MU120131A 10/100/1000M Ethernet Module
MU120132A Gigabit Ethernet Module

MD1230B, MP1590B

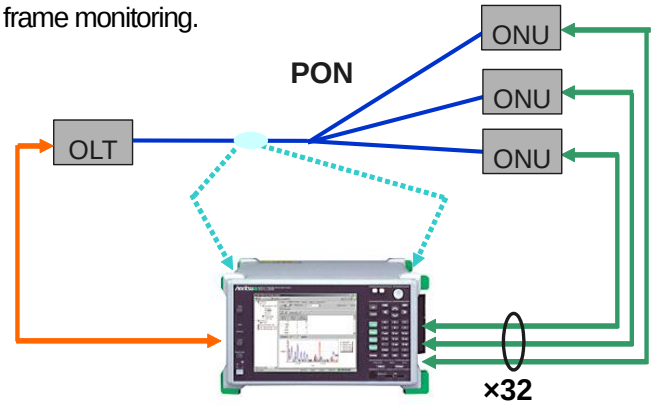
Data Quality Analyzer, Network Performance Tester

Multi-Ports Test for Multi-Service

Today's network connections include a wide variety of methods including LAN, FTTH, ADSL, CATV, WLAN, mobile, etc., while services are diversifying into Triple and Quadruple Play. This is driving the trend towards multi-port transmission equipment and network expansion. Additionally, QoS is becoming increasingly important for Internet and Ethernet networks using previous best-effort protocols. To meet these demands, Anritsu's MD1230 Data Quality Analyzer family now includes the high-cost performance MU120131A/132A modules for performing multi-port high-density measurements of transmission equipment on all these types of networks.

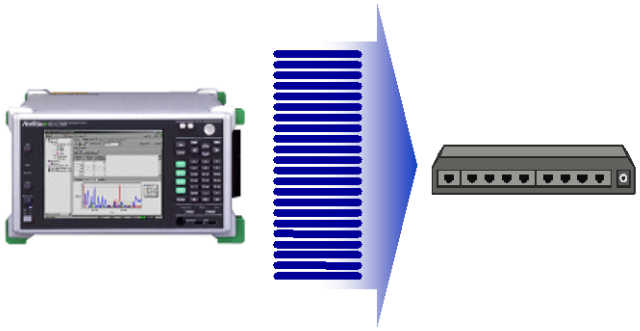
PON Measurement

OLT and ONU equipment for E-PON and G-PON applications is measured using end-to-end load tests in either one or both directions. The all-in-one MD1230B supports simultaneous measurement of ONU and OLT performance on a 32-port PON system as well as E-PON frame monitoring.



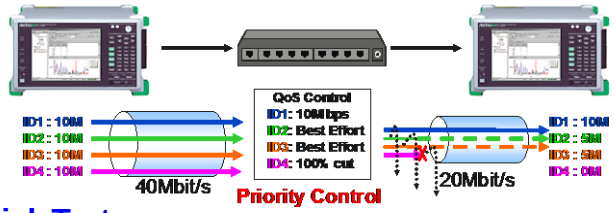
Switch Multi-Port Measurements

By using the MU120131A module (10/100/1000M), one MD1230B unit supports measurement of up to 60 ports. In other words, all 48 ports of a 1U switch can be load-tested simultaneously. And RFC2544/2889 auto-testing is also supported too.



Multi-Flow QoS Measurement

The priority control system at multi-flow streaming can be checked by monitoring the priority switching of each port at the send and receive sides. In addition, the data quality of each client and the network performance can also be checked.



Link Test

Since Link On/Off can be repeated forcibly, it is possible to monitor the Link status at Link Flap and detect any Link errors.

Clock Measurement

By using the MU120131A/132A clock measurement function, the frequency of equipment connected to each port can be monitored to check whether the clock of each equipment is within specification. And because a variable frequency function is built-in, the equipment clock withstand frequency can also be evaluated.

BER Measurement

Inserting a PRBS pattern into the Ethernet Data field supports BER measurement and verification of what errors are being generated by connected equipment.

PoE Power Supply Check

The MU1120131A has a PoE power supply check function that can be used to check that the specified power is being output.

Specifications

Model	MU120131A	MU120132A
Name	10/100/1000M Ethernet Module	Gigabit Ethernet Module
No. of Ports	RJ-45: 12 ports	SFP: 8 ports
Clock Measurement (*1)	Frequency Measurement (excluding 10BASE-T): MP1590B (±0.1 ppm), MD1230B (±4 ppm) Frequency Variation: ±100 ppm (1-ppm step)	
Link Up/Down (Flap)	On/Off/Flap (Interval: On: 10 to 3600s, Off: 1 to 3600s; Times: 1 to 65536; Infinite), No/Go evaluation	
Auto-negotiation Analysis (*2)	-	10B Code date send, auto-negotiation sequence capture, variable Link Timer
VLAN Measurement	Q in Q VLAN	
E-PON Support	-	Programmable Preamble, E-PON preamble CRC Error, Pattern Trigger & Capture, LLID Decode
PoE (*3)	Emulation by class Power supply check (Off, Under, Normal)	-
Application Traffic Monitor (*4)	Supported	
RFC Test	RFC2544 (VLAN), RFC2889 (VLAN) (*5)	
BER Measurement	Packet BER (Single PRBS9, Cross PRBS23, 31) (*6), Unframe BER	
Multi-flow Counter	Frame/bit/byte/rate/latency (min., max., current, avg.)/Sequence Error count 256Flow/port real-time display	
Supported Models	MD1230B, MP1590B	

*1: Clock Measurement requires MU120131A-01 and MU120132A-01

*2: Auto-negotiation analysis requires main-frame option 15 (MD1230B-15, MP1590B-15)

*3: PoE requires MU120131A-02

*4: Application Traffic requires main-frame option 20 (MD1230B-20, MP1590B-20)

*5: RFC2889 measurement requires-main frame option 10 (MD1230B-10, MP1590B-10)

*6: Packet BER measurement requires main-frame option 11 (MD1230B-11, MP1590B-11)

External Appearance

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Ordering Information

Model/Code	Name
	-Plug-in Modules-
MU120131A	10/100/1000M Ethernet Module
MU120132A	Gigabit Ethernet Module
	-Options-
MU120131A-01	Clock Measurement
MU120131A-02	PoE*
MU120132A-01	Clock Measurement

Model/Code	Name
	-Application Parts-
G0181A	SFP SX 850 nm
G0182A	SFP LX 1310 nm
G0183A	SFP LE 1310 nm
G0184A	SFP LR 1550 nm

*Factory Option; retrofitting in already shipped units requires return to the Anritsu factory.

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