VNA Master™ MS202xC / MS203xC

Anritsu

MS2026C	MS2027C	MS2028C		MS2036C	MS2037C	MS2038C
5 kHz to 6 GHz	5 kHz to 15 GHz	5 kHz to 20 GHz	←Vector Network Analyzer→	5 kHz to 6 GHz	5 kHz to 15 GHz	5 kHz to 20 GHz
			+ Spectrum Analyzer→	9 kHz to 9 GHz	9 kHz to 15 GHz	9 kHz to 20 GHz

Handheld Vector Network Analyzer + Spectrum Analyzer

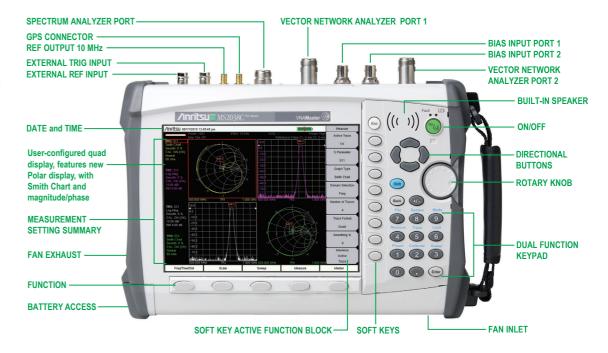### The Grand Master of Handheld S-Parameters

The title *Grand Master* suggests the ultimate level of skill, experience, accomplishment and recognition as best in class. The VNA Master Series is the industry's highest performance, handheld solution for 2-port, 2-path measurements, anytime, anywhere. It specifically addresses complex cable, waveguide and antenna measurement needs in the field with accurate, vector corrected 2-port magnitude, phase, and Time or Distance Domain measurements.

Vector Analyzer Key Features

> 2-port, 2-path, fully-reversing VNA; measures and displays all S-parameters with a single connection

> 350 μsec per data point, ideal for filter tuning

> 12-term error correction algorithm

> Vector Voltmeter option, ideal for cable phase matching

> Time Domain option for precise Time or Distance Domain diagnostics, includes Gated Time Domain, LP Processing, and Phasor Impulse mode

+ Spectrum Analyzer Key Features

> Detectors: Peak, Negative, Sample, Quasi-peak, and true RMS

> Markers: 6, each with a Delta Marker, or 1 Reference with 6 Deltas

> Built-in pre-selector for eliminating spurious in displays

> Interference Analyzer Option: Spectrogram, Signal Strength, RSSI

Top panel callouts: SPECTRUM ANALYZER PORT, GPS CONNECTOR, REF OUTPUT 10 MHz, EXTERNAL TRIG INPUT, EXTERNAL REF INPUT, VECTOR NETWORK ANALYZER PORT 1, BIAS INPUT PORT 1, BIAS INPUT PORT 2, VECTOR NETWORK ANALYZER PORT 2. Front panel callouts: DATE and TIME, User-configured quad display, features new Polar display, with Smith Chart and magnitude/phase, MEASUREMENT SETTING SUMMARY, FAN EXHAUST, FUNCTION, BATTERY ACCESS, SOFT KEY ACTIVE FUNCTION BLOCK, SOFT KEYS, BUILT-IN SPEAKER, ON/OFF, DIRECTIONAL BUTTONS, ROTARY KNOB, DUAL FUNCTION KEYPAD, FAN INLET.

MS2026C / MS2027C / MS2028C VNA MASTER — callouts: 4-PIN DIN for RF DETECTOR, SECURITY CABLE LOCK, VECTOR NETWORK ANALYZER TEST PORTS 1 & 2, BATTERY CHARGER INPUT, FAN EXHAUST, 3.5 mm HEADSET CONNECTOR, USB HOST (x2), USB MINI, LAN CONNECTOR.

MS2036C / MS2037C / MS2038C VNA MASTER + SPECTRUM ANALYZER — callouts: SPECTRUM ANALYZER PORT, FAN EXHAUST, VECTOR NETWORK ANALYZER TEST PORTS 1 & 2, BATTERY CHARGER INPUT, SECURITY CABLE LOCK, 3.5 mm HEADSET CONNECTOR, USB MINI, USB HOST(x2), LAN CONNECTOR.

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Key Specifications

Vector Network Analyzer	
Frequency	5 kHz to 6 GHz (MS2026C / MS2036C), 5 kHz to 15 GHz (MS2027C / MS2037C), 5 kHz to 20 GHz (MS2028C / MS2038C)
Sweep Speed	350 µsec/data point
Directivity	> 42 dB up to 5 GHz (all models), > 36 dB up to 15 GHz (MS2027C / MS2037C), > 32 dB at 20 GHz (MS2028C / MS2038C)
Dynamic Range	> 100 dB 2 MHz - 3 GHz (all models), > 90 dB 3 GHz - 6 GHz (all models), > 85 dB 6 GHz - 20 GHz (MS2027C / MS2037C, MS2028C / MS2038C)

+ Spectrum Analyzer	
Frequency	9 kHz to 9 GHz (MS2036C), 9 kHz to 15 GHz (MS2037C), 9 kHz to 20 GHz (MS2038C)
DANL	–160 dBm in 1 Hz RBW
Phase Noise	–100 dBc/Hz @ 10 kHz offset at 1 GHz
Dynamic Range	> 104 dB in 1 Hz RBW

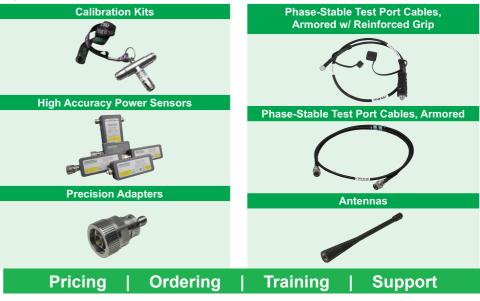| General	
Internal Trace	> 13,000 traces and setup memory
External Trace	Limited by size of USB Flash drive
Connectivity	Ethernet, USB cable, USB Flash drive
Display	8.4" daylight viewable color LCD, resolution 800 x 600
Temperature	Operating Temperature –10 ºC to 55 ºC
Battery	Li-Ion, 2.5 hours, typical
Dimensions	211 mm x 315 mm x 78 mm (8.3 in x 12.4 in x 3.1 in) (MS202xC models) 211 mm x 315 mm x 97 mm (8.3 in x 12.4 in x 3.8 in) (MS203xC models)
Weight	4.5 kg (9.9 lbs) (MS202xC models), 4.8 kg (10.5 lbs) (MS203xC models)

Options

Option Number	Description
Option 0002	Time Domain (includes Option 0501 and DTF capability)
Option 0005	Power Monitor (requires external detector, MS202xC models only)
Option 0007	Secure Data Operation
Option 0010	Built-in Variable Voltage Bias Tee
Option 0011	K(f) Test Port Connector (MS2028C and MS2038C only)
Option 0015	Vector Voltmeter
Option 0019	High Accuracy Power Meter (requires USB sensors, sold separately)
Option 0025	Interference Analysis (requires external antenna, MS203xC models only)
Option 0027	Channel Scanner (requires external antenna, MS203xC models only)
Option 0031	GPS Receiver (requires GPS antenna, sold separately)
Option 0077	Balanced / Differential S-Parameters, 1-port
Option 0501	Distance Domain (included in Option 0002)
Option 0098	Standard Calibration (ANSI Z540-1-1994)
Option 0099	Premium Calibration (ANSI Z540-1-1994, plus test data)

Standard Accessories

Part Number	Description
10920-00060	Handheld Instruments Documentation Disc
10580-00305	VNA Master User Guide
65729	Soft Carrying Case
2300-498	Master Software Tools (MST) CD Disc
2300-530	Anritsu Tool Box with Line Sweep Tools (LST) DVD Disc
40-168-R	AC-DC Adapter
806-141-R	Automotive Cigarette Lighter 12 VDC Adapter
3-2000-1498	USB A/5-pin mini-B Cable, 10 feet/305 cm
2000-1371-R	Ethernet cable, 2.13 m (7 ft)
3-806-152	Ethernet crossover cable, 2.13 m (7 ft)
11410-00548	VNA Master MS2026C / MS2027C / MS2028C / MS2036C / MS2037C / MS2038C Technical Data Sheet
	One Year Warranty (Including battery, firmware, and software)
	Certificate of Calibration and Conformance

Optional Accessories

Calibration Kits

High Accuracy Power Sensors

Precision Adapters

Phase-Stable Test Port Cables, Armored w/ Reinforced Grip

Phase-Stable Test Port Cables, Armored

Antennas

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