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PRODUCT INTRODUCTION

MD1231A

IP Network Analyzer

ANRITSU CORPORATION

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MD1231A IP Network Analyzer

Product Introduction

Anritsu Corporation
Photonic Measurement Solutions
Version 1

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Today, I am going to introduce the new Anritsu MD1231A as shown here.

Contents

What is the MD1231A?
Exterior
Features
- Types of interface
- Throughput measurement
- Troubleshooting (Through mode)
  - Monitor, Capture/Decode
  - Traffic Monitoring/Mapping
- Latency measurement
- Frame arrival interval measurement
- Others

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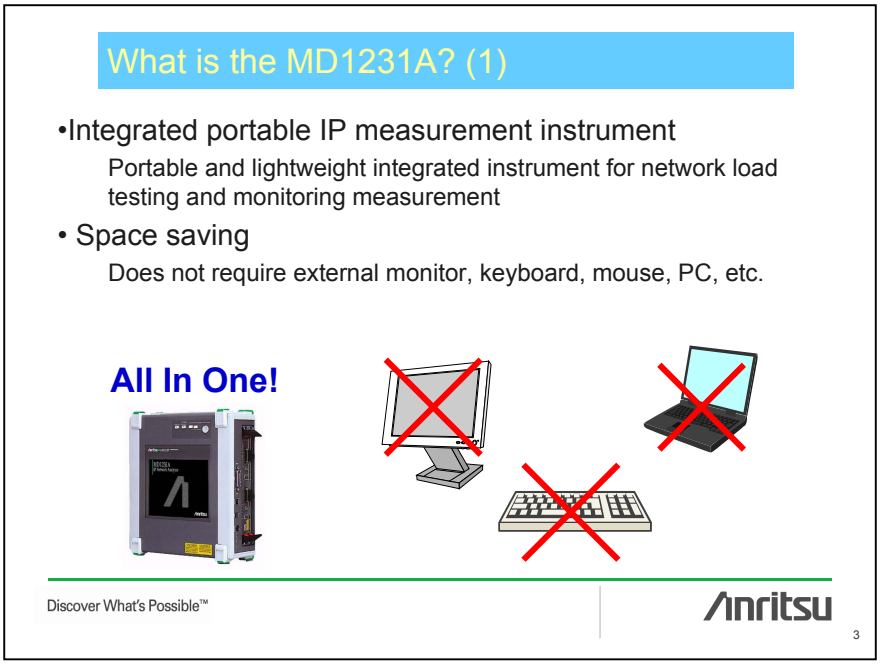
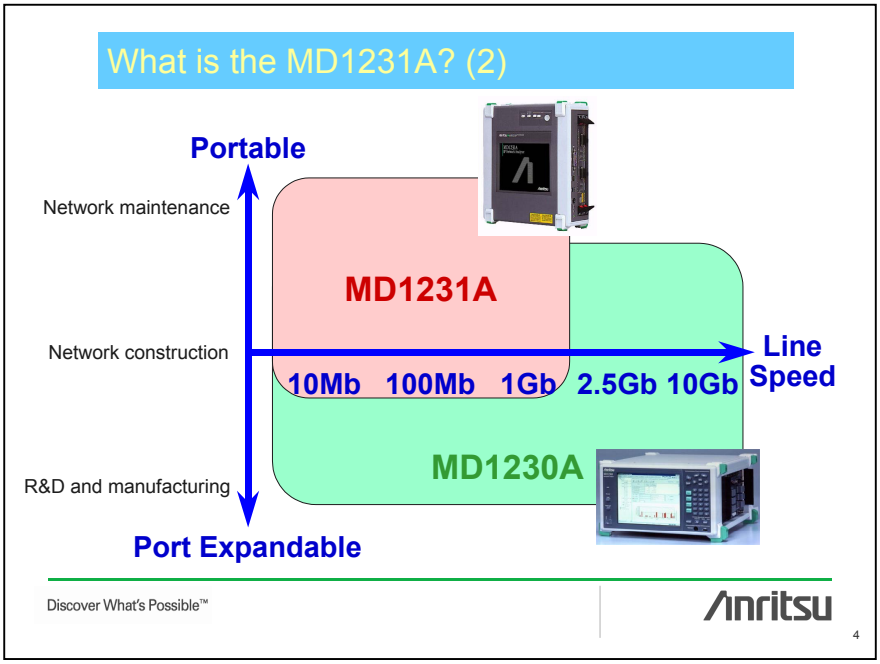
The MD1231A is a portable measuring instrument for performing both load testing and network monitoring all in a single box.
It occupies a tiny footprint and does not require any external peripherals like a CRT, keyboard, mouse, or note PC, etc.
The operation is exactly the same as the MD1230A, so operators who are familiar with the MD1230A will not require retraining.

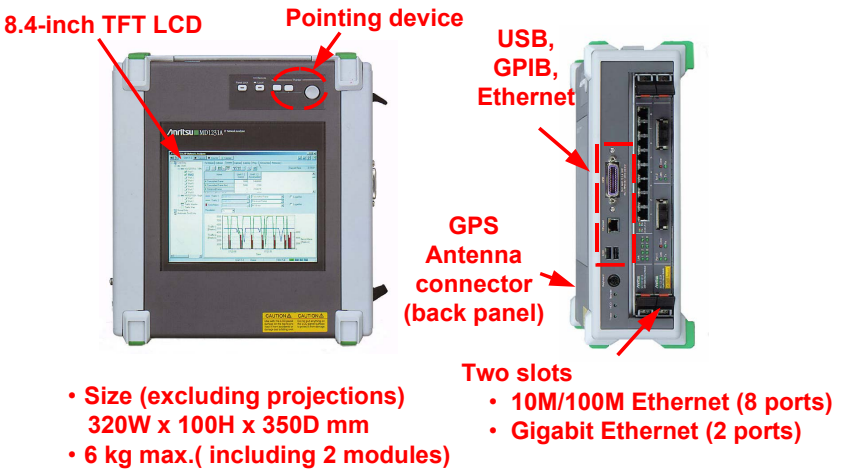


The MD1231A inherits the functions of the MD1230A but only supports 10M/100M Ethernet and Gigabit Ethernet interfaces.
The MD1231A was developed to be mainly used for the network maintenance.
The MD1231A can be easy to carry around so that it has only two slots for installing the interface modules.



It is easy to see for using 8.4-inch TFT LCD and up to two interface modules can be installed.
Every operation can be performed using a pointing device and an external keyboard and mouse are not required.

Exterior



- Size (excluding projections) 320W x 100H x 350D mm
- 6 kg max.(including 2 modules)

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This slide shows some application examples that make use of the MD1231A's features that I would like to explain.

Features

- Interfaces
- Throughput measurement
- Troubleshooting (Through mode)
  - Monitor, Capture/Decode
  - Traffic Monitoring/Mapping
- Latency measurement
- Fame arrival interval measurement
- Others

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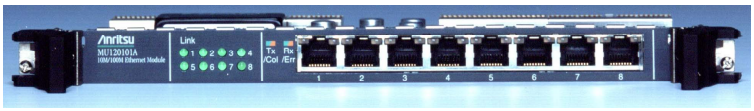
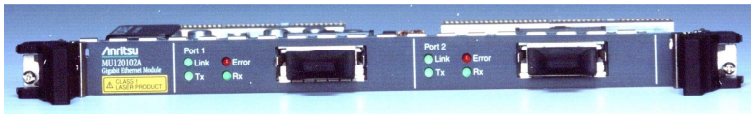
There are two types of interface modules: 10M/100M Ethernet and Gigabit Ethernet.
These interface modules can be used in the MD1230A for full compatibility.
The Gigabit Ethernet module supports 1000Base-SX/LX/LH/ZX using GBIC.

Interfaces

MU120101A 10M/100M Ethernet Module
- **8 ports/module**
- **Supports 10Base-T/100Base-TX**



MU120102A Gigabit Ethernet Module
- **2 ports/module**
- **Supports 1000Base-SX/LX/LH/ZX using GBIC**



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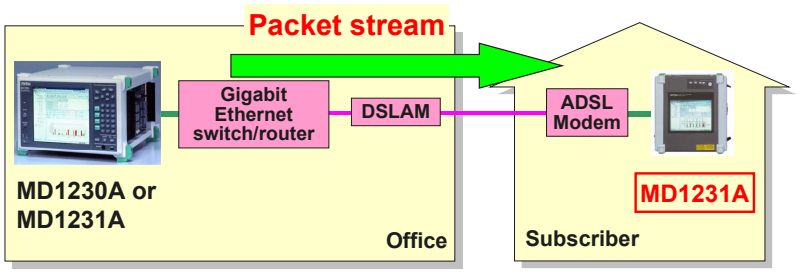
This slide shows a throughput measurement example.
With an ADSL setup, the MD1231A can be used at a remote site to accurately measure the circuit throughput using the MD1230A and MD1231A.
Of course, the MD1231A can be used instead of the in-office MD1230A.

Throughput Measurement

To evaluate throughput in an installed circuit, an MD1231A is connected at a remote site and it can measure accurate throughput against an MD1230A or MD1231A.



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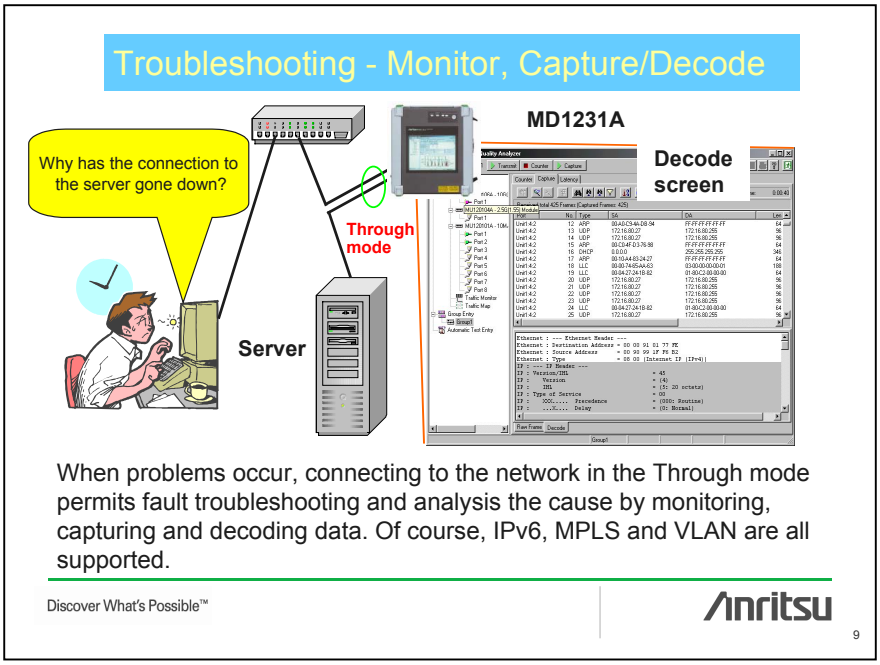
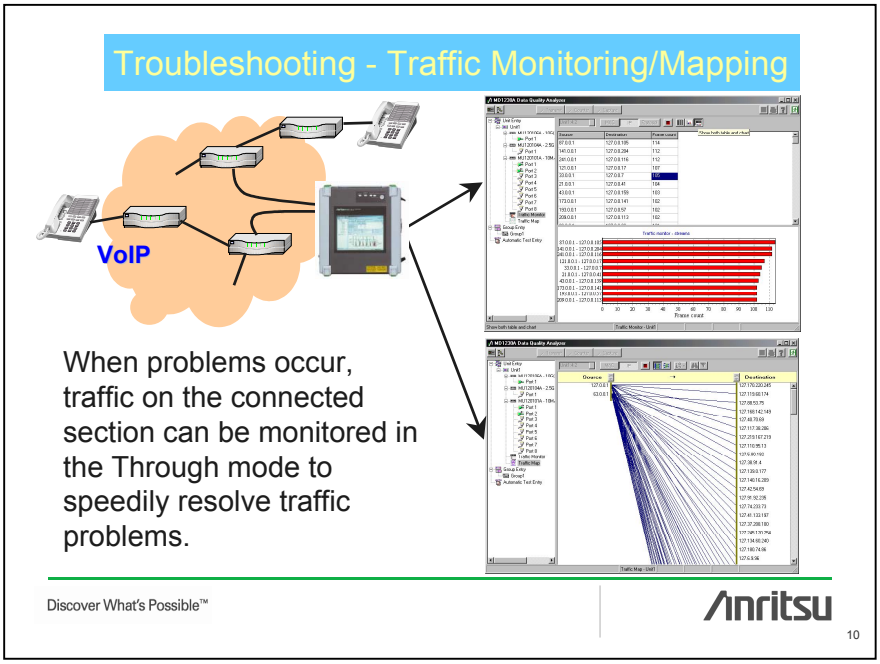
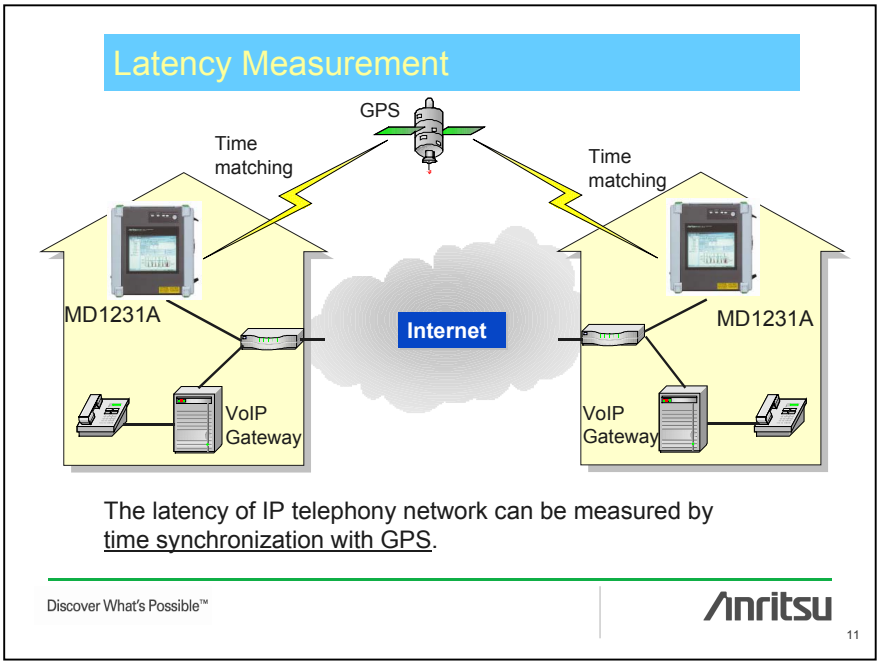
The MD1231A can be used in the through mode to perform monitoring and capture of the frames on the network.
By using the through mode, it is possible to monitor and capture faults in real time, providing speedy investigation of fault causes.
In addition, by using the decode functions, the captured packets and frames can be decoded and displayed. As a result, it is possible to analyze the field area of each packet from low to high layers; this permits isolation of problems in each layer.
Of course, the MD1231A supports IPv6, MPLS tables and VLAN tags, so it can be used in various fields and a wide variety of applications.



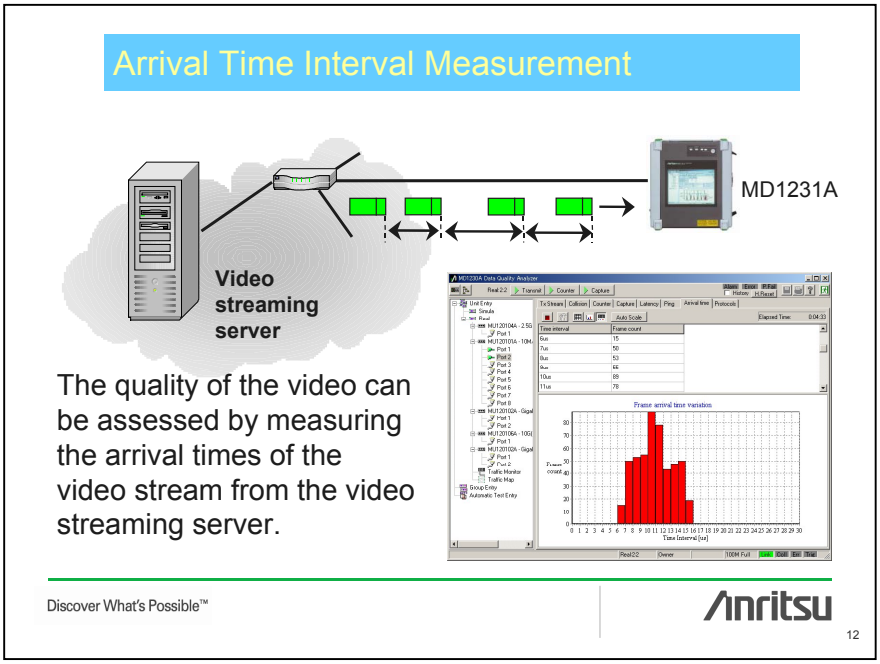
Network traffic analysis is extremely important in network maintenance.
The MD1231A has both traffic monitoring and mapping functions.
With the traffic monitoring function, the proportions of the data flows for each IP address, MAC address, or protocol can be analyzed using a graphical screen.
Furthermore, with traffic mapping, the sending and receiving signal pairs of the data flow for each IP address or MAC Address are displayed, making it easy to understand the data flow with the communications partner.



This slide shows a latency measurement application.
In IP telephony, voice is transferred as data using VoIP packets.
The problem with IP telephony is the delays and the packet jitter caused by processing at VoIP gateways and passage through the public network.
To measure a latency is very important for the applications like IP telephony.
With the MD1231A, the latency between remote sites can be measured using GPS.



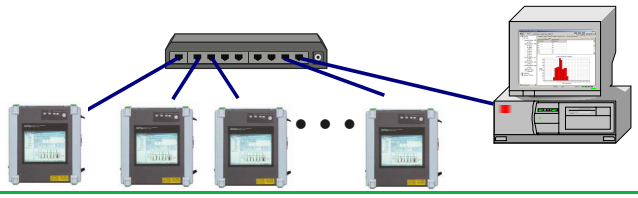
Here you can see an arrival interval application example.
Measurement of data (packet) arrival interval is an important item for streaming data like video over a network.
When the MD1231A is remotely connected, the arrival time variation can be measured by measuring the arrival times.



The MD1231A has some of the other features.
1. Ping function: This function is used to ping a specific IP address to test IP connections.
2. Protocol emulation: This function is used to emulate ARP, ICMP, IGMP, and BGP-4.
3. Auto test function: This function automatically does the test specified in RFC2544.
4. Multi-user function: Multiple users can use one MD1231A if each user allocates one measurement port or more.
5. Multi-unit function: With this function, one user can use and control up to eight MD1231A units.
6. When the separately sold MX123001A Data Quality Analyzer Control Software is installed in a PC running Windows 98 or Windows 2000, up to 8 units of the MD1230A or MD1231A can be remotely controlled via the network.

Others

•Ping
• Protocol emulation function
  - ARP, PING, IGMP, BGP4
• Auto-test function (RFC2544)
• Multi-user function
  - Allocates ports to each user
• Multi-unit function
  -Permits simultaneous control of up to eight MD1231A units
• Remote control (option)



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This slide shows the differences between the MD1230A and MD1231A.
The major difference is that the MD1231A is portable and has a limited number of interface modules that can be used.

References:Comparison of MD1230A and MD1231A

Item	MD1231A	MD1230A
Interface module	MU120101A 10M/100M Ethernet	MU120101A 10M/100M Ethernet
	MU120102A Gigabit Ethernet	MU120102A Gigabit Ethernet
		MU120118A 10Gigabit Ethernet
		MU120119A OC3/12 STM-1/4
		MU120120A OC3 STM-1/4
		MU120103A/04A 2.5G(POS)
		MU120105A/06A 10G(POS)
Number of Interface module slot	2 slots	5 slots
FDD	-	X
External VGA output	-	X
Pointing device	X	External USB mouse
Remote control interface	GPIB, Ethernet	GPIB, Ethernet, RS-232C
Size [mm]	320W×100H×350D	320W×177H×359D
Mass	<6kg(MU120101A and MU120102A is installed)	<15kg(not include a interface module)

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Specifications are subject to change without notice.

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