Anritsu

Four optimized remote control solutions
From development to deployment

MT1000A Network Master Pro

MT1100A Network Master Flex

MU100010A 10G Multirate Module

MU110010A 10G Multirate Module
MU110011A 100G Multirate Module
MU110012A 40/100G Module CFP2

Introduction

Demands and requirements for remotely controlling network testers are becoming bigger, in these days. The reason is as following.
・With massive growth of smartphone and tablet data transmission, number of network deployment is also explosively growing. But, the number of network engineers for it is much smaller than the requirement.
So, the network deployment or maintenance with an engineer at the central network center operating testers remotely is becoming very popular in these days.
・At the network equipment manufacturing or deployed network troubleshooting, "tucking equipment" testing or bi-directional monitoring is very important. So, modern network testers have two ports inside to support them. Remote control software needs to have a feature to allow multiple users to access one tester and independently operate each port for efficient use of the tester.
・At network equipment manufacturing, GPIB-based or Ethernet-based testing system was built and repetitive test was performed. Demand of such test system is increasing more and more for many network deployments.
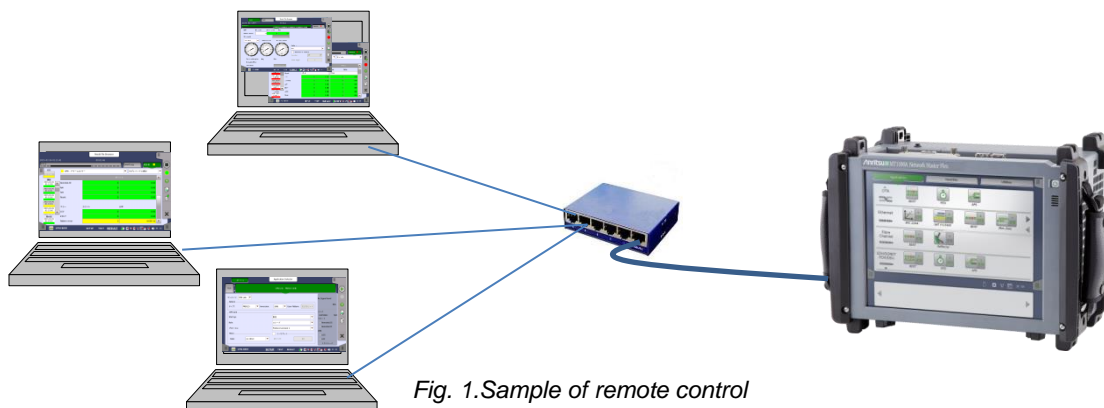
Fig. 1.Sample of remote control

Solution

MT1100A supports four remote control interfaces and four kinds of remote control solutions to optimize the system perfect fit to variable requirements.
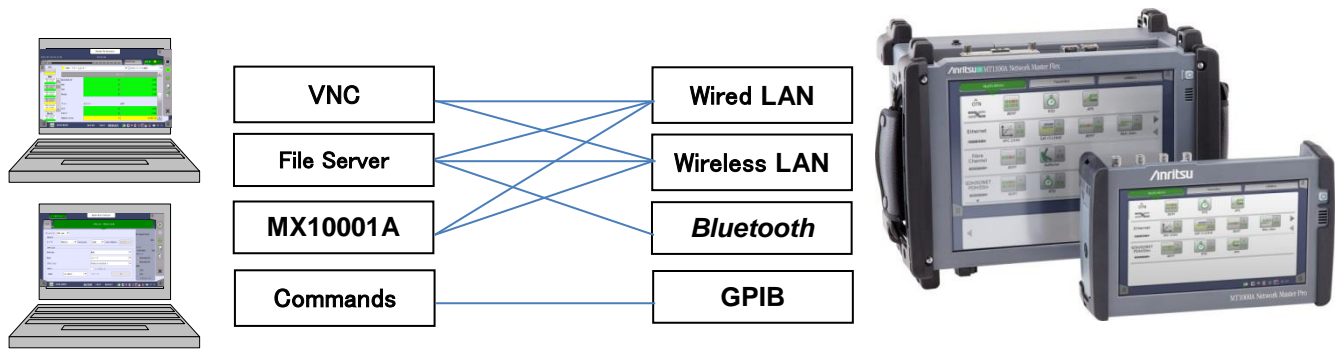

Fig. 2 MT1000A/MT1100A Remote control interfaces and control solutions

** Wireless LAN and *Bluetooth* can be used in the certificated countries. The certificated countries list is available from Anritsu homepage.

Application 1: Remote GUI control using VNC
Supported interface: Wired LAN, Wireless LAN

It's convenient to use Virtual Networking Computing (VNC) for remote control if network engineer won't go to the field for of the target network deployment or the engineer supports the technician in field.
MT1000A/MT1100A has VNC server inside. So, it's easy to control MT1000A/MT1100A remotely if a PC or a smartphone with VNC client software is connected with the MT1000A/MT1100A. Even if VNC client is not installed, the device could be connected with MT1000A/MT1100A in the case the device has Java 7 or earlier and web browser.

・The required bandwidth for VNC is 128 kbps to 1 Mbps. It depends on the network congestion.
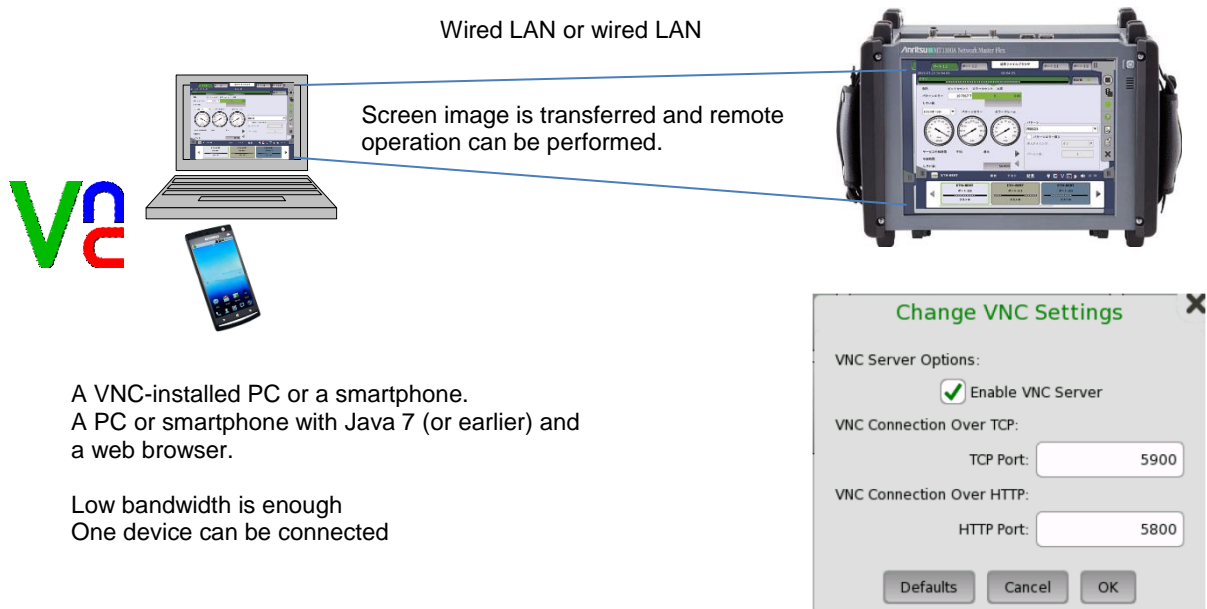・One PC or a smartphone can be connected with a MT1000A/MT1100A at the same time.

Fig. 3 Remote control using VNC

Application 2: File transfer with MT1000A/MT1100A network storage server
Supported interface: Wired LAN, Wireless LAN, *Bluetooth*

In these days, USB connection or USB thumb memory is prohibited to use in many offices or network stations.
Even in such conditions, it is required to send configuration files to the tester or get the result files from it.
In such case, file transfer can be done with MT1000A/MT1100A working as a network file storage server or network file storage client.

・Special application installation is not required for file transfer from/to MT1000A/MT1100A.

Wired LAN、Wireless LAN、*Bluetooth*

MT1100A to access PC's storage

PC to access MT1100A's storage

Fig. 4 MT1000A/MT1100A files transfer via network

Application 3: Remote GUI control using MX10000A
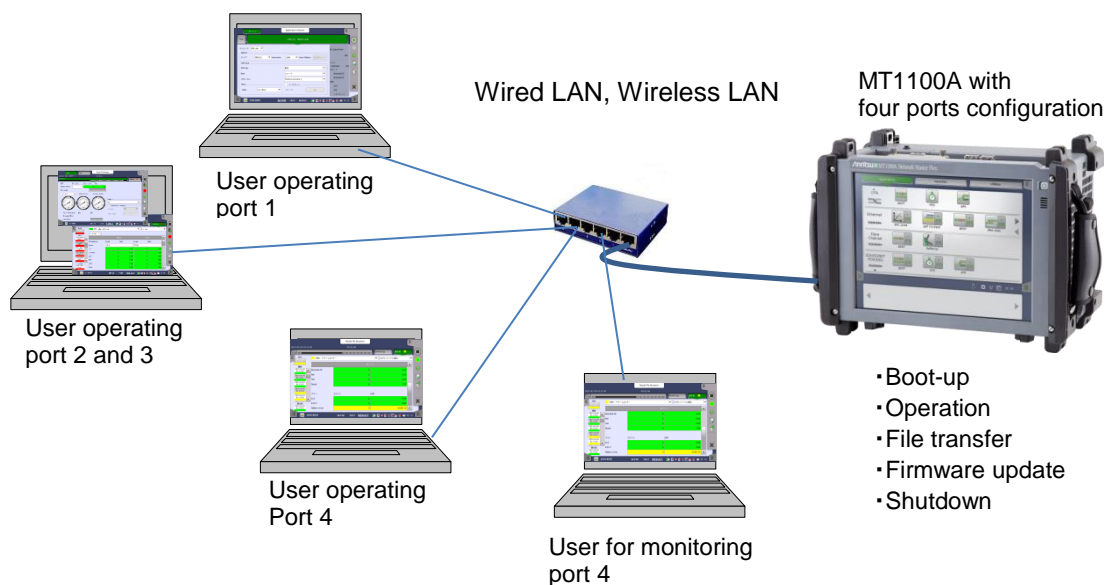
Supported interface: Wired LAN, Wireless LAN
Required bandwidth: 1 Mbps/port

At the network equipment manufacturing or deployed network troubleshooting, "tucking equipment" testing or bi-directional monitoring is very important. So, modern network testers have two ports inside to support them. Remote control software needs to have a feature to allow multiple users to access one tester and independently operate each port for efficient use of the tester. Also, the software is required to allow one user to access multiple ports simultaneously to monitor those ports simultaneously.

At the network deployment and troubleshooting, remotely full-control of a distant instrument including boot-up is required.

MX10001A, MT1000A/MT1100A Control Software, is the full-featured remote GUI control application software to meet those various requirements.

・MX10001A is downloadable from Anritsu web site.
・Users can control each port of MT1000A/MT1100A simultaneously and independently.
・Each port can be accessed one more user who cannot control but monitor it.
・A user can fully control MT1000A/MT1100A including boot-up, operating, file-transfer and firmware update. It is required for the usage at the submarine cable landing stations or unmanned stations.
・1 Mbps/port network bandwidth is required for full operations.

Wired LAN, Wireless LAN

User operating
port 1

User operating
port 2 and 3

User operating
Port 4

User for monitoring
port 4

MT1100A with
four ports configuration

・Boot-up
・Operation
・File transfer
・Firmware update
・Shutdown

Each port can be operated simultaneously and independently
One user can control multiple ports
One more user for each port only for monitoring

Fig. 5 Remote GUI control using MX100001A

Application 4: SCPI commands (script) control

Supported interface: Wired LAN, Wireless LAN, GPIB

SCPI commands (script) control has been popular for repetitive operation at development and manufacturing scenes. They built up the testing system based on GPIB remote control interface. But, they are moving to Ethernet-based system for speed and cost.

At network deployment and troubleshooting scene only with very low network bandwidth for control, SCPI commands control is selected thanks to its low bandwidth.
MT1000A/MT1100A has SCPI command control without any option. GPIB control is supported with MT1000A/MT1100A-004, GPIB control software option and J1667A, GPIB-USB converter.

・Multiple users can control each port simultaneously and independently. It can support efficient usage of one instrument.
・LabVIEW driver sample is available for National Instruments' LabVIEW programmers' support.
・SCPI commands reference, LabVIEW driver sample, MT1000A/MT1100A operation manual is downloadable from Anritsu Web site. Remote control programmers can start their work without the instrument.
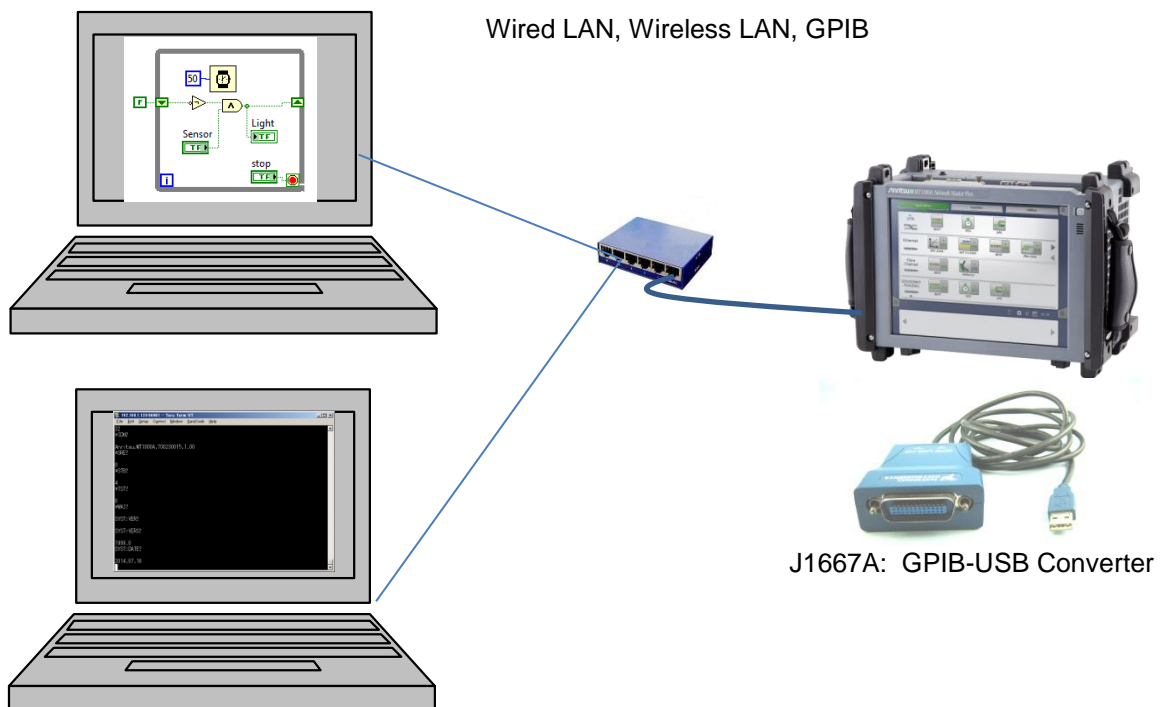

Wired LAN, Wireless LAN, GPIB

J1667A: GPIB-USB Converter

Fig. 6 Remote control using SCPI commands

Strength of the product

- Wired LAN, Wireless LAN, *Bluetooth*, GPIB are available for remote control interface.
- MX100001A, SCPI commands are available for the way of remote control
- MT1000A: 1.5 Mbps to 10 Gbps, MT1100A: 1.5 Mbps to 100 Gbps are supported.
- Strong OTN testing support including ODUFlex, multistage mapping, client signal test over mapped OTN.
- Full range of network testing support including core, metro, mobile backhaul, mobile fronthaul (CPRI/OBSAI)

Summary

MT1000A/MT1100A supports four remote control interfaces and four ways of remote control to fully support development, manufacturing, network deployment and troubleshooting.

Note

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Specifications are subject to change without notice.

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