

ANRITSU

MT1000A

The Anritsu MT1000A Network Master Pro is a versatile, modular, and portable test platform designed for optical fiber characterization (OTDR) and multi-protocol network testing. Capable of supporting OTDR, optical loss test sets (OLTS), Ethernet (up to 100G), OTN, SDH/SONET, Fibre Channel, and CPRI/OBSAI testing, the MT1000A is a field-proven solution that simplifies network installation, maintenance, and troubleshooting.

SPECIFICATIONS

General

Interfaces	3x USB 2.0 Type A, 1x USB 2.0 Type Mini-B, 1x RJ-45 Gigabit Ethernet LAN, WLAN (IEEE 802.11 b/g/n), Bluetooth v2.1+EDR, 3.5 mm Audio Jack
Display	9-inch active matrix TFT color touch screen, WVGA (800 x 480 pixels)

Physical

Power Supply	Input: 100 V to 240 V AC, 50/60 Hz; Output: 18 V DC, 5.5 A; Li-ion rechargeable battery (10.8 V, 6.75 Ah)
Operating Temperature	0 °C to +50 °C (0 °C to +40 °C when charging battery) °C
Dimensions (W×H×D)	257.6 x 164.4 x 103.5 mm (with OTDR module MU100020A/21A/22A and battery) mm
Weight	2.6 kg kg
Multi-Module Stacking Capability	Yes (supports stacking mainframe with up to two measurement modules)

OTDR Performance Specifications

OTDR Wavelengths (SM)	1310 nm, 1550 nm, 1625 nm (module and configuration dependent)
OTDR Wavelengths (MM)	850 nm, 1300 nm (MU100022A)
Fiber Types Tested	Single-mode (SM), Multi-mode (MM)
Dynamic Range (SM)	39 dB / 37.5 dB
Dynamic Range (MM)	29 dB / 28 dB (850/1300 nm, MU100022A)
Event Dead Zone (SM)	≤ 0.8 m
Event Dead Zone (MM)	≤ 0.8 m
Attenuation Dead Zone (SM)	≤ 3.8 m
Attenuation Dead Zone (MM)	≤ 4.0 m
Pulse Widths (SM)	3 ns, 10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 μs, 2 μs, 5 μs, 10 μs, 20 μs
Pulse Widths (MM)	3 ns, 10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 μs, 2 μs, 5 μs
Distance Ranges (SM)	0.5 km, 1 km, 2.5 km, 5 km, 10 km, 25 km, 50 km, 100 km, 200 km, 300 km
Distance Ranges (MM)	0.5 km, 1 km, 2.5 km, 5 km, 10 km, 25 km, 50 km
Sampling Points	Up to 250,001 points
Sampling Resolution	Minimum 5 cm
Distance Accuracy	±1 m ± (3 × 10 ⁻⁵ × distance) ± sampling resolution
Loss Resolution	0.001 dB
Group Refractive Index (IOR) Setting	1.30000 to 1.70000
Optical Connector Options	FC, SC, LC, ST

Optical Source & Power Meter (OLTS)

Stabilized Light Source Wavelengths	1310 nm, 1550 nm (SM) / 850 nm, 1300 nm (MM) (module dependent)
Light Source Output Power	-5 dBm ±1.5 dB (SM), -20 dBm ±3 dB (MM)
Light Source Stability	≤ ±0.1 dB (SM, 1 hour)
Power Meter Calibrated Wavelengths	850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm, 1625 nm, 1650 nm
Power Meter Measurement Range	-50 dBm to +26 dBm (SM/MM)
Power Meter Measurement Accuracy	±5%

Visual Fault Locator (VFL)

VFL Wavelength	650 nm ±15 nm
VFL Output Power	0 dBm ±3 dB
VFL Operating Modes	Continuous Wave (CW), Pulse (approx. 2 Hz)
VFL Laser Safety Class	Class 2

Ethernet & Transport Testing Option Capabilities

Supported Interface Rates	10 Mbps to 100 Gbps (module dependent)
Physical Port Options	SFP, SFP+, SFP28, QSFP+, QSFP28, RJ-45
Ethernet Testing Standards	RFC 2544, Y.1564, RFC 6349 TCP Throughput
OTN Testing Standards	ITU-T G.709 (OTU1, OTU2, OTU1e, OTU2e, OTU1f, OTU2f, OTU3, OTU4)
SDH/SONET Testing Standards	ITU-T G.707, GR-253-CORE (STM-1 to STM-64 / OC-3 to OC-192)
Fibre Channel Rates	1GFC, 2GFC, 4GFC, 8GFC, 10GFC
CPRI Interface Rates	CPRI Option 1 (614.4 Mbps) to Option 8 (10.1 Gbps)
OBSAI Interface Rates	768 Mbps, 1.536 Gbps, 3.072 Gbps, 6.144 Gbps
Synchronization Testing	SyncE (ITU-T G.826x), IEEE 1588v2 (PTP) verification
BERT Patterns	PRBS 9, PRBS 11, PRBS 15, PRBS 20, PRBS 23, PRBS 31, QRSS, User defined

System & User Interface

Internal Storage Capacity	Approx. 7 GB
PDF Report Generation	Built-in automated PDF report generator
Operating System	Linux-based proprietary OS
Touch Panel Technology	Resistive touch screen
Multi-language Support	English, Japanese, Chinese, French, German, Spanish, Korean, Russian

Connectivity & Interfaces

GPS Receiver Support	Via external USB GPS receiver or MU100090A module
External Clock Input	10 MHz, 2.048 MHz, 1.544 MHz, 1 pps
Remote Control Methods	VNC, Web browser, CLI commands
Software Update	Via USB flash drive or network download
Fiber Inspection Probe Support	USB external video inspection probe (G0306A/G0382A)

Power Supply & Management

AC Adapter Input	100 V to 240 V AC, 50/60 Hz
AC Adapter Output	18 V DC, 5.62 A
Battery Type	Lithium-Ion smart battery pack
Battery Operating Time	Up to 6 hours (OTDR module) / up to 4 hours (10G transport module)
Battery Charging Time	Approx. 3 hours (power off)

Physical Characteristics

Main Unit Dimensions (with Protector)	257.6 x 164.4 x 60.5 mm
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Environmental Specifications

Storage Temperature Range	-20 °C to +60 °C
Relative Humidity Range	85% or less (non-condensing)

Compliance & Certifications

Laser Safety Compliance	IEC 60825-1, Class 1 / Class 1M / Class 2 (VFL)
EMC Compliance	EN61326-1, EN61000-3-2
Vibration Resistance	MIL-T-28800F Class 3
Calibration Interval	1 year

Connectivity

WLAN Standards	IEEE 802.11 b/g/n (option-dependent)
Bluetooth Standard	Bluetooth v2.1 + EDR (option-dependent)
USB Interface	2x USB 2.0 Type A (Host), 1x USB 2.0 Type Mini-B (Client)
Ethernet Control Port	10/100/1000BASE-T (RJ45)
Audio Interfaces	3.5 mm diameter stereo jack, built-in monaural speaker, built-in microphone

Power

Battery Model	G0310A Lithium-Ion battery pack
Battery Pack Capacity	10.8 V, 6.75 Ah (73 Wh)

Software & Features

Built-in Wireshark	Yes (supports protocol analysis and packet display on .pcap files)
Built-in PDF Viewer	Yes (allows viewing of saved reports and user guides)
Report File Formats	PDF, XML, CSV, HTML

Environmental

Environmental Resistance Standard	MIL-T-28800D Class 3 (Vibration and Shock)
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Transport Testing

PDH/DSn Testing Rates	1.544 Mbps (DS1), 2.048 Mbps (E1), 34.368 Mbps (E3), 44.736 Mbps (DS3), 139.264 Mbps (E4)
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Ethernet Testing

RFC 2544 Testing	Throughput, Frame Loss, Latency, Packet Jitter, Back-to-Back
ITU-T Y.1564 Testing	Service Configuration Test, Service Performance Test (up to 8 services)
RFC 6349 TCP Testing	Supported up to 10 Gbps (module/option dependent)
Ethernet Multi-stream Generation	Up to 16 independent streams

Synchronization Testing

SyncE Standards Supported	ITU-T G.8261, G.8262, G.8264 ESMC
IEEE 1588v2 Profiles Supported	ITU-T G.8265.1, G.8275.1, G.8275.2
Wander Analysis Parameters	TIE, MTIE, TDEV

OTDR Testing

OTDR Test Modes	Auto, Manual, Realtime, Fiber Visualizer
Macrobend Detection	Supported (automatic comparison of multiple wavelengths)

TECHNOLOGY

Optical Time Domain Reflectometry (OTDR) & Transport Network Testing

APPLICATIONS

Fiber optic characterization, network installation, commissioning, and maintenance from access to core networks

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