North Africa +33 1 69 86 81 81

Germany +49 (221) 94 77 400

Hong Kong (852) 2585-6688

India (91) 80-2275577

Italy +39 (2) 25086 501

Japan (Sony/Tektronix Corporation) 81 (3) 3448-3111

Mexico, Central America & Caribbean 52 (5) 666-6333

The Netherlands +31 23 56 95555

Norway +47 22 07 07 00

People's Republic of China 86 (10) 6235 1230

Poland (48) 22 251 5340

Republic of Korea 82 (2) 528-5299

South Africa (27 11) 254-8360

Spain & Portugal +34 91 372 6000

Sweden +46 8 477 65 00

Switzerland +41 (41) 729 36 40

Taiwan 886 (2) 2722-9622

United Kingdom & Eire +44 (0)1344 392000

USA 1 (800) 426-2200

For other areas, contact: Tektronix, Inc. at 1 (503) 627-1924

07/01 HB/XBS 21W-14855-0

Tektronix
Enabling Innovation