

# Spectrum Master™ MS2720T

## 9 kHz to 9 GHz, 13 GHz, 20 GHz, 32 GHz, 43 GHz

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### Designed for Field Use

With the 7th Spectrum Master generation, Anritsu has not been standing still in the development of instruments designed to meet user needs, whether as a handy bench instrument or as a high performance field tool that can make measurements wherever they need to be made. User convenience features, such as a touch screen, serve to make the 7th generation Spectrum Master even easier to use. A brighter display with several user-selectable display choices including high contrast, monochrome, and night-vision red makes the Spectrum Master outstanding in the field. Burst detect is included to simplify finding pulsed interfering signals.

### Spectrum and Interference Analyzer Highlights

- > Intuitive, Easy to Use Touch Screen User Interface
- > Tracking Generators to 9/13/20 GHz (model dependent)
- > Measure: Occupied Bandwidth, Channel Power, ACPR, C/I, Spurious Emissions, Field Strength and More
- > Dynamic Range: > 106 dB in 1 Hz RBW
- > DANL: -160 dBm in 1 Hz RBW @ 1 GHz
- > Phase Noise: -108 dBc/Hz typical @ 10 kHz offset at 1 GHz
- > Sweep Modes: Fast, Performance, No FFT, Burst Detect
- > Traces: Normal, Max Hold, Min Hold, Average, # of Averages
- > Burst Detect: detects and displays bursty signals 200  $\mu$ s wide or wider
- > Frequency Accuracy: GPS On:  $\pm$ 25 ppb, GPS Off:  $\pm$ 1 ppm/yr
- > Interference Analyzer: Spectrogram, Signal Strength, RSSI, Mapping
- > 1 Hz to 10 MHz Resolution Bandwidth (RBW) and Video Bandwidth (VBW)
- > Options for 3G and 4G cellular measurements including LTE, TD-LTE, GSM, NB-IoT, CDMA, WiMAX, WCDMA, and TD-SCDMA
- > Detectors: Peak, Negative, Sample, Quasi-peak, and true RMS
- > Markers: 6, each with a Delta Marker, or 1 Reference with 6 Deltas
- > Limit Lines: up to 40 segments with one-button envelope creation



### Capabilities and Functional Highlights

- > LTE, TD-LTE
- > GSM/EDGE
- > W-CDMA/HSPA+
- > TD-SCDMA/HSPA+
- > CDMA, EV-DO
- > Fixed, Mobile WiMAX
- > NB-IoT
- > AM/FM/SSB Demodulator
- > Zero-span IF Output
- > EMF Measurements
- > IQ Waveform Capture
- > Standard Quasi-PK Detector
- > Gated Sweep
- > GPS tagging of stored traces
- > Internal Preamplifier standard
- > High Accuracy Power Meter
- > USB Power Sensors Up to 50 GHz
- > Channel Scanner
- > 8.4 inch High Resolution Display
- > < 5 minute warm-up time
- > 3 hour battery operation time
- > Ethernet/USB Data Transfer



# Quick Fact Sheet

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### Key Specifications

Spectrum Analyzer					
Option	Option 709	Option 713	Option 720	Option 732	Option 743
Frequency	9 kHz to 9 GHz	9 kHz to 13 GHz	9 kHz to 20 GHz	9 kHz to 32	9 kHz to 43
Frequency	10 Hz to 9 GHz	10 Hz to 13 GHz	10 Hz to 20 GHz	10 Hz to 32	10 Hz to 43
Phase Noise	-108 dBc/Hz at 10 kHz offset at 1 GHz	-102 dBc/Hz at 10 kHz offset at 1 GHz (-106 dBc/Hz typ.)			
Displayed Average Noise Level					
DANL Preamplifier	-146 dBm at 3 GHz	-145 dBm at 3 GHz			
DANL Preamplifier	-160 dBm at 3 GHz	-161 dBm at 3 GHz			
Dynamic	> 106 dB				
Tracking Generator	100 kHz to 9/13/20 GHz, -40 dBm to 0 dBm (only for options 709, 713, and 720)				
General					
Internal Trace/Setup Memory	>40,000 traces				
External Trace/Setup Memory	size of USB Flash drive				
Connections	Connect to PC using USB, LAN, or Direct Ethernet connection				
Display	8.4 inch with 800 x 600 resolution				
Operating Temperature	-10 °C to 55 °C				
Dimensions	315 mm x 211 mm x 77 mm, (12.4 in x 8.3 in x 3.0 in)				
Weight	3.7 kg, (8.5 lbs)				
Warranty	Standard three-year warranty, One-year warranty on battery				

### Standard Accessories

Part Number	Description
2000-1685-R	Soft Carrying Case
2000-1691-R	Stylus with Coiled Tether
633-75	High Capacity Li-Ion Battery
40-187-R	AC/DC Power Supply
806-141-R	Automotive Cigarette Lighter 12 Volt DC Adapter
2000-1371-R	Ethernet Cable, 7 feet/213 cm
3-2000-1498	USB A-mini B Cable, 10 feet/305 cm
2000-1797-R	Touchscreen Protective Film, 8.4 in (one factory-installed, one spare)
	Certificate of Calibration and Conformance

Options	
MS2720T-0709	Frequency Range 9 kHz to 9 GHz
MS2720T-0713	Frequency Range 9 kHz to 13 GHz
MS2720T-0720	Frequency Range 9 kHz to 20 GHz
MS2720T-0732	Frequency Range 9 kHz to 32 GHz
MS2720T-0743	Frequency Range 9 kHz to 43 GHz
MS2720T-0809	9 GHz Tracking Generator (Requires option 709)
MS2720T-0813	13 GHz Tracking Generator (Requires option 713)
MS2720T-0820	20 GHz Tracking Generator(Requires option 720)
MS2720T-0025	Interference Analyzer (Option 31 is recommended)
MS2720T-0009	Demodulation Hardware
MS2720T-0027	Channel Scanner
MS2720T-0431	Coverage Mapping (Requires Option 31 for full functionality)
MS2720T-0509	AM/FM/PM Measurements (Option 431 required for full functionality)
MS2720T-0024	I/Q Waveform Capture (Requires Option 9)
MS2720T-0089	Zero-Span IF Output
MS2720T-0090	Gated Sweep
MS2720T-0444	EMF Measurements (Requires Anritsu Isotropic Antenna)
MS2720T-0019	High Accuracy Power Meter (Requires USB Power Sensor, sold separately)
MS2720T-0880	GSM/GPRS/EDGE Measurements (Requires Option 9)
MS2720T-0881	W-CDMA/HSPA+ Measurements (Requires Option 9, Option 31 recommended)
MS2720T-0882	TD-SCDMA/HSPA+ Measurements (Requires Option 9, Option 31 required for full functionality)
MS2720T-0883	LTE FDD/TDD Measurements (Requires Option 9, Option 31 required for full functionality)
MS2720T-0886	LTE 256 QAM Demodulation (Requires Option 883)
MS2720T-0884	CDMA/EV-DO Measurements (Requires Option 9, Option 31 required for full functionality)
MS2720T-0885	WiMAX Fixed/Mobile Measurements (Requires Option 9, Option 31 required for full functionality)
MS2720T-0887	NB-IoT Analyzer (Requires Option 9)
MS2720T-0007	Secure Data Operation
MS2720T-0031	GPS Receiver (Requires GPS Antenna, sold separately)
	- 2000-1528-R GPS Antenna, SMA(m) with 5 m (15 ft) cable, requires 5 VDC
	- 2000-1652-R GPS Antenna, SMA(m) with 0.3 m (1 ft) cable, requires 3.3 VDC or 5 VDC
	- 2000-1760-R GPS Antenna, SMA(m) with no cable, 2.5 VDC to 3.7 VDC
MS2720T-0098	Standard Calibration (ANSI Z540-1-1994)
MS2720T-0099	Premium Calibration (ANSI Z540-1-1994 plus test data)

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