

Site Master™

Compact Handheld Cable & Antenna Analyzer with Spectrum Analyzer

S331E S332E S361E S362E

2~MHz~to~4~GHz~~2~MHz~to~4~GHz~~2~MHz~to~6~GHz~~2~MHz~to~6~GHz~~Cable~&~Antenna~Analyzer

9 kHz to 4 GHz 9 kHz to 6 GHz Spectrum Analyzer





From the Leader in Cable and Antenna Analysis Anritsu Introduces Its 8th Generation Site Master



The wireless communications market continues to evolve at a rapid pace. Operators and service providers have to maintain old networks while upgrading to the new 3G and 4G networks so as to keep up with changing consumer demands. They face the additional challenge of needing to ensure their networks are competitive from a reliability, quality, and cost perspective. As a result of all this, they expect more of the contractors and technicians who maintain their networks. To stay competitive, these contractors and technicians must maintain more base stations than before and complete a wide variety of tasks in the shortest time possible.

Anritsu is pleased to introduce its eighth-generation compact handheld Site Master cable and antenna analyzer series with integrated spectrum analyzer. The new Site Master analyzers offer the same ease of use, ruggedness, and familiar menus as its predecessor S331D and S332D. In addition, Anritsu has enhanced the Site Master to address all the customer requirements and suggestions received over the years.

Indeed, for nearly two decades, Anritsu's Site Master has been the de facto standard for contractors, installers, and wireless service providers who need a portable and rugged cable and antenna analyzer. The Site Master reduces per site maintenance expense, maximizes system up-time, and breaks away from the traditional fix-after-failure maintenance mode by finding small problems before major failures occur. Radio frequency (RF) engineers and field technicians in the U.S. Navy, U.S. Air Force, and other global defense programs responsible for installing and maintaining communication systems use Site Master's frequency domain reflectrometry (FDR)-based approach to improve the quality of their communication systems.

Although the new Site Master resides in a modern platform that takes advantage of the latest technologies and is loaded with features that will enhance productivity, it provides more value for better productivity without giving up the familiar look and feel.

Integrated

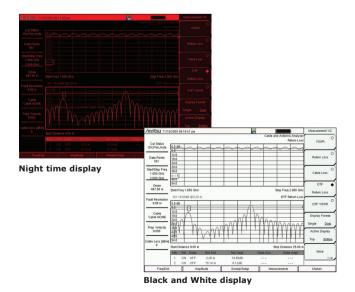
The Site Master is a 4 or 6 GHz cable and antenna analyzer that can be configured to include either a 4 or 6 GHz spectrum analyzer, 2-port transmission measurement with built-in 32V bias tee, an interference analyzer with spectrogram displays, a channel scanner, power meter, high accuracy power meter, and GPS receiver for time and location stamping. Because of its multi-functional capabilities, it eliminates the need for you to carry and learn multiple instruments.

Trusted

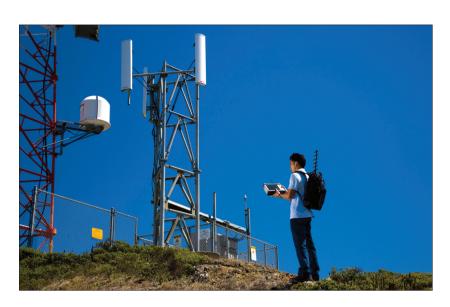
Anritsu builds upon its expertise in portable compact cable and antenna analyzers and spectrum analyzers. The Site Master is approved by all major operators and service providers worldwide.

Designed for Field Use

The Site Master is designed specifically for field environments. It weighs less than 6 lbs and its field replaceable Li-Ion battery typically lasts for more than 4 hours. A new bright 8.4-inch color display provides visibility even in broad daylight. With an operating temperature range from -10 °C to 55 °C, the Site Master will work in the most extreme weather conditions. The analyzer is almost impervious to the bumps and bangs typically encountered by portable field equipment. Its ruggedized case and splash proof design allow you to depend on high performance anywhere, anytime.

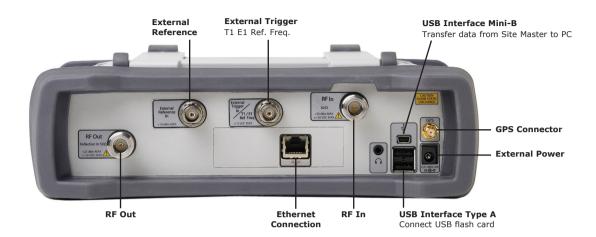


INTEGRATED MEASUREMENT CAPABILITIES



Configuration Overview

Function	Description
Cable and Antenna Analyzer, 2 MHz to 4/6 GHz	Characterizes cable and antenna systems with return loss, cable loss, VSWR, distance-to-fault measurements. Also includes 1-port phase and Smith chart displays. Offers faster than 1 ms/data point sweep speed and a dual display.
Spectrum Analyzer, 9 kHz to 4/6 GHz	Locates and identifies various signals over a wide frequency range. Detect signals as low as -152 dBm with phase noise better than -100 dBc/Hz.
2-port Transmission Measurement (Option 21)	Provides high and low power settings for both TMA gain and antenna-antenna isolation measurements. Offers better than 80 dB dynamic range.
Bias Tee (Option 10)	Provides built-in adjustable 12 - 32V bias tee that can be turned on as needed, and which eliminates the need to carry an external supply.
High Accuracy Power Meter (Option 19)	Connects high accuracy 4, 6, 8, 18, and 26 GHz USB power sensors with up to ± 0.16 dB accuracy.
Power Meter (Option 29)	Makes channelized transmitter power measurements.
Interference Analyzer (Option 25)	Includes the popular spectrogram display for monitoring intermittent signals over time. Pin point the interfering source with on screen interference mapping.
Channel Scanner (Option 27)	Measures the power of multiple transmitted signals.
Coverage Mapping (Option 431)	Outdoor and indoor coverage mapping for RSSI and ACPR measurements.
CW Signal Generator (Option 28)	Includes CW source to test low noise amplifiers, repeaters. (This requires an external CW generator kit.)
GPS Receiver (Option 31)	Provides location and UTC time information. Also improves the accuracy of the reference oscillator.
Gated Sweep (Option 90)	Views pulsed or burst signals such as WiMAX, GSM, and TD-SCDMA only when they are on.
AM/FM/PM Analyzer (Option 509)	Analyzes AM/FM/PM signals and measures FM/PM deviation, AM depth, SINAD, Total Harmonic Distortion and much more.
Ethernet Connectivity (Option 411)	Provides the ability to operate automated testing from remote PC, or conversely, to upload data from field test to the PC. Remote access control is also provided through Master Software Tools.
CPRI RF Measurements (Option 751)	Converts the CPRI IQ data into RF measurements.
EMF Measurement System (Option 444)	
CPRI LTE RF Software (Option 752)	Requires Option 759
OBSAI LTE RF Software (Option 753)	Requires Option 759
RF Over Fiber Hardware (Option 759)	Must be ordere with Options 752 or 753)
Ethernet Connectivity (Option 413)	



All Connectors Are Conveniently Located On The Top Panel, Leaving The Sides Clear For Handheld Use.



Saves & Recall > 2000 traces & setups





Tilt Bails Are Integrated Into The Case And Soft Case For Better Screen Viewing

Master Cable & Antenna Analysis, Anywhere, Anytime

The majority of the problems you find at a typical cell site are caused by problematic cables, pinched cables, corroded connectors, antennas, lightning strikes, rain getting into cables, and bullet holes. Degraded cable systems and badly positioned antennas affect overall system coverage and eventually result in dropped calls. Site Master's FDR-based return loss and DTF measurements can pinpoint an antenna problem from ground level in a few seconds, enabling Site Master to identify small problems before they become big problems.

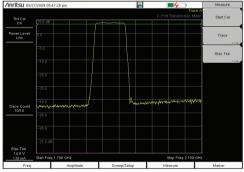


Cable and Alterna Analysis | Cable and A

Return Loss/VSWR



Distance-to-Fault



2-Port Transmission Measurements

Return Loss / VSWR

Use the Site Master to make return loss and VSWR and verify that the cable and antenna system conforms to performance specifications.

Cable Loss

Cable Loss metrics measure the level of insertion loss within the cable feedline system. This measurement can be verified prior to deployment, when you have access to both ends. Site Master automatically calculates the average cable loss.

Distance-To-Fault

While the return loss metric is the best measurement to verify the health of a system, distance-to-fault (DTF) is used to troubleshoot systems and locate the problem.

The Site Master's DTF measurement uses the fast Fourier transform to convert frequency data to the time domain and displays signal anomalies with respect to distance. Using the standard trace math feature, you can monitor small relative changes over time.

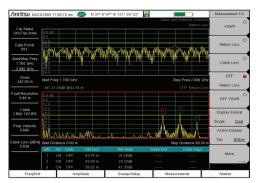
2-port Transmission Measurements (Option 21)

Cellular/PCS and 3G base stations today use diplexers, duplexers, and tower-mounted amplifiers to extend the coverage area. Site Master's 2-port transmission measurement enables you to make gain, isolation, and insertion loss measurements as well as verify sector-to-sector isolation.

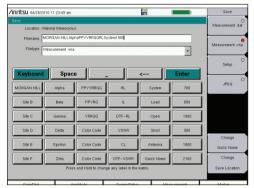
Bias Tee (Option 10) requires Option 21

The built-in bias tee can be turned on as needed to place +12 to +32V on the center conductor of the RF in port, eliminating the need for you to carry external supplies in the field.

Enhance Productivity with Dual Displays and Instant Calibration



Dual Display



Ouick Name Matrix



InstaCal

Dual Display

The dual display enables users to view two cable and antenna measurements on the same display. Because you can control the top and bottom displays independently, you can set markers and limit lines on each display. This results in significant time savings as there's no need to make two measurements.

Quick Name Matrix

The integrated quick name matrix and keyboard enables you to preset up to 42 commonly used names. The quick name matrix allows you to save long file names with cell site ID, sector information, color coding, measurement type, frequency, and termination in less than five seconds. Now you can label the traces of the entire site in minutes instead of hours.

InstaCal™ Calibration

Although you need to get the job done as quickly as possible, you still need to make reliable and accurate measurements. Anritsu's InstaCal module enables you to make accurate calibrations at the end of the phase stable cable without connecting a short/open/load. This calibration method can cut the calibration time by as much as 50 percent and still deliver accurate calibrations.

Standard OSL Calibration

Open-Short-Load (OSL) calibration comes standard with the Site Master. All errors from source match, directivity, and frequency response are mathematically removed, allowing you to make accurate vector-corrected measurements. Directivity is usually the main contributor to measurement uncertainty, and corrected directivity of 42 dB or better is common using Anritsu's precision components.

FlexCal™

The Site Master's FlexCal™ broadband calibration feature is an calibration method that allows you to perform a broadband calibration and change the frequency range after calibration without having to recalibrate the instrument.

RF Immunity

Site Master's unique RF immunity algorithm solution enables you to make accurate cable and antenna measurements even in the presence of strong RF activity from co-located cell sites.

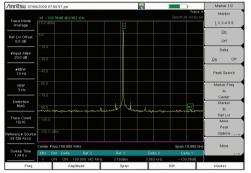
Cable and Antenna Analyzer Highlights

- Return loss, VSWR, cable loss, DTF
- 2-port transmission measurements with 32V bias tee
- 1-port phase, Smith chart
- Quick Name Matrix reduces trace labeling time in the field
- PIM 3rd, 5th and 7th Order Frequency measurements
- Dual display mode capabilities
- Built-in, editable signal standard and cable standard lists
- Calibration: OSL Cal. FlexCal. InstaCal
- 137, 275, 551, 1102, 2204 data points

- < 1 msec per datapoint sweep speed
- Trace overlay and trace math to monitor changes with Reference traces
- Marker table with automatic peak/valley markers
- GPS tagging
- Limit lines and alarming for providing reference standards
- GPS tagging of data to verify location of tests
- Line Sweep Tools and Master Software Tools for post-analysis and report generation

Site Master S332E and the S362E Site Master with integrated spectrum analysis capability provide users with a high-performance, easy-to-use, feature-rich spectrum analyzer for field environments and applications requiring mobility.

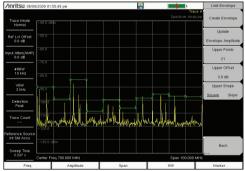
Site Master's integrated high performance spectrum analyzer makes it ideal for a broad range of activities, including spectrum monitoring, AM/FM broadcast proofing, interference analysis, field strength measurements, transmitter spectrum analysis, electro magnetic field strength, signal strength mapping, and overall field analysis of cellular 2G/3G/4G, land mobile radio, Wi-Fi, and broadcast signals.



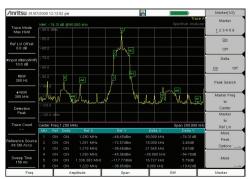
Dynamic Range Performance



Low Level Performance



Limit Envelope



Comprehensive Marker Menu

High Performance

The dynamic range is better than 95 dB in 10 Hz RBW, enabling measurement of very small signals in the presence of much larger signals. The picture demonstrates the dynamic range in the Site Master

Displayed Average Noise Level

Site Master delivers impressive and best-in-class DANL performance. With the built-in pre-amp, better than -152 dBm DANL can typically be realized in 10 Hz RBW and -162 dBm when normalized to 1 Hz. This low-level performance capability is essential when looking for low-level interference signals.

GPS-Assisted Frequency Accuracy

With GPS Option 0031 the frequency accuracy is < 50 ppb. This additional accuracy is important when characterizing 3GPP signals using counted frequency markers. Also all measurements can be GPS tagged for exporting to maps.

Simple But Powerful for Field Use

Convenience is a must in the field. This is why the Site Master is equipped with features that will enhance productivity in the field.

The Site Master is equipped with limit lines for all user levels. You can create single limit lines and segmented limit lines in one step using the one-button limit envelope feature.

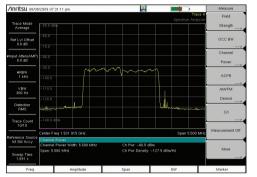
The Site Master automatically sets the fastest sweep possible while still ensuring accurate measurements. This allows users to rely on the instrument to optimize accuracy and consistency.

Auto Attenuation ties the input attenuation to the reference level eliminating the need for the user to determine how much attenuation is needed.

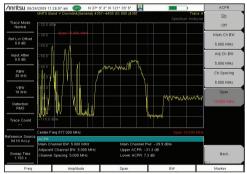
Six regular and six delta markers can be displayed with a marker table that can be turned on as needed. The capability to measure noise level in terms of dBm/Hz or dB μ V/Hz is a standard feature of the Site Master.

Smart Measurements for Transmitter Systems

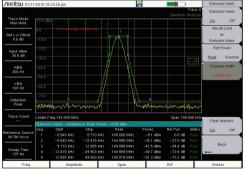
Commonly needed transmitter measurements are built in and can be accessed easily. These include field strength, occupied bandwidth, channel power, adjacent channel power ratio (ACPR), and emission mask.



Occupied Bandwidth



Adjacent Channel Power Ratio



Emission Mask

Occupied Bandwidth

This measurement determines the amount of spectrum used by a modulated signal. The Site Master allows you to choose between two different methods of determining bandwidth: the percent-of-power method or the "x" dB down method.

Adjacent Channel Power Ratio

Adjacent Channel Power Ratio is a common transmitter measurement. High ACPR will create interference for neighboring carriers. This measurement can be used to replace the traditional two-tone Intermodulation Distortion (IMD) test for system non-linear behavior.

Field Strength Measurements

The Site Master can determine the effects of electromagnetic fields caused by transmitter systems. Specific antenna factors of the connected antenna are automatically taken into account, and field strength is displayed directly in dB μ V/m. The Site Master also supports a wide range of directional antennas. If you are using a different antenna, Master Software Tools can be used to edit the antenna list and upload the custom antenna list to the instrument to accurately measure the maximum field strength.

Emission Mask

The emission mask is a segmented upper limit line that will display frequency range, peak power and frequency, relative power and pass/fail status for each segment of the mask. The emission mask must have at least two segments. Emission mask adjusts to the peak power value of transmitted signal level per government emission mask requirements.

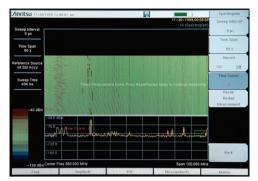
Spectrum Analyzer Highlights

- Measurements: Occupied bandwidth, channel power, ACPR, C/I, AM/FM demod, field strength, emission mask
- Interference analyzer: spectrogram, signal strength, RSSI, signal ID, Interference Mapping
- Dynamic range: > 95 dB
- DANL: -162 dBm typical (normalized to 1 Hz)
- Phase noise: -100 dBc/Hz @ 10 kHz offset
- Frequency accuracy: < ± 50 ppb with GPS on

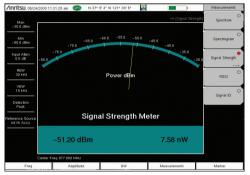
- Advanced marker functions: noise marker, frequency counter, fixed, tracking
- Advanced limit line functions: one-button envelope creation
- Detection methods: peak, RMS, negative, sample, quasi-peak
- Save-on-event: automatically saves a sweep when crossing a limit line
- Gated sweep: view pulsed or burst signals only when they are on, or off

As the wireless industry continues to expand, more diverse uses for the radio spectrum emerge, and the number of signals that may potentially cause interference is constantly increasing.

Compounding the problem are the many sources that can generate interference, including intentional radiators, unintentional radiators, and self interference. Interference causes Carrier-to-Interference degradation robbing the network of capacity. The goal of these measurements is to resolve interference issues as quickly as possible.



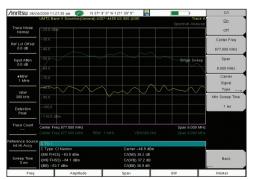
Spectrogram Display



Signal Strength Meter



Signal ID



Carrier-to-Interference (C/I)

Interference Analysis (Option 25)

The interference analyzer option provides you with a spectrogram display, RSSI, signal strength meter, signal ID, and Interference Mapping capabilities. Site Master's integrated spectrum analyzer can detect signals as low as -152 dBm.

Spectrogram Display

This option provides you with a three-dimensional display of frequency, power, and time of the spectrum activity to identify intermittent interference and track signal levels over time. The dual display screen allows for easy viewing of both the spectrum and 3D display. The Site Master allows you to save a history of data up to 72 hours.

Signal Strength Meter

The Site Master's signal strength meter can locate an interfering signal by using a directional antenna and measuring the signal strength. It displays power in Watts or dBm, in the graphical analog meter display and by an audible beep proportional to its strength.

Signal ID

Site Master's signal ID feature in the interference analyzer can help you quickly identify the type of the interfering signal. You can configure this measurement to identify all signals in the selected band or to simply monitor one single interfering frequency. The Site Master then displays results that include center frequency, signal bandwidth, and signal type (FM, GSM/GPRS/EDGE, W-CDMA/HSDPA, CDMA/EV-DO, Wi-Fi).

Carrier-To-Interference Measurement

Site Master's carrier-to-interference measurement capability makes it simple for you to determine if the level of interference will affect users in the intended service area.

AM/FM/SSB Demodulation

A built-in demodulator for AM, narrowband FM, wideband FM and single sideband allows you to easily identify the interfering signal.

Pin Point Location of Interfering Signal with Interference Mapping



Interference Mapping with Google Earth"





Interference Mapping

The Interference Mapping measurement eliminates the need to use printed maps and draw lines to triangulate the interfering signal.

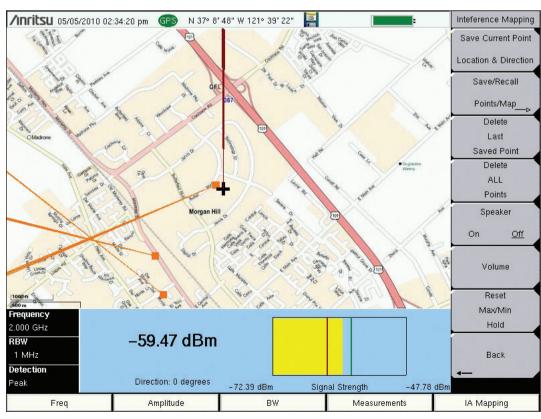
Using Map Master™, it is easy to convert maps and make them compatible with the Site Master. With a valid GPS signal, the instrument identifies the user location on the map. Using one of the recommended Anritsu Yagi antennas, you can identify the direction of the interfering signal and input the angle information with the rotary knob. With two or more lines from different locations, it is possible to obtain an estimate location of the interfering signal. The Interference Mapping can be done directly on the Site Master. Files can also be saved as kml and opened with Google Earth.

Directional Antennas

Anritsu offers several different directional antennas covering a wide range of common frequency bands including: 822 to 900 MHz, 885 to 975 MHz, 1710 to 1880 MHz, 1850 to 1990 MHz, 2400 to 2500 MHz, 1920 to 2170 MHz, 500 to 3000 MHz, and 600 to 21000 MHz.

GPS Antenna

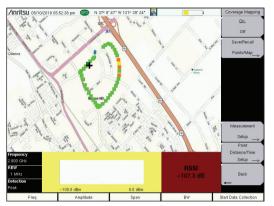
The 2000-1528-R GPS antenna and option (31) are required for the interference mapping and coverage mapping measurements.



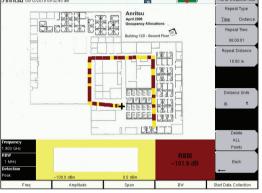
On Screen Interference Mapping

Indoor and Outdoor Coverage Mapping Solutions (Option 0431)

There is a growing demand for coverage mapping solutions. Anritsu's Coverage Mapping measurements option provides wireless service providers, public safety users, land mobile ratio operators, and government officials with indoor and outdoor mapping capabilities



Outdoor Mapping



Indoor Mapping

Outdoor Mapping

With a GPS antenna connected to the instrument and a valid GPS signal, the instrument monitors RSSI and ACPR levels automatically. Using a map created with Map Master, the instrument displays maps, the location of the measurement, and a special color code for the power level. The refresh rate can be set up in time or distance.

The overall amplitude accuracy coupled with the GPS update rate ensures accurate and reliable mapping results

Indoor Mapping

When there is no GPS signal valid, the Site Master uses a start-walk-stop approach to record RSSI and ACPR levels. You can set the update rate, start location, and end location and the interpolated points will be displayed on the map.



Create maps with Map Master

EasyMap Tools

easyMAp sources map data from either Google Maps or MapQuest. MAps sourced from Goofle can be displayed as terrain maps, road maps, hybrid maps (a combination of terrain and road maps) and as satellite view maps. These maps are quite useful when used in interference hunting or coverage mapping. However, Google Maps is not available in every country, due to countru specific restrictions. MapQuest sourced maps are available as road maps and come from the OpenStreetMaps movement. At this time, they are freely downloadable wherever internet access is availabale.

Site Master™ Valuable Options and Features

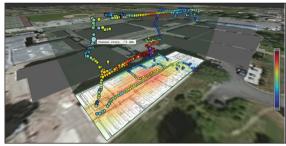
MA8100A Series TRX NEON Signal Mapper



NEON Signal Mapping with Anritsu Handhelds



Support for NFPA Gridding Requirements



Automatically generate 3-D Heatmaps



Automatic Report Generation

MA8100A Series TRX NEON® Signal Mapper*

The most powerful 3D in-building coverage mapping tool specially for Anritsu Handheld Spectrum Analyzers

Anritsu's TRX NEON Signal Mapper, a 3D in-building coverage mapping solution, is compatible with all Anritsu handheld instruments with spectrum analyzer mode. Instruments supported include Spectrum Master, LMR Master, Site Master, BTS Master, Cell Master, and VNA Master.

The MA8100A-xxx consists of both hardware and software from TRX Systems, a 3rd party partner. The MA8100A-xxx consists of a TRX Systems NEON Tracking Unit, NEON Signal Mapper Software for Android devices, and NEON Command Software for a PC.

The TRX NEON Tracking Unit supports collection and processing of sensor data that delivers 3D location information. The Tracking Unit connects to the TRX NEON Signal Mapper application which is run on an Android device via a Bluetooth connection.

The TRX NEON Signal Mapper application provides an intuitive Android user interface enabling lightly trained users to map RF signals within buildings. Users can initialize their location, start/stop mapping and save mapping data to the cloud. RF data is captured by an Anritsu Handheld spectrum analyzer product and the data is sent to the Android device via a USB connection.

The TRX NEON Command Software, run on a PC, enables creation and visualization of 3D building maps and provides centralized access to the TRX NEON Cloud Service to access stored maps and measurement data.

Key Features and Benefits

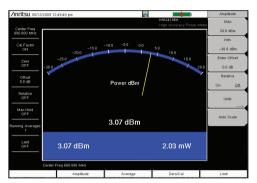
Integrating NEON's capability to automatically collect geo-referenced test data with Anritsu handheld spectrum analyzer products saves valuable time and money by:

- Eliminating the need to manually perform "check-ins" at each test point by automatically calculating indoor location
- Providing vastly more data than is possible with manual processes by recording data with every step
- Removing typical data recording errors caused by "guesstimating" locations in large buildings through automatic indoor location and path estimation
- Delivering actionable data in areas not easily analyzed such as stairways and elevators by recording and referencing measurements in 3D
- Enabling quick analysis of signal coverage and faster problem resolution by delivering the industry's only geo-referenced 3D visualization
- Provides color-graded measurement results in 2D and 3D views.
 Measurement values can be seen by clicking on each point. A .csv file of all measurements is also provided.

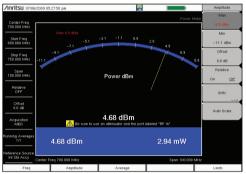
^{*}Android device and PC are NOT included in the MA8100A-xxx. Customers must purchase their own Android device and PC.

Power Measurements for a Wide Range of Applications

The Anritsu Site Master provides many different power measurements to support a wide range of applications. The high-accuracy broadband sensor family provides the best accuracy (± 0.16 dB) over a wide frequency range. The power meter is ideal for users looking to making channelized measurements in a few keystrokes with minimal training. Site Master's channel power measurement also makes channelized measurements but requires more knowledge and is recommended for more advanced users. And when you are measuring multiple channels, the channel scanner is your perfect choice.



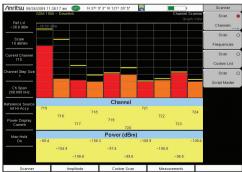
Power Meter



High Accuracy Power Meter



High Accuracy Power Sensors



Channel Scanner

Channel Power

Use Site Master's channel power measurement to determine the power and power density of a transmission channel. Using the built-in signal standard list, you can measure the channel power of a wide range of signals.

Power Meter (Option 29)

Site Master's internal power meter provides power measurements without any additional tools and is ideal for making channelized power measurements. You can display the results in both dBm and Watts. This option is easy to use and requires limited setup entries.

High Accuracy Power Meter (Option 19)

Anritsu's high accuracy power meter option enables you to make high accuracy RMS measurements. This capability is perfect for measuring both CW and digitally modulated signals such as CDMA/EV-DO, GSM/EDGE, WCDMA/HSPA+, and P25. You can select from a wide range of USB sensors delivering better than ± 0.16 dB accuracy. An additional benefit of using the USB connection is that a separate DC supply (or battery) is not needed since the necessary power is supplied by the USB port.

- PSN50 High Accuracy RF Power Sensor, 50 MHz to 6 GHz,
 -30 to +20 dBm, True-RMS
- MA24105A Inline Peak Power Sensor, 350 MHz to 4 GHz, +3 to +51.76 dBm (150W), True-RMS
- MA24106A High Accuracy RF Power Sensor, 50 MHz to 6 GHz,
 -40 to +23 dBm, True-RMS
- MA24108A Microwave USB Power Sensor, 10 MHz to 8 GHz,
 -40 to +20 dBm, True-RMS
- MA24118A, Microwave USB Power Sensor, 10 MHz to 18 GHz,
 -40 to +20 dBm, True-RMS
- MA24126A, Microwave USB Power Sensor, 10 MHz to 26 GHz,
 -40 to +20 dBm, True-RMS

PC Power meter

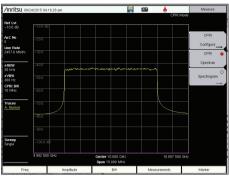
These power sensors can be used with a PC running Microsoft Windows® via USB. They come with PowerXpert $^{\text{TM}}$ application, a data analysis, and control software. The application has abundant features, such as data logging, power versus time graph, big numerical display, and many more, that enable quick and accurate measurements.

Channel Scanner (Option 27)

The channel scanner option measures the power of multiple transmitted signals, making it very useful for simultaneously measuring channel power of up to 20 channels in GSM, TDMA, CDMA, W-CDMA, HSDPA, and public safety networks. You can select the frequencies or the scanned data to be displayed by frequencies or the channel number. And in the custom setup menu each channel can be custom built with different frequency bandwidth, or with channels from different signal standards. With Script Master, scans can be automated for up to 1200 channels.

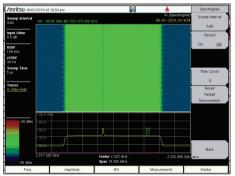
Site Master™ Valuable Options and Features

CPRI RF Measurements (Option 0751)



CPRI Spectrum

Tapping into the optical CPRI link allows the user to monitor either uplink or downlink spectrums



CPRI Spectrogram

Identifies transient or intermittent interference signals on the uplink over time



Layer 2 Alarms

Verify CPRI transport layer



SFP Data

Easily Determine the type of SFP is installed in the $\ensuremath{\mathsf{MT8220T}}$

CPRI RF Measurements

The CPRI RF measurement option allows the user to make RF based measurements over a fiber optic CPRI link (fiber connection between the BBU & RRU).

Measurements include:

- CPRI spectrum
- CPRI spectrogram
- Layer 2 Alarms
- SFP Data

Uplink Interference

One of the biggest issues facing operators is interference on the uplink which can drastically affect KPIs. By tapping into the CPRI fiber link, the uplink spectrum can be monitored.

The ultra-fast sweep speed of the CPRI RF measurements makes it easy to capture and analyze transient and bursty signals typical of many types of interference. For added convenience, the user may tune to anywhere within the spectrum and zoom in for more detailed analysis.

Automatic Configuration

To improve productivity, preconfigured radio setups and an Auto Detect function allow quick and simple configuration of the CPRI RF measurements.

Layer 2 Alarms

Ability to verify and troubleshoot the CPRI (optical) connection with CPRI Layer 2 Alarms. The key Layer 2 Alarms are always visible at the top of the screen. Optical Power is also available on the Layer 2 Alarm screen.

SFP Data

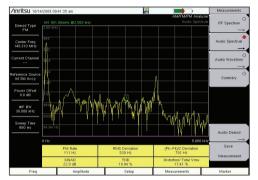
Ability to read the embedded SFP data, quickly determine wavelength, supported line rate, manufacturer information and more.

Measurements

CPRI Spectrum Spectrogram Layer 2 Alarms SFP Data



GPS Receiver



AM/FM/PM Analyzer



Touch screen keyboard



Ethernet connectivity

GPS Receiver (Option 31)

Site Master's GPS option can be used to confirm the exact measurement location (longitude, latitude, altitude) and Universal Time (UT) information. Each trace can be stamped with location information to ensure you are taking measurements at the right location.

In addition, the GPS option enhances the frequency accuracy of the internal reference oscillator. Within three minutes of acquiring the GPS satellite, the built-in GPS receiver provides a frequency accuracy to better than 50 ppb, for Spectrum Analyzer measurements.

AM/FM/PM Analyzer (Option 509)

The AM/FM/PM analyzer provides analysis and display of analog modulation. Four measurement displays are provided.

The RF Spectrum display shows the spectrum with carrier power, frequency, and occupied BW. The Audio Spectrum display shows the demodulated audio spectrum along with the Rate, RMS deviation, Pk-Pk/2 deviation, SINAD, Total Harmonic Distortion (THD), and Distortion/Total. Audio Waveform display shows the time-domain demodulated waveform. Finally, there is a Summary Table Display that includes all the RF and Demod parameters.

Built-in Kevboard

The built-in touch screen keyboard gives you access to a fully functional keyboard, saving valuable time in the field when entering trace names. You can create shortcuts to customer-configurable user "quick names" to program frequently used words.

CW Signal Generator (Option 28)

This option provides a CW signal generator from 2 MHz to 4 or 6 GHz. The signal at the output port can be set high (approximately 0 dBm) or low (-30 dBm). With the use of the CW Signal Generator Kit's attenuator connected to the RF port, the level can be varied in 1 dB steps, giving you the ability to generate signals as low as -110 dBm for receiver sensitivity measurements. The included splitter divides the signal, allowing for a simultaneous power measurement.

Ethernet Connectivity (Option 0411)

By enabling the S331E, S332E, S361E, and S362E to communicate with PCs via Ethernet, you gain the ability to operate automated testing from your PC, or conversely, to upload data from field test to the PC. By using the Remote Access Tool (a utility provided with Anritsu's Master Software Tools), remote access control is provided.

Local Language Support

Site Master features eight languages including English, Japanese, Chinese, Italian, French, German, Spanish, Russian and Korean. One custom user-defined language can be uploaded into the instrument using Master Software Tools.

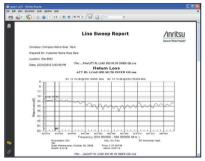
Site Master™ Valuable Options and Features

Line Sweep Tools™, Master Software Tools™ and easyTest Tools™ (for your PC)



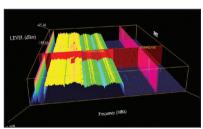
Trace Validation

Marker and Limit Line presets allow quick checks of traces for limit violations.



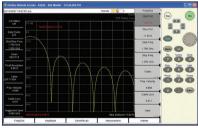
Report Generation

Create reports with company logo, GPS tagging information, calibration status, and serial number of the instrument for complete reporting.



3D Spectrogram

For in-depth analysis with 3-axis rotation viewing, threshold, reference level, and marker control. Turn on Signal ID to see the types of signals.



Remote Access Tool

The Remote Access Tool allows supervisor's to remotely view and control the instrument over the Internet.



easyTest Tools

easyTest Tools is a PC based program that helps create, distribute and display work instructions on Anritsu's Cable and Antenna Analyzers.

Line Sweep Tools

Line Sweep Tools increases productivity for people who deal with dozens of Cable and Antenna traces, or Passive Inter-Modulation (PIM) traces, every day.

- User Interface will be familiar to users of Anritsu's Hand Held Software Tools. This will lead to a short learning curve.
- Marker and Limit Line Presets make applying markers and a limit line to similar traces, as well as validating traces, a quick task.
- Renaming Grid makes changing file names, trace titles, and trace subtitles from field values to those required for a report much quicker than manual typing and is less prone to error.
- Report Generator will generate a professional looking PDF of all open traces with additional information such as contractor logos and contact information.

Master Software Tools

Master Software Tools (MST) is a powerful PC software post-processing tool designed to enhance the productivity of technicians in data analysis and testing automation.

Folder Spectrogram – creates a composite file of up to 15,000 multiple traces for quick review, also create:

- Peak Power, Total Power, and Peak Frequency plotted over time
- Histogram filter data and plot number of occurrences over time
- Minimum, Maximum, and Average Power plotted over frequency
- Movie playback playback data in the familiar frequency domain view
- 3D Spectrogram for in-depth analysis with 3-axis rotation viewing control

easyTest Tools

Anritsu's easyTest Tools is a PC based program that can help create, distribute, and display work instructions on Anritsu's Cable and Antenna Analyzers. easyTest can:

- Create easyTest Tools has a simple-to-use tool set to help create an on-instrument procedure, with setups, pictures, prompts, and easy methods to save results.
- **Distribute** An easyTest procedure is completely contained in a single compressed file, making electronic distribution simple.
- Display work instructions on the instrument. Prompts, photos, and even Power Point slides can be displayed on your Anritsu handheld cable and antenna analyzers. The ability to recall setups and automatically save results make using easyTest even easier.

Line Sweep Features

Presets

7 sets of 6 markers and 1 limit line Next trace capability

File Types

Input: HHST DAT, VNA Measurements: Return Loss (VSWR), Cable Loss, DTF-RL, DTF-VSWR, PIM Output: LS DAT, VNA, CSV, PNG, BMP, JPG, PDF

Report Generator

Logo, title, company name, customer name, location, date and time, filename, PDF, HTML, all open traces

Tools

Cable Editor

Distance to Fault

Measurement calculator Signal Standard Editor

Renaming Grid

Interfaces

Serial, Ethernet, USB

Capture Plots to

Screen, Database, DAT files, JPEG, Instrument

Master Software Tools Features Database Management

Full Trace Retrieval

Trace Catalog

Group Edit

Trace Editor

Data Analysis

Trace Math and Smoothing

Data Converter

Measurement Calculator

Mapping (GPS Required)

Spectrum Analyzer Mode

Mobile WiMAX OTA Option

TS-SCDMA OTA Option

LTE, both FDD and TDD Options

Folder Spectrogram

Folder Spectrogram – 2D View Video Folder Spectrogram – 2D View Folder Spectrogram – 3D View

List/Parameter Editors

Traces

Antennas, Cables, Signal Standards

Product Updates

Firmware Upload

Pass/Fail

VSG Pattern Converter

Languages

Mobile WiMAX

Display

Connectivity

USB

Download measurements and live traces

Upload Lists/Parameters

Firmware Updates

Remote Access Tool over the Internet

easyTest Tools

Create tests

Distribute procedures

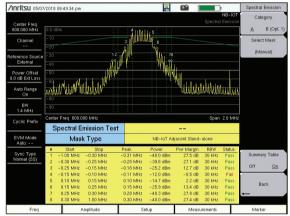
Display instructions

Site Master™ Valuable Options and Features

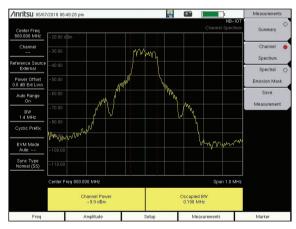
NB-IoT Analyzer (Option 887)



NB-IoT Analyzer Summary Screen



NB-IoT Analyzer Spectral Emission Mask



NB-IoT Analyzer Channel Spectrum

NB-IoT Analyzer (Option 887)

Narrowband Internet of Things (NB-IoT), also known as LTE Cat-NB1, is a new cellular technology introduced in 3GPP Release 13 for providing wide-area coverage for the Internet of Things (IoT).

TheNB-IoT Analyzer is ideal for network operator installation and maintenance teams, along with their contractors that are deploying or have already deployed NB-IoT services. This new feature will allow the field installation and maintenance teams to verify that NB-IoT services are deployed and are working as intended.

Key Features and Benefits

The NB-IoT analyzer, Option 887 has the following features:

- Summary screen showing the following RF measurements:
 - Carrier Frequency
 - Channel Power
 - Occupied BW
 - NPSS Power
 - NSSS Power
 - NPBCH Power
 - NPDCH/NPDSCH Power
 - Cell ID
 - RSRP
 - RSRQ
 - SINR
 - Spectral Emission Mask (Pass/Fail)
- Channel Spectrum
- Spectral Emission Mask

Site Master™ Ordering Information

Ordering Information - Options

	S331E	S332E	S361E	S362E	Description
	2 MHz to 4 GHz	2 MHz to 4 GHz	2 MHz to 6 GHz	2 MHz to 6 GHz	Cable and Antenna Analyzer
		9 kHz to 4 GHz		9 kHz to 6 GHz	Spectrum Analyzer
	Options	Options	Options	Options	
M	S331E-0021	S332E-0021	S361E-0021	S362E-0021	2-Port Transmission Measurement
	S331E-0010	S332E-0010	S361E-0010	S362E-0010	Bias-Tee (requires Option 0021 for S331E /S361E)
	S331E-0031	S332E-0031	S361E-0031	S362E-0031	GPS Receiver (requires Antenna P/N 2000-1528-R)
	S331E-0019	S332E-0019	S361E-0019	S362E-0019	High-Accuracy Power Meter (requires External Power Sensor)
		S332E-0029		S362E-0029	Power Meter
		S332E-0025		S362E-0025	Interference Analyzer (Option 0031 recommended)
hutatil		S332E-0027		S362E-0027	Channel Scanner
سللس	ı	S332E-0431		S362E-0431	Coverage Mapping (requires Option 0031)
		S332E-0090		S362E-0090	Gated Sweep
·•••		S332E-0028		S362E-0028	C/W Signal Generator (requires CW Signal Generator Kit, P/N 69793)
M		S332E-0509		S362E-0509	AM/FM/PM Analyzer
CPRI	S331E-0752	S332E-0752	S361E-0752	S362E-0751	CPRI LTE RF Measurements (requires Option 759)
	S331E-0413	S332E-0413	S361E-0413	S362E-0411	Ethernet Connectivity
(a s)	S331E-0098	S332E-0098	S361E-0098	S362E-0098	Standard Calibration (ANSI 2540-1-1994)
(0,0)		S332E-0444			S362E-0444 EMF Measurements (requires Anritsu Isotropic Antenna)
OBSAI		S332E-0753	S361E-0753	S362E-0753	S362E-0753 OBSAI LTE RF Measurements (requires Option 759)
	S331E-0098	S332E-0098	S361E-0098	S362E-0098	Standard Calibration (ANSI 2540-1-1994)
	S331E-0099	S332E-0099	S361E-0099	S362E-0099	Premium Calibration to Z540 plus test data

Power Sensors (For complete ordering information see the respective datasheets of each sensor)



Model Number	Description
MA24105A	Inline Peak Power Sensor, 350 MHz to 4 GHz, +51.76 dBm
MA24106A	High-Accuracy RF Power Sensor, 50 MHz to 6 GHz, +23 dBm
MA24108A	Microwave USB Power Sensor, 10 MHz to 8 GHz, +20 dBm
MA24118A	Microwave Universal USB Power Sensor, 10 MHz to 18 GHz, +20 dBm
MA24126A	Microwave USB Power Sensor, 10 MHz to 26 GHz, +20 dBm
MA24208A	Microwave Universal USB Power Sensor, 10 MHz to 8 GHz, +20 dBm to $-60~\mathrm{dBm}$
MA24218A	Microwave Universal USB Power Sensor, 10 MHz to 18 GHz, +20 dBm to -60 dBm $$
MA24330A	Microwave CW USB Power Sensor, 10 MHz to 33 GHz, +20 dBm
MA24340A	Microwave CW USB Power Sensor, 10 MHz to 40 GHz, +20 dBm
MA24350A	Microwave CW USB Power Sensor, 10 MHz to 50 GHz, +20 dBm
MA25100A	RF Power Indicator

Manuals (available at www.anritsu.com)



Part Number	Description	
10100-00065	Product Information, Compliance, and Safety	
10580-00252	Site Master User Guide	
10580-00241	Cable and Antenna Analyzer Measurement Guide	
10580-00242	2-Port Transmission Measurement Guide	
10580-00349	Spectrum Analyzer Measurement Guide	
10580-00240	Power Meter Measurement Guide	
10580-00415	CPRI LTE RF Analyzer Measurement Guide	
10580-00434	OBSAI LTE RF Analyzer Measurement Guide	
10580-00256	Programming Manual	

Troubleshooting Guides (soft copy at www.anritsu.com)

Part Number	Description
11410-00473	Cable, Antenna and Components
11410-00551	Spectrum Analyzers
11410-00472	Interference

Standard Accessories (included with instrument)





Part Number	Description
2000-1654-R	Soft Carrying Case
2000-1691-R	Stylus with Coiled Tether
2000-1797-R	Screen Protector Film, 8.4 inch (2, one installed)
633-75	Rechargeable Li-Ion Battery
40-187-R	AC-DC Adapter
806-141-R	Automotive Power Adapter, 12 VDC, 60 W
3-2000-1498	USB A/5-pin mini-B Cable, 10 feet/305 cm

Optional Accessories

Calibration Components, 50 Ω



ICN50B InstaCal™ Calibration Module, 38 dB, 2 MHz to 6.0 GHz, N(m), 50 Ω OSLN50A-8 High Performance Type N(m), DC to 8 GHz, 50 Ω OSLNF50A-8 High Performance Type N(f), DC to 8 GHz, 50 Ω Precision Open/Short/Load, 4.3-10(f), DC to 6 GHz, 50 Ω 2000-1915-R Precision Open/Short/Load, 4.3-10(m), DC to 6 GHz, 50 Ω 2000-1618-R Precision Open/Short/Load, 7/16 DIN(m), DC to 6.0 GHz 50 \square 2000-1619-R Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 \square 22N50 Open/Short, N(m), DC to 18 GHz, 50 Ω 22NF50 Open/Short, N(f), DC to 18 GHz, 50 Ω SM/PL-1 Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω Precision Load, N(f), 42 dB, 6.0 GHz, 50 Ω	Part Number	Description
OSLNF50A-8 High Performance Type N(f), DC to 8 GHz, $50~\Omega$ 2000-1914-R Precision Open/Short/Load, 4.3 - 10 (f), DC to 6 GHz, $50~\Omega$ 2000-1915-R Precision Open/Short/Load, 4.3 - 10 (m), DC to 6 GHz, $50~\Omega$ 2000-1618-R Precision Open/Short/Load, $7/16~DIN(m)$, DC to $6.0~GHz~50~\Box$ 2000-1619-R Precision Open/Short/Load, $7/16~DIN(f)$, DC to $6.0~GHz~50~\Box$ 22N50 Open/Short, N(m), DC to $18~GHz$, $50~\Omega$ 22NF50 Open/Short, N(f), DC to $18~GHz$, $50~\Omega$ SM/PL-1 Precision Load, N(m), $42~dB$, $6.0~GHz$, $50~\Omega$	ICN50B	InstaCal $^{\text{\tiny{TM}}}$ Calibration Module, 38 dB, 2 MHz to 6.0 GHz, N(m), 50 Ω
2000-1914-R Precision Open/Short/Load, 4.3-10(f), DC to 6 GHz, 50 Ω 2000-1915-R Precision Open/Short/Load, 4.3-10(m), DC to 6 GHz, 50 Ω 2000-1618-R Precision Open/Short/Load, 7/16 DIN(m), DC to 6.0 GHz 50 \square 2000-1619-R Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 \square 22N50 Open/Short, N(m), DC to 18 GHz, 50 Ω 22NF50 Open/Short, N(f), DC to 18 GHz, 50 Ω SM/PL-1 Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω	OSLN50A-8	High Performance Type N(m), DC to 8 GHz, 50 Ω
2000-1915-R Precision Open/Short/Load, 4.3-10(m), DC to 6 GHz, 50 Ω 2000-1618-R Precision Open/Short/Load, 7/16 DIN(m), DC to 6.0 GHz 50 \square 2000-1619-R Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 \square 22N50 Open/Short, N(m), DC to 18 GHz, 50 Ω 22NF50 Open/Short, N(f), DC to 18 GHz, 50 Ω SM/PL-1 Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω	OSLNF50A-8	High Performance Type N(f), DC to 8 GHz, 50 Ω
2000-1618-R Precision Open/Short/Load, 7/16 DIN(m), DC to 6.0 GHz 50 \square 2000-1619-R Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 \square 22N50 Open/Short, N(m), DC to 18 GHz, 50 Ω 22NF50 Open/Short, N(f), DC to 18 GHz, 50 Ω SM/PL-1 Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω	2000-1914-R	Precision Open/Short/Load, 4.3-10(f), DC to 6 GHz, 50 Ω
2000-1619-R Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 \square 22N50 Open/Short, N(m), DC to 18 GHz, 50 Ω 22NF50 Open/Short, N(f), DC to 18 GHz, 50 Ω SM/PL-1 Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω	2000-1915-R	Precision Open/Short/Load, 4.3-10(m), DC to 6 GHz, 50 Ω
22N50 Open/Short, N(m), DC to 18 GHz, $50~\Omega$ 22NF50 Open/Short, N(f), DC to 18 GHz, $50~\Omega$ SM/PL-1 Precision Load, N(m), 42 dB, $6.0~\text{GHz}$, $50~\Omega$	2000-1618-R	Precision Open/Short/Load, 7/16 DIN(m), DC to 6.0 GHz 50 \square
22NF50 Open/Short, N(f), DC to 18 GHz, 50 Ω SM/PL-1 Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω	2000-1619-R	Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 \square
SM/PL-1 Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω	22N50	Open/Short, N(m), DC to 18 GHz, 50 Ω
· , , , , , , , , , , , , , , , , , , ,	22NF50	Open/Short, N(f), DC to 18 GHz, 50 Ω
SM/PLNF-1 Precision Load, N(f), 42 dB, 6.0 GHz, 50 Ω	SM/PL-1	Precision Load, N(m), 42 dB, 6.0 GHz, 50 Ω
	SM/PLNF-1	Precision Load, N(f), 42 dB, 6.0 GHz, 50 Ω

Calibration Components, 75 Ω



22N75 Open/Short, N(m), DC to 3 GHz, 75 Ω	
22NF75 Open/Short, N(f), DC to 3 GHz, 75 Ω	
26N75A Precision Termination, N(m), DC to 3 GHz, 75	Ω
26NF75A Precision Termination, N(f), DC to 3 GHz, 75 S	Ω
12N50-75B Matching Pad, DC to 3 GHz, 50 Ω to 75 Ω	

Phase-Stable Test Port Cables, Armored w/ Reinforced Grip (recommended for cable & antenna line sweep applications)



Part Number	Description
15RNFN50-1.5-R	1.5 m, DC to 6 GHz, N(m) to N(f), 50 Ω
15RDFN50-1.5-R	1.5 m, DC to 6 GHz, N(m) to 7/16 DIN(f), 50 Ω
15RDN50-1.5-R	1.5 m, DC to 6 GHz, N(m) to 7/16 DIN(m), 50 Ω
15RNFN50-3.0-R	3.0 m, DC to 6 GHz, N(m) to N(f), 50 Ω
15RDFN50-3.0-R	3.0 m, DC to 6 GHz, N(m) to 7/16 DIN(f), 50 Ω
15RDN50-3.0-R	3.0 m, DC to 6 GHz, N(m) to 7/16 DIN(m), 50 Ω

InterChangeable Adaptor Phase Stable Test Port Cables, Armored w/Reinforced Grip (recommended for cable and antenna line sweep applications. It uses the same ruggedized grip as the Reinforced grip series cables. Now you can also change the adaptor interface on the grip to four different connector types)



Part Number	Description
15RCN50-1.5-R	1.5 m, DC to 6 GHz, N(m), N(f), 7/16 DIN(m), 7/16 DIN(f), 50 Ω
15RCN50-3.0-R	3.0 m, DC to 6 GHz, N(m), N(f), 7/16 DIN(m), 7/16 DIN(f), 50 Ω

Phase-Stable Test Port Cables, Armored (recommended for use with tightly spaced connectors and other general purpose applications)



Part Number	Description
15NNF50-1.5C	1.5 m, DC to 6 GHz, N(m) to N(f), 50 Ω
15NN50-1.5C	1.5 m, DC to 6 GHz, N(m) to N(m), 50 Ω
15NDF50-1.5C	1.5 m, DC to 6 GHz, N(m) to 7/16 DIN(f), 50 Ω
15ND50-1.5C	1.5 m, DC to 6 GHz, N(m) to 7/16 DIN(m), 50 Ω
15NNF50-3.0C	3.0 m, DC to 6 GHz, N(m) to N(f), 50 Ω
15NN50-3.0C	3.0 m, DC to 6 GHz, N(m) to N(m), 50 Ω
15NNF50-5.0C	5.0 m, DC to 6 GHz, N(m) to N(f), 50 Ω
15NN50-5.0C	5.0 m, DC to 6 GHz, N(m) to N(m), 50 Ω
15N43M50-1.5C	Test Port Extension Cable, Armored, 1.5 meters, DC to 6GHz, N(m) to 4.3-10(m)
15N43F50-1.5C	Test Port Extension Cable, Armored, 1.5 meter, DC to 6GHz, N(m) to 4.3-10(f)
15N43M50-3.0C	Test Port Extension Cable, Armored, 3 meters, DC to 6 GHz, N(m) to 4.3-10(m)
15N43F50-3.0C	Test Port Extension Cable, Armored, 3 meters, DC to 6 GHz, N(m) to 4.3-10(f)
15NF43M50-1.5C	Test Port Extension Cable, Armored, 1.5 meters, DC to 6 GHz, N(f) to 4.3-10(m)
15NF43F50-1.5C	Test Port Extension Cable, Armored, 1.5 meters,DC to 6 GHz, N(f) to 4.3-10(f)
15NF43M50-3.0C	Test Port Extension Cable, Armored, 3 meters, DC to 6 GHz, N(f) to 4.3-10(m)
15NF43F50-3.0C	Test Port Extension Cable, Armored, 3 meters, DC to 6 GHz, N(f) to 4.3-10(f)

Optional Accessories (continued)

Optional Accessories (continued)		
Adapters		
	Part Number	Description
	1091-26-R	SMA(m) to N(m), DC to 18 GHz, 50 Ω
	1091-27-R	SMA(f) to N(m), DC to 18 GHz, 50 Ω
	1091-80-R	SMA(m) to N(f), DC to 18 GHz, 50 Ω
	1091-81-R	SMA(f) to N(f), DC to 18 GHz, 50 Ω
	1091-172-R	BNC(f) to N(m), DC to 1.3 GHz, 50 Ω
	1091-433-R	Low PIM Adapter, 4.1-9.5(f) to 7/16 DIN(f), DC to 3.0 GHz, 50 Ω
	1091-434-R	Low PIM Adapter, 4.1-9.5(m) to 7/16 DIN(f), DC to 3.0 GHz, 50 Ω
	1091-465-R	Adapter, DC to 6 GHz, 4.3-10(f) to N(f), 50 Ω
	1091-467-R	Adapter, DC to 6 GHz, 4.3-10(m) to N(f), 50 Ω
	510-90-R	7/16 DIN(f) to N(m), DC to 7.5 GHz, 50 Ω
	510-91-R	7/16 DIN(f) to N(f), DC to 7.5 GHz, 50 Ω
	510-92-R	7/16 DIN(m) to N(m), DC to 7.5 GHz, 50 Ω
	510-93-R	7/16 DIN(m) to N(f), DC to 7.5 GHz, 50 Ω
	510-96-R	7/16 DIN(m) to 7/16 DIN (m), DC to 7.5 GHz, 50 Ω
	510-97-R	7/16 DIN(f) to 7/16 DIN (f), DC to 7.5 GHz, 50 Ω
Precision Adapters	510-102-R	N(m) to N(m), DC to 11 GHz, 50 Ω , 90 degrees right angle
Precision Adapters	Part Number	Description
	34NN50A	Precision Adapter, N(m) to N(m), DC to 18 GHz, 50 Ω
	34NFNF50	Precision Adapter, N(f) to N(f), DC to 18 GHz, 50 Ω
Miscellaneous Accessories		
	Part Number	Description
	2000-1528-R	GPS Antenna, SMA(m) with 15 ft cable
	2000-1652-R	GPS Antenna, SMA(m) with 1 ft cable
	69793	CW Signal Generator Kit
	2000-1520-R	USB Flash Drive
	2000-1374 2000-1371-R	External Charger for Li-lon Batteries
	3-806-152	Ethernet Cable, 7 ft/213 cm Cat 5e Crossover Patch Cable, 7 ft/213 cm)
	2000-1797-R	Screen Protector Film 8.4 in.
	2300-517	Phase Noise Measurement Software (requires Ethernet Option 0411)
	2300-532	Map Master CD
Backpack and Transit Case		
Take Case	Part Number	Description
	67135	Anritsu Backpack (For Handheld Instrument and PC)
· ·	760-243-R	Large Transit Case with Wheels and Handle 56 cm x 45.5 cm x 26.5 c (22.07" x 17.92" x 10.42")
	760-271-R	Transit Case for Portable Directional Antennas and Port Extender 52.4 cm x 42.8 cm x 20.6 cm (20.62" x 16.87" x 8.12") (for 2000-1777-R, 2000-1778-R, 2000-1779-R, 2000-1798-R)
Directional Antennas		
	Part Number	Description
	2000-1411-R	824 MHz to 896 MHz, N(f), 12.3 dBi, Yagi
	2000-1412-R	885 MHz to 975 MHz, N(f), 12.6 dBi, Yagi
a 6 (a) L	2000-1413-R	1710 MHz to 1880 MHz, N(f), 12.3 dBi, Yagi
	2000-1414-R	1850 MHz to 1990 MHz, N(f), 11.4 dBi, Yagi
	2000-1415-R	2400 MHz to 2500 MHz, N(f), 14.1 dBi, Yagi
	2000-1416-R	1920 MHz to 2170 MHz, N(f), 14.3 dBi, Yagi
	2000-1659-R	698 MHz to 787 MHz, N(f), 10.1 dBi, Yagi
	2000-1660-R	1425 MHz to 1535 MHz, N(f), 14.3 dBi, Yagi
	2000-1715-R	Directional Antenna, 698 MHz to 2500 MHz, N(f), gain of 2 dBi to 10
	2000-1726-R	Antenna, 2500 MHz to 2700 MHz, N(f), 14.1 dBi, Yagi
	2000-1777-R	Portable Directional Antenna, 9 kHz to 20 MHz, N(f)
	2000-1778-R	Portable Directional Antenna, 20 MHz to 200 MHz, N(f)
	2000-1779-R	Portable Directional Antenna, 200 MHz to 500 MHz, N(f)
	2000-1812-R	Portable Yagi Antenna, 450 MHz to 512 MHz, N(f), 7.1 dBi

2000-1825-R

Portable Yagi Antenna, 380 MHz to 430 MHz, N(f), 7.1 dBi

Site Master™ Ordering Information

Optional Accessories (continued)

Portable Antennas



Part Number	Description
2000-1200-R	806 MHz to 866 MHz, SMA(m), 50 Ω
2000-1473-R	870 MHz to 960 MHz, SMA(m), 50 Ω
2000-1035-R	896 MHz to 941 MHz, SMA(m), 50 Ω (1/2 wave)
2000-1030-R	1710 MHz to 1880 MHz, SMA(m), 50 Ω (1/2 wave)
2000-1474-R	1710 MHz to 1880 MHz with knuckle elbow (1/2 wave)
2000-1031-R	1850 MHz to 1990 MHz, SMA(m), 50 Ω (1/2 wave)
2000-1475-R	1920 MHz to 1980 MHz and 2110 MHz to 2170 MHz, SMA(m), 50 Ω
2000-1032-R	2400 MHz to 2500 MHz, SMA(m), 50 Ω (1/2 wave)
2000-1361-R	2400 MHz to 2500 MHz, 5000 MHz to 6000 MHz, SMA(m), 50 Ω
2000-1636-R	Antenna Kit (Consists of: 2000-1030-R, 2000-1031-R, 2000-1032-R,

Mag Mount Broadband Antenna





Part Number	Description
2000-1647-R	Cable 1: 698-1200 MHz 2 dBi peak gain, 1700-2700 MHz 5 dBi peak gain, N(m), 50 Ω , 10 ft Cable 2: 3000-6000 MHz 5 dBi peak gain, N(m), 50 Ω , 10 ft Cable 3: GPS 26 db gain, SMA(m), 50 Ω , 10 ft
2000-1645-R	694-894 MHz 3 dBi peak gain, 1700-2700 MHz 3 dBi peak gain, N(m), 50 $\Omega,$ 10 ft
2000-1646-R	750-1250 MHz 3 dBi peak gain, 1650-2700 MHz 5 dBi peak gain, 2100-2700 MHz 3 dBi peak gain, N(m), 50 Ω , 10 ft
2000-1648-R	1700-6000 MHz 3 dBi peak gain, N(m), 50 Ω , 10 ft

Filters





Part Number	Description
1030-114-R	806 MHz to 869 MHz, N(m) to SMA(f), 50 Ω
1030-109-R	824 MHz to 849 MHz, N(m) to SMA(f), 50 Ω
1030-110-R	880 MHz to 915 MHz, N(m) to SMA(f), 50 Ω
1030-105-R	890 MHz to 915 MHz, N(m) to N(f), 50 Ω
1030-111-R	1850 MHz to 1910 MHz, N(m) to SMA(f), 50 Ω
1030-106-R	1710 MHz to 1790 MHz, N(m) to N(f), 50 Ω
1030-107-R	1910 MHz to 1990 MHz Band, 0.41 dB loss, N(m) to SMA(f), 50 Ω
1030-112-R	2400 MHz to 2484 MHz, N(m) to SMA(f), 50 Ω
1030-149-R	High Pass, 150 MHz, N(m) to N(f), 50 Ω
1030-150-R	High Pass, 400 MHz, N(m) to N(f), 50 Ω
1030-151-R	High Pass, 700 MHz, N(m) to N(f), 50 Ω
1030-152-R	Low Pass, 200 MHz, N(m) to N(f), 50 Ω
1030-153-R	Low Pass, 550 MHz, N(m) to N(f), 50 Ω
1030-155-R	2500 MHz to 2700 MHz, N(m) to N(f), 50 Ω
1030-178-R	1920 MHz to 1980 MHz, N(m) to N(f), 50 Ω
1030-179-R	777 MHz to 798 MHz, N(m) to N(f), 50 Ω
1030-180-R	2500 MHz to 2570 MHz, N(m) to N(f), 50 Ω
2000-1684-R	791 MHz to 821 MHz, N(m) to N(f), 50 Ω
2000-1734-R	Bandpass Filter, 699 MHz to 715 MHz, N(m) and N(f), 50 Ω
2000-1735-R	Bandpass Filter, 776 MHz to 788 MHz, N(m) and N(f), 50 Ω
2000-1736-R	Bandpass Filter, 815 MHz to 850 MHz, N(m) and N(f), 50 Ω
2000-1737-R	Bandpass Filter, 1711 MHz to 1756 MHz, N(m) and N(f), 50 Ω
2000-1738-R	Bandpass Filter, 1850 MHz to 1910 MHz, N(m) and N(f), 50 Ω
2000-1739-R	Bandpass Filter, 880 MHz to 915 MHz, N(m) and N(f), 50 Ω
2000-1740-R	Bandpass Filter, 1710 MHz to 1785 MHz, N(m) and N(f), 50 Ω
2000-1741-R	Bandpass Filter, 1920 MHz to 1980 MHz, N(m) and N(f), 50 Ω
2000-1742-R	Bandpass Filter, 832 MHz to 862 MHz, N(m) and N(f), 50 Ω
2000-1743-R	Bandpass Filter, 2500 MHz to 2570 MHz, N(m) and N(f), 50 Ω
2000-1799-R	Bandpass Filter, 2305 MHz to 2320 MHz, N(m) and N(f), 50 Ω
2000-1911-R	Bandpass Filter, 703 MHz to 748 MHz, N(m) and N(f), 50 Ω
2000-1912-R	Bandpass Filter, 788 MHz to 798 MHz, N(m) and N(f), 50 Ω
2000-1925-R	Bandpass Filter, 663 MHz to 698 MHz, N(m) and N(f), 50 Ω
2000-1926-R	Bandpass Filter, 776 MHz to 806 MHz, N(m) and N(f), 50 Ω

Site Master™ Ordering Information

Optional Accessories (continued)

Attenuators





Part Number Description

3-1010-122	20 dB, 5 W, DC to 12.4 GHz, N(m) to N(f)
42N50-20	20 dB, 5 W, DC to 18 GHz, N(m) to N(f)
42N50A-30	30 dB, 50 W, DC to 18 GHz, N(m) to N(f)
3-1010-123	30 dB, 50 W, DC to 8.5 GHz, N(m) to N(f)
1010-127-R	30 dB, 150 W, DC to 3 GHz, N(m) to N(f)
3-1010-124	40 dB, 100 W, DC to 8.5 GHz, N(m) to N(f), Uni-directional
1010-121	40 dB, 100 W, DC to 18 GHz, N(m) to N(f), Uni-directional
1010-128-R	40 dB, 150 W, DC to 3 GHz, N(m) to N(f)

RF over Fiber Accessories



Part Number Description

67-12-R	Optical Tap; Single Mode/Multi Mode 80/20 Tap
67-13-R	Optical Tap; Single Mode 80/20 Tap
67-14-R	Optical Tap; Single Mode/Multi Mode 50/50 Tap
67-15-R	Optical Tap; Single Mode 50/50 Tap
68-5-R	SFP (Optical Module), MM (Multi Mode) 4.25 Gbps, 850 nm, 500 m
68-6-R	SFP+ (Optical Module), MM (Multi Mode) 8 Gbps FC/10G SR 850 nm
68-7-R	SFP (Optical Module), SM (Single Mode) 2.7 Gbps, 1310 nm, 15 km
68-8-R	SFP+ (Optical Module), SM (Single Mode) 10 Gbps LR, 1310 nm
68-9-R	SFP (Optical Module), SM (Single Mode) 3.07 Gbps, 1310 nm
68-10-R	SFP (Optical Module), MM (Multi Mode) 3.7 Gbps, 850 nm
68-11-R	SFP+ (Optical Module), SM (Single Mode) 10.5 Gbps, 1310 nm
68-12-R	SFP+ (Optical Module), MM (Multi Mode) 10.5 Gbps, 850 nm
808-16-R	Fiber Optic Cable, 3 m, Duplex MM (Multi Mode) 1.6 mm LC/PC LC/PC 50 μm
808-17-R	Fiber Optic Cable, 3 m, Simplex MM (Multi Mode) 1.6 mm LC/UPC LC/UPC
808-18-R	Fiber Optic Cable, 3 m, Ruggedized Simplex SM (Single Mode) LC/UPC
808-19-R	Fiber Optic Cable, 3 m, Ruggedized Duplex SM (Single Mode) LC/UPC
2100-29-R	Fiber Optic Cable, 3 m, Simplex SM (Single Mode) LC/UPC
2100-30-R	Fiber Optic Cable, 10 m, Simplex MM (Multi Mode) LC-SC
2100-31-R	Fiber Optic Cable, 3 m, Duplex SM (Single Mode) LC/UPC
971-14-R	Ferrule Cleaner, 2.5 mm SC
971-15-R	Ferrule Cleaner, 1.25 mm LC
971-16-R	Fiber Ferrule Cleaner
2000-1849-R	SFP 4-slot ESD Box

MA8100A TRX NEON Signal Mapper

(supported on S332E, S362E models only)

Model Number

Description

TRX NEON® Signal Mapper with Anritsu Integration and Tracking Unit. Includes 1 year TRX NEON Software License with 1 year of maintenance and support and 1 year of Cloud

MA8100A-003

MA8100A-001

TRX NEON® Signal Mapper with Anritsu Integration and Tracking Unit. Includes 3 years TRX NEON Software License with 3 years of maintenance and support and 3 years of

MA8100A-005

TRX NEON® Signal Mapper with Anritsu Integration and Tracking Unit. Includes 5 years TRX NEON Software License with 5 years of maintenance and support and 5 years of Cloud Service.



TRX NEON® Signal Mapper with Anritsu Integration and Tracking Unit. Includes Perpetual TRX NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service.

MA8100A-100

1 year TRX NEON Software License with 1 year of maintenance and support and 1 2300-574 year of Cloud Service. Cannot be ordered separately from P/N MA8100A-001. See P/N 2300-612 for renewals.



3 year TRX NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service. Cannot be ordered separately from 2300-575

P/N MA8100A-003. See P/N 2300-613 for renewals. 5 year TRX NEON Software License with 5 years of maintenance and

2300-576

support and 5 years of Cloud Service. Cannot be ordered separately from P/N MA8100A-005. See P/N 2300-614 for renewals.

Perpetual TRX NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service. Part number can also be used to

2300-606

order a perpetual license after a limited term license has expired.

2300-612

Renewal of 1 year TRX NEON Software License with 1 year of maintenance and support and 1 year of Cloud Service.

Renewal of 3 year TRX NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service.

2300-613

Renewal of 5 year TRX NEON Software License with 5 years of maintenance and support and 5 years of Cloud Service.



2300-614



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