MS2720T 9 kHz to 9 GHz, 13 GHz, 20 GHz, 32 GHz, 43 GHz

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 μs wide or wider
- Frequency Accuracy: GPS On: ±25 ppb, GPS Off: ±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, W-CDMA/HSPA+, TD-SCDMA/HSPA+, CDMA, EV-DO
- Fixed, Mobile WiMAX
- Narrow-Band (NB-IoT)
- AM/FM/SSB Demodulator
- Zero-span IF Output
- EMF Measurements
- IQ Waveform Capture

Capabilities and Functional Highlights
- LTE, TD-LTE
- GSM/EDGE
- W-CDMA/HSPA+
- TD-SCDMA/HSPA+
- CDMA, EV-DO
- Fixed, Mobile WiMAX
- Narrow-Band (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**

**Spectrum Master MS2720T**

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

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### Key Specifications

#### Spectrum Analyzer

<table>
<thead>
<tr>
<th>Option</th>
<th>Option 709</th>
<th>Option 713</th>
<th>Option 720</th>
<th>Option 732</th>
<th>Option 743</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>9 kHz to 9 GHz</td>
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<td>9 kHz to 20 GHz</td>
<td>9 kHz to 32 GHz</td>
<td>9 kHz to 43 GHz</td>
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<td>10 Hz to 43 GHz</td>
</tr>
<tr>
<td>Phase Noise</td>
<td>–108 dBc/Hz at 10 kHz offset at 1 GHz</td>
<td>–102 dBc/Hz at 10 kHz offset at 1 GHz (–106 dBc/Hz typ.)</td>
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</tr>
</tbody>
</table>

#### Displayed Average Noise Level

<table>
<thead>
<tr>
<th></th>
<th>DANL Preamplifier</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>–146 dBm at 3 GHz</td>
<td>–160 dBm at 3 GHz</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>–145 dBm at 3 GHz</td>
<td>–161 dBm at 3 GHz</td>
</tr>
</tbody>
</table>

#### 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

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

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### 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-0819**: GSM/GPRS/EDGE Measurements (Requires Option 9)
- **MS2720T-0880**: 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-0884**: LTE 256 QAM Demodulation (Requires Option 883)
- **MS2720T-0885**: CDMA/EV-DO Measurements (Requires Option 9, Option 31 required for full functionality)
- **MS2720T-0886**: 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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### Pricing, Ordering, Support

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