

ANRITSU

MT8212B

The Anritsu MT8212B Cell Master is a comprehensive, lightweight, handheld cable, antenna, and base station analyzer designed for wireless network installation, maintenance, and troubleshooting. It consolidates multiple test instruments into a single portable device, including a 4 GHz cable and antenna analyzer, a 3 GHz spectrum analyzer, a transmitter analyzer, an interference analyzer, and a T1/E1 analyzer.

SPECIFICATIONS

General

Interfaces	RS-232 serial interface (9-pin D-sub)
Display	640 x 480 color TFT LCD

Physical

Power Supply	12 to 15 VDC, 3.0 A max via external AC-DC adapter (100 to 240 VAC, 50 to 60 Hz)
Operating Temperature	-10°C to 55°C °C
Dimensions (W×H×D)	312 x 211 x 79 mm mm
Weight	2.28 kg kg

Frequency Specifications

Frequency Range (Cable & Antenna)	25 MHz to 4.0 GHz
Frequency Range (Spectrum Analyzer)	100 kHz to 3.0 GHz
Frequency Reference Accuracy	±1.0 ppm
Reference Aging Rate	±1.0 ppm/year
Reference Temperature Stability	±1.0 ppm (0°C to 50°C)
Resolution Bandwidth (RBW) Range	100 Hz to 1 MHz (1-3 sequence)
Video Bandwidth (VBW) Range	3 Hz to 1 MHz (1-3 sequence)

RF Input & Receiver

Maximum Safe Input Level	+30 dBm (1 W) continuous, ±50 VDC
RF Input Impedance	50 Ω
RF Input Connector Type	Type N, female
Displayed Average Noise Level (DANL)	-135 dBm (typical at 1 GHz, 100 Hz RBW, preamp on)
RF Input VSWR	< 1.5:1 (typical)

Signal Analysis & Measurements

Return Loss Measurement Range	0 to 60 dB
VSWR Measurement Range	1.00 to 65.00
Cable Loss Measurement Range	0 to 30 dB
Sweep Resolution (Data Points)	130, 259, 517
Sweep Speed	< 2.5 ms per data point (typical)
Directivity (Corrected)	> 42 dB
Source Power (Cable & Antenna)	-10 dBm (typical)

Signal Generation

CW Output Frequency Range	25 MHz to 3.0 GHz
---------------------------	-------------------

T1/E1 Analyzer

T1 Transmission Rate	1.544 Mbps
E1 Transmission Rate	2.048 Mbps
T1/E1 Connector Type	Bantam jacks
T1/E1 Impedance Settings	100 Ω (T1), 120 Ω / 75 Ω (E1)
T1 Line Coding Settings (Option 50)	AMI, B8ZS
E1 Line Coding Settings (Option 50)	AMI, HDB3
T1 Framing Formats (Option 50)	D4 (SF), ESF
E1 Framing Formats (Option 50)	PCM30, PCM30C, PCM31, PCM31C

Power Requirements

Battery Chemistry	Rechargeable NiMH
Battery Operating Time	up to 2.5 hours

Physical & Environmental

Storage Temperature Range	-51°C to 82°C
Operating Humidity Range	up to 95% RH (non-condensing)
Operating Altitude Limit	4,600 m

Compliance & Calibration

Calibration Cycle	12 months
-------------------	-----------

Cable & Antenna Analyzer Performance

Frequency Resolution (Cable & Antenna)	100 kHz
DTF Range	Up to 1250 m (4100 ft)
DTF Resolution	$(1.5 \times 10^8 \times V_p) / \Delta F$ (meters)

Spectrum Analyzer Performance

Frequency Span Range	10 Hz to 2.99 GHz, 0 Hz (zero span)
Zero Span Sweep Time	50 μ s to 20 s
SSB Phase Noise	≤ -75 dBc/Hz @ 30 kHz offset
Overall Amplitude Accuracy	± 1.0 dB typical (100 kHz to 3.0 GHz, for input levels ≥ -50 dBm)

GPS Receiver

GPS Antenna Connector (Option 31)	SMA female, 50 Ω
GPS Time to First Fix	2.5 minutes cold start, 5 seconds warm start

External Reference

External Reference Input Frequencies	1 MHz, 5 MHz, 10 MHz, 13 MHz, 15 MHz, 19.66 MHz
External Reference Connector Type	BNC female, 50 Ω

Power Meter

Internal Power Meter Frequency Range (Option 29)	4.5 MHz to 3.0 GHz
Internal Power Meter Display Range (Option 29)	-80 dBm to +80 dBm

RF Output (Reflection Port)

RF Output Connector Type	N, female
RF Output Impedance	50 Ω

Bias Tee (Option 10)

Bias Tee Output Voltage Range	12 V to 24 V (variable in 1 V steps) (Option 10)
Bias Tee Maximum Current	250 mA (Option 10)
Bias Tee Maximum Power	6 W (Option 10)

Channel Scanner (Option 27)

Channel Scanner Capacity	Up to 20 channels (Option 27)
--------------------------	-------------------------------

High Accuracy Power Meter (Option 19)

High Accuracy Power Meter Sensor Compatibility	Anritsu PSN50 / MA24105A / MA24106A (Option 19, sensor-dependent)
High Accuracy Power Meter Frequency Range	50 MHz to 6 GHz (sensor-dependent) (Option 19)
High Accuracy Power Meter Dynamic Range	-30 dBm to +20 dBm (sensor-dependent) (Option 19)

Internal Power Meter (Option 29)

Internal Power Meter Offset Range	-100 dB to +100 dB (Option 29)
Internal Power Meter Resolution	0.1 dB (Option 29)

T1/E1 Analyzer (Option 50)

T1 Line Build Out (LBO) Settings	0 dB, -7.5 dB, -15 dB, -22.5 dB (Option 50)
T1/E1 Test Patterns	PRBS (9, 11, 15, 20, 23), All Ones, All Zeros, 1:1, 1:7, 2:8, User-defined (Option 50)
T1/E1 Error Detection Types	BPV (Bipolar Violation), Frame Bit Error, CRC Error, Pattern Error (Option 50)

General & Storage

Internal Trace Storage Capacity	Up to 200 traces
---------------------------------	------------------

Compliance

Safety Compliance	Conforms to EN 61010-1
EMC Compliance	Conforms to EN 61326-1

TECHNOLOGY

RF / Cellular

APPLICATIONS

Base Station Installation, Antenna Alignment, and Interference Analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.