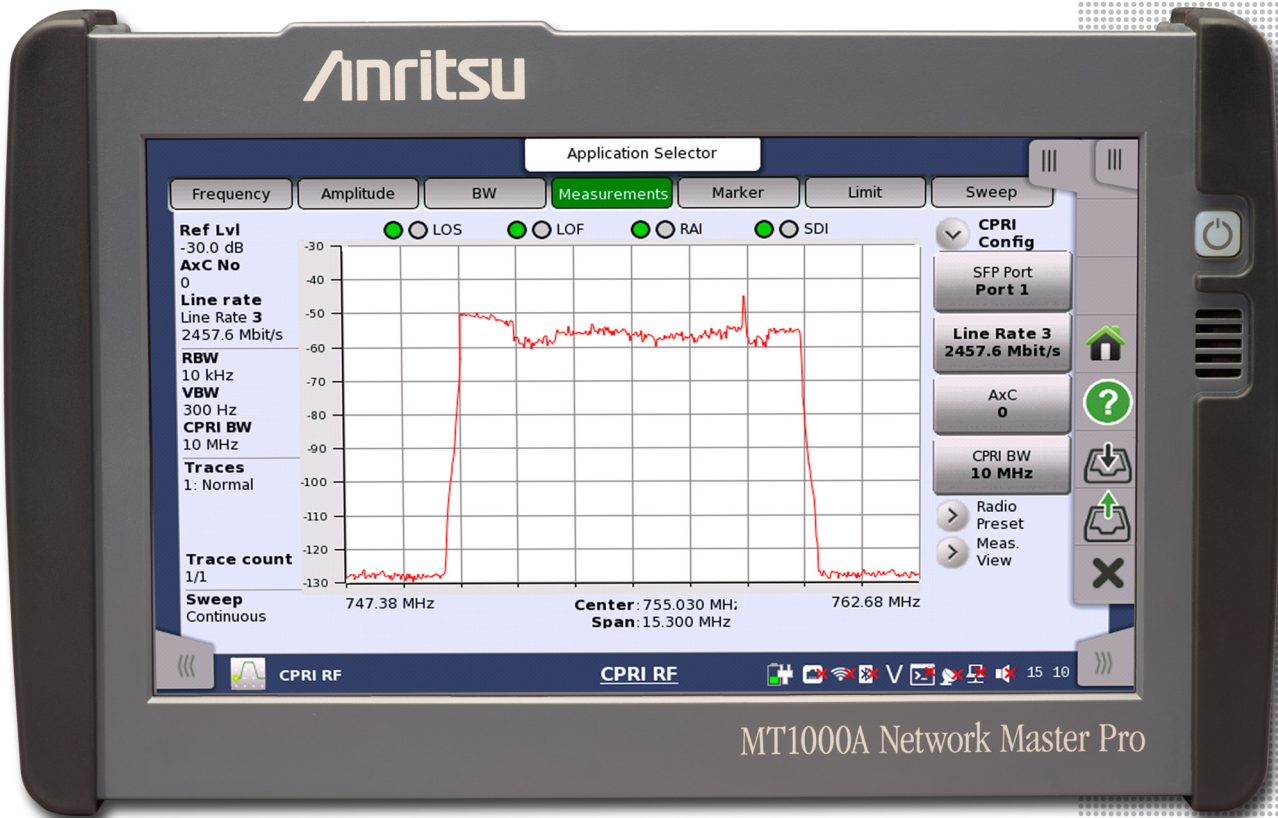


Anritsu envision : ensure

# Network Master™ Series

## Network Master Pro MT1000A

### CPRI RF Module MU100040A



MT1000A Network Master Pro

## Introduction

The MT1000A Network Master Pro is a handheld, battery-powered tester designed to facilitate the installation and maintenance of cellular networks. CPRI RF measurements are configured and displayed on the 9-inch color touch screen. The MU100040A CPRI RF module for the MT1000A Network Master Pro adds CPRI RF measurements to Anritsu's transport and fiber test platform. The modular design of the MT1000A means that it can be configured just for CPRI measurements or combined with the 10G transport module and OTDR module to create the most comprehensive and versatile fiber and transport tester available.

### Key Benefits and Features

- Displays LTE spectrum of ALU/Nokia, Ericsson and Huawei CPRI radios
- Fast update rate to capture intermittent interferers
- Spectrum pan and zoom for detailed analysis of interferers
- Spectrogram display captures and holds data for intermittent interferers
- Two SFP slots for simultaneous uplink and downlink testing
- SFP data reading and display
- Layer 2 alarm monitoring and display
- Auto configuration of CPRI parameters
- Modular design for use with MT1000A OTDR and 10G transport test modules
- Battery powered for field use

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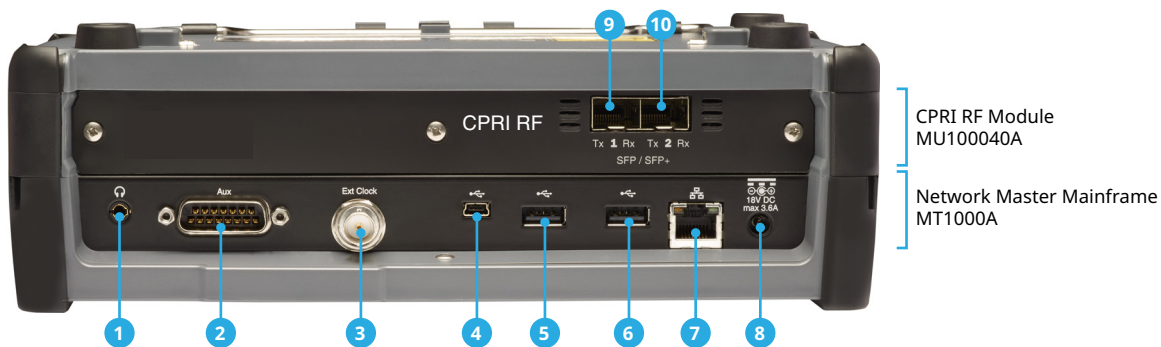
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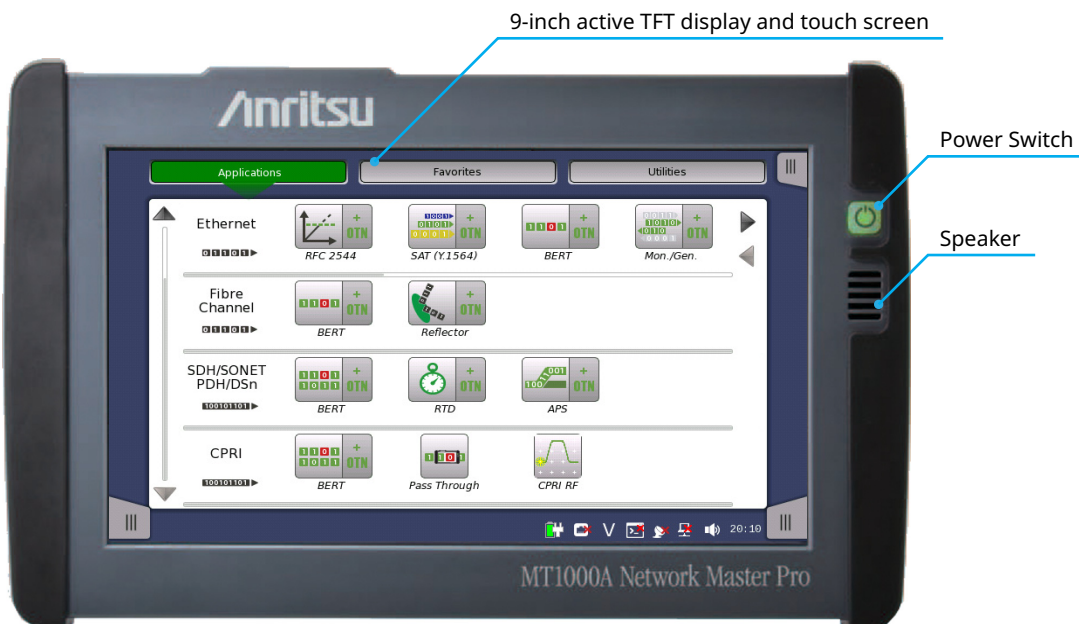
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All specifications and features subject to change without notice. For the most current data sheet, please visit the Anritsu web site: [www.anritsu.com](http://www.anritsu.com)

Connector Panel and Interface Overview



- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1. Audio (3.5Ø: CTIA Standard)</li> <li>2. AUX (G0325A/with MT1000A-005, MU100090A)</li> <li>3. Clock Input</li> <li>4. USB Mini-B</li> <li>5. USB A</li> </ul> | <ul style="list-style-type: none"> <li>6. USB A</li> <li>7. Ethernet Service Interface</li> <li>8. DC Input (18 VDC)</li> <li>9. CPRI SFP Port 1</li> <li>10. CPRI SFP Port 2</li> </ul> |
|--|--|



**Network Master Pro MT1000A Mainframe**

<b>User Interfaces</b>		
Display	9-inch active TFT display (800 × 480 pixels) and touch screen	
Supported Languages	English	
<b>Service Interfaces</b>		
USB Data Interface	MT1000A operates as host: USB 2.0 type A (2 ports) MT1000A operates as device: USB 2.0 type Mini-B (1 port)	
Ethernet Interface	Ethernet 10M/100M/1000M, Connector: RJ45	
WLAN Interface <sup>1</sup>	IEEE 802.11 b/g/n	
Bluetooth Interface <sup>1</sup>	Bluetooth 2.1 +EDR	
<b>Other Interfaces</b>		
Audio Interface	For connection of CTIA Standard head set Connector: 3.5 mm diameter jack	
AUX Connector	For connection of optional G0325A GPS receiver With MT1000A-005: For connection of optional MU100090A	
Built-in Loudspeaker	Monitors voice channel Output level: user-controlled from user interface	
Ext. Clock Input	For connection of external clock signals: SETS (E1: 2.048 Mbps), BITS (DS1: 1.544 Mbps) or 2.048 MHz TTL signal in accordance with ITU-T G.703, 10 MHz Connector: BNC	
<b>Miscellaneous</b>		
Battery	10.8 V rechargeable and replaceable intelligent Li-ion battery Operating time: 4 hours (typical) Charging time: 3 to 6 hours (typical) Remaining capacity indication: %	
Mains Adapter	Input: 100 VAC to 240 VAC, 50 Hz/60 Hz Output: 18 VDC, 3.62 A (max) Power Consumption: ≤ 65 W	
Dimensions and Mass	255 (W) × 164 (H) × 80 (D) mm ≤2.6 kg (including MT1000A, MU100040A and battery)	
<b>Environmental</b>		
Temperature	Operating: 0 °C to +45 °C (non-condensing) with MU100040A Charging: 0 °C to +40 °C (non-condensing) Storage: -30 °C to +60 °C (non-condensing, without battery or AC adapter) -20 °C to +50 °C (non-condensing, with battery and AC adapter)	
Humidity	Operating: ≤ 85 % RH (non-condensing) Storage and Transportation: ≤ 90 % RH (non-condensing)	
<b>Compliance and Safety</b>		
EMC	EN61326-1, EN61000-3-2	
LVD	EN61010-1	
Laser Safety <sup>2</sup>	IEC 60825-1: 2007 CLASS 1, 21CFR1040.10, and 1040.11 <sup>3</sup> (MU100040A with optical modules)	

1. Available for certified countries and regions including USA, Canada, Japan and all EU countries. Please visit [www.anritsu.com](http://www.anritsu.com) for updated information.  
 2. Safety measures for laser products. This product complies with optical safety standards in 21CFR1040.10, 1040.11, and IEC 60825-1. The descriptive labels are affixed to the product.  
 3. Excludes deviations caused by conformance to Laser Notice No. 50 dated June 24, 2007.



**CPRI LTE RF Measurements (Option 1)**

<b>Measurements</b>	(CPRI RF measurements support LTE technology)
Spectrum	LTE Uplink and Downlink
Spectrogram	LTE Uplink and Downlink
Layer 2 Alarms	Signal Loss, LOS, LOF, LSS, Remote LOS, Remote LOF, RAI, SDI, Reset
SFP Data	Reads device information
Optical Power	Reads Tx/Rx Optical Power from SFP

**Setup Parameters**

Frequency	Center, Span
Amplitude	Reference Level (RL), Scale
Bandwidth	RBW, Auto RBW, VBW, Auto VBW, VBW/Average Type, RBW/VBW, Span/RBW
Measurements	CPRI Spectrum, Spectrogram, Layer 2 Alarms, SFP Data (SFP Info/Compliance Info)
CPRI Configure	Line Rate, AxC Container #, CPRI BW, Radio Presets
Radio Presets	Ericsson (Uplink/Downlink), Alcatel (Uplink/Downlink) Huawei (Uplink/Downlink), Advanced
Advanced	IQ Bit Width, Number of Reserve Bits, Aggregation (On/Off)

**Sweep Functions**

Sweep	Single/Continuous
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**Trace Functions**

Traces	Up to three Traces (1, 2, 3), Blank, Hold/View, Active
Trace 1 Operations	Normal, Max Hold, Min Hold, Average (2 to 512 averages)
Trace 2 Operations	Max Hold, Min Hold
Trace 3 Operations	Max Hold, Min Hold

**Marker Functions**

Markers	Markers 1 to 6, Marker Table (On/Off), All Markers Off
Marker Auto-Position	Peak Search, Next Peak (Right/Left), Marker Frequency to Center, Fine Tune Marker Control (Right/Left)
Marker Table	1 to 6 markers frequency and amplitude

**Limit Line Functions**

Limit Lines	Upper/Limit, On/Off, Move, Limit Alarm
Limit Line Move	By dB

**Bandwidth**

Resolution Bandwidth (RBW)	10 Hz to 3 MHz in 1-3-10 sequence ±10 % (-3 dB bandwidth point) typical
Video Bandwidth (VBW)	10 Hz to 3 MHz in 1-3-10 sequence ±10 % (-3 dB bandwidth) typical
Line Bit Rate	Line bit rate 1: 614.4 Mbit/s Line bit rate 2: 1228.8 Mbit/s Line bit rate 3: 2457.6 Mbit/s Line bit rate 4: 3072.0 Mbit/s Line bit rate 5: 4915.2 Mbit/s Line bit rate 6: 6144.0 Mbit/s Line bit rate 7: 9830.4 Mbit/s

**CPRI Parameters**

IQ Sample Width	10 bits, 12 bits, 15 bits, 16 bits
Bandwidth	5 MHz, 10 MHz, 15 MHz, 20 MHz
Aggregation	On/Off

**CPRI Interfaces** Two SFP (small form factor pluggable) optical transceiver ports.

SFP 4.25G	850 nm
SFP+ 8G-FC/10G-SR	850 nm
SFP 2.7G	1310 nm
SFP+ 10G-LR	1310 nm
SFP 3.07Gbps	1310 nm
SFP 3.7Gbps	850 nm
SFP+ 10.5Gbps	1310 nm
SFP+ 10.5Gbps	850 nm

**Ordering Information** Please specify the model/part number, description, and quantity when ordering.

**Mainframe**



Part Number	Description
MT1000A	Network Master Pro

**Standard Accessories**

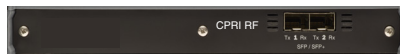
B0728A	Rear Panel and Screw Kit
J1565A <sup>a</sup>	Line Cord USA
J1594A <sup>a</sup>	Line Cord Japan
J1566A <sup>a</sup>	Line Cord Europe
J1567A <sup>a</sup>	Line Cord UK
J1568A <sup>a</sup>	Line Cord Australia
J1596A <sup>a</sup>	Line Cord Korea
Z1746A	Stylus
G0309A	AC Adapter
G0310A	Li-ion Battery
Z1747A <sup>b</sup>	Shoulder Strap
Z1748A <sup>c</sup>	Handgrip

**Options**

MT1000A-003 <sup>d</sup>	Connectivity for WLAN/Bluetooth
MT1000A-005 <sup>e</sup>	AUX I/O

- a. One of the power line cords is supplied with the MT1000A.
- b. This strap is mounted on the MT1000A.
- c. This handgrip is mounted on the MT1000A.
- d. Available for certified countries and regions including USA, Canada, Japan and all EU countries. Please visit the Anritsu web site for updated information.
- e. Required to carry MU100090A. MT1000A-205 is a retrofit option.

**CPRI RF Module**



Part Number	Description
MU100040A	CPRI RF Module (requires the option listed below)

**Options**

MU100040A-001	Option 1, CPRI LTE RF Measurements
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**Optional CPRI Accessories**

67-12-R	80/20 Optical Tap; Single Mode/Multi Mode
67-13-R	80/20 Optical Tap; Single Mode
67-14-R	50/50 Optical Tap; Single Mode/Multi Mode
67-15-R	50/50 Optical Tap; Single Mode
68-5-R	SFP (Optical Module), 4.25G, 850 nm, 500 m
68-6-R	SFP+ (Optical Module), 8G FC/10G SR 850 nm
68-7-R	SFP (Optical Module), 2.7G, 1310 nm, 15 km
68-8-R	SFP+ (Optical Module), 10G LR, 1310 nm
68-9-R	SFP (Optical Module), 3.07Gbps SFP, 1310 nm
68-10-R	SFP (Optical Module), 3.7Gbps SFP, 850 nm
68-11-R	SFP (Optical Module), 10.5Gbps SFP+, 1310 nm
68-12-R	SFP (Optical Module), 10.5Gbps SFP+, 850 nm
2100-29-R	Fiber Optic Cable, 3 m, LC/UPC, Single Mode (SM), Simplex
2100-30-R	Fiber Optic Cable, 10 m, LC-SC, Multi Mode (MM), Simplex
2100-31-R	Fiber Optic Cable, 3 m, LC/UPC, Single Mode (SM), Duplex
971-14-R	Ferrule Cleaner, 2.5 mm SC
971-15-R	Ferrule Cleaner, 1.25 mm LC
971-16	Fiber Ferrule Cleaner
808-16-R	3m, DUPLEX, MM, LC-LC
808-17-R	3m, SIMPLEX, MM, LC-LC
2000-1849-R	ESD Box

**Miscellaneous Accessories**

Part Number	Description
760-286-R	Compact Transit Case with Wheels and Handle 55.6 cm x 35.5 cm x 22.9 cm (22" x 14" x 9")
G0324A	Battery Charger
J1569A	Car 12 VDC Adapter
J1667A <sup>a</sup>	GPIB-USB Converter

**Operation Manuals**

10580-00423	MT1000A/MU100040A Network Master Pro Operation Manual
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- a. J1667A is required for SCPI remote control via GPIB.

**Maintenance Service**

Part Number	Description
MT1000A-ES210	2 Years Extended Warranty Service
MT1000A-ES310	3 Years Extended Warranty Service
MT1000A-ES510	5 Years Extended Warranty Service
MU100040A-ES210	2 Years Extended Warranty Service
MU100040A-ES310	3 Years Extended Warranty Service
MU100040A-ES510	5 Years Extended Warranty Service

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