Anritsu

envision : ensure

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

Site Master — the Leading Cable and Antenna Analyzer

Built on a trusted history of quality, expertise, and performance, the Site Master S331E/S332E/S361E/S362E compact cable and antenna analyzer series is the leading 2-port solution that provides coverage from 2 MHz to 4/6 GHz. This portable and rugged solution has a variety of configuration options that make it the preferred solution by contractors, installers, and wireless service providers. Because of the Site Master series multi-functional capabilities and options, it eliminates the need for you to carry and learn multiple instruments.

- **Cable and antenna analyzer** – with a faster than 1 ms/data point sweep speed and dual display, quickly characterize cable and antenna systems with return loss, cable loss, VSWR, and distance-to-fault measurements

- **Spectrum analyzer** – covering a 9 kHz to 4/6 GHz frequency range, this option will help locate and identify various signals as low as -152 dBm with phase noise better than -100 dBc/Hz

- **Interference hunting** – identify interference from both illegal and unintentional signals that can degrade network performance and cause critical communications to be interrupted

- **Passive intermodulation (PIM) testing** – operating with a PIM Hunter™ probe allows a test technician to pinpoint the location of external PIM beyond the antenna

- **Indoor/Outdoor coverage mapping** – coupled with the NEON® MA8100A signal mapper, collect geo-referenced test data for RSSI and ACPR measurements
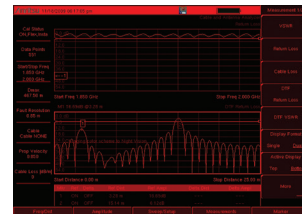
Nightime Display
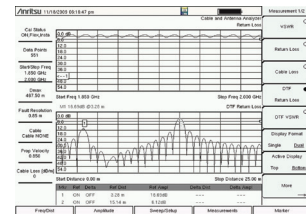
Black and White Display

Additional Configuration Options

Function	Description
2-port transmission measurement (Option 21)	With better than 80 dB dynamic range, provides high and low power settings for both TMA gain and antenna-antenna isolation measurements.
Bias tee (Option 10)	Built-in adjustable 12 to 32V bias tee can be turned on as needed eliminating 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 spectrogram display for monitoring intermittent signals over time and pinpoints source with on-screen interference mapping.
Channel scanner (Option 27)	Measures the power of multiple transmitted signals.
CW signal generator (Option 28)	Includes CW source to test low noise amplifiers and repeaters (requires an external CW generator kit).
GPS receiver (Option 31)	Provides location and UTC time information, and 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 413)	Enables automated testing from remote PC, or uploads data from field test to the PC.
EMF measurement system (Option 444)	Provides the capability to measure electromagnetic field radiation when used in conjunction with an Anritsu isotropic antenna. Automated measurements can be taken using user-definable time intervals.
CPRI LTE RF measurement (Option 752)	Converts the IQ data in the CPRI link into RF measurements. (requires Option 759).
OBSAI LTE RF measurement (Option 753)	Converts the IQ data in the OBSAI link into RF measurements. (requires Option 759).
RF over fiber hardware (Option 759)	Must be ordered with Options 752 or 753.

Designed for the Field

External Reference

External Trigger
T1 E1 Ref. Freq.

USB Interface Mini-B
Transfer data from Site Master to PC

GPS Connector

External Power

RF Out

Ethernet Connection

RF In

USB Interface Type A
Connect USB flash card

All connectors are conveniently located on the top panel, leaving the sides clear for handheld use.

Tilt bails are integrated into the case and soft case for better screen viewing.

Reliable Cable & Antenna Analysis — Anywhere, Anytime

The majority of the problems you find at a typical cell site are caused by problematic or 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. The Site Master series FDR-based return loss and DTF measurements can pinpoint an antenna problem from ground level in a few seconds, enabling the identification of small problems before they become big problems.

Cable and Antenna Analyzer Highlights

- Return loss, VSWR, cable loss, DTF

- Spectrum analyzer

- Interference analyzer with spectrogram displays

- Channel scanner

- High-accuracy power meter

- 2-port transmission measurements with built-in 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 of data to verify location of test

- Limit lines and alarming for providing reference standards

- Line Sweep Tools™ (LST) and Master Software Tools (MST) for post-analysis and report generation
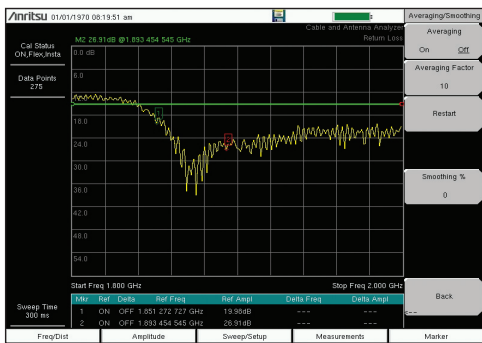
Return Loss/VSWR

Return Loss / VSWR

Make return loss and VSWR measurerments, 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. The Site Master series automatically calculates the average cable loss.
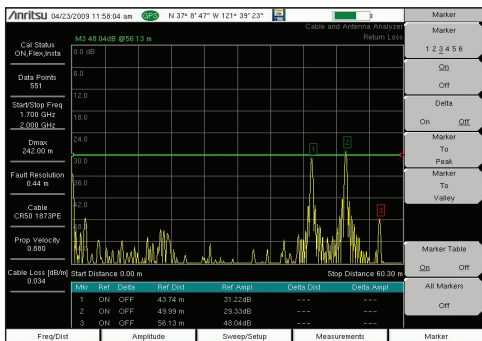

Distance-to-Fault

Distance-To-Fault (DTF)

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

The Site Master series 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.
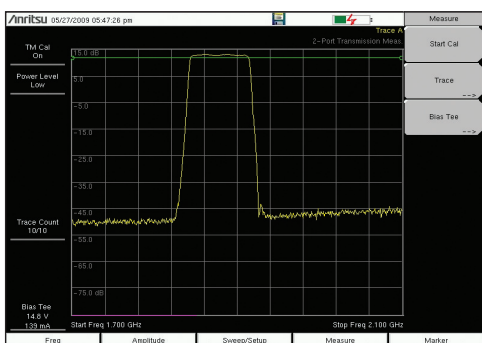
## 2-port Transmission Measurements (Option 21)

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

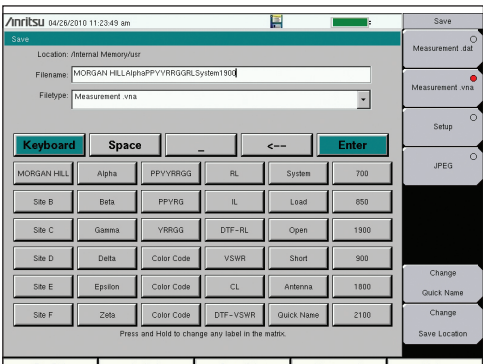## Bias Tee (Option 10) — requires Option 21 for S331E/S361E

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.

2-Port Transmission Measurements
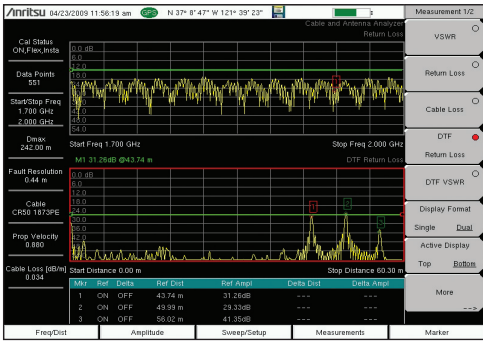
Dual Display

Quick Name Matrix

InstaCal Calibration

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 one. 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. This 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 results.

Standard OSL Calibration

Open-Short-Load (OSL) calibration comes standard with the Site Master series. 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™ Calibration

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

RF Immunity

The Site Master series 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.
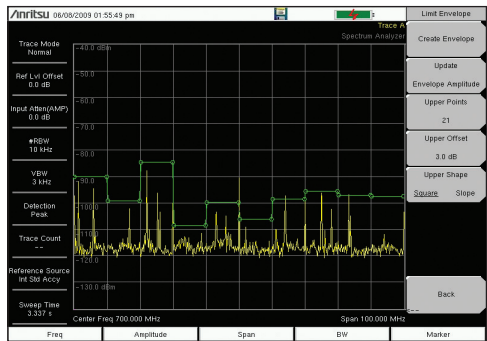
Performance

The Site Master S332E and S362E series 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. This makes the series ideal for a broad range of activities, including: spectrum monitoring, AM/FM broadcast proofing, interference analysis, field strength measurements, transmitter spectrum analysis, electromagnetic field strength, signal strength mapping, as well as overall field analysis of cellular 2G/3G/4G, land mobile radio, Wi-Fi, and broadcast signals.
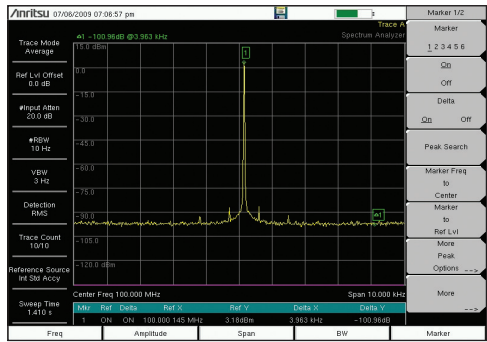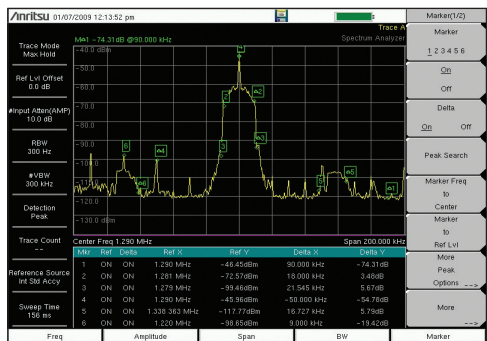

Dynamic Range Performance
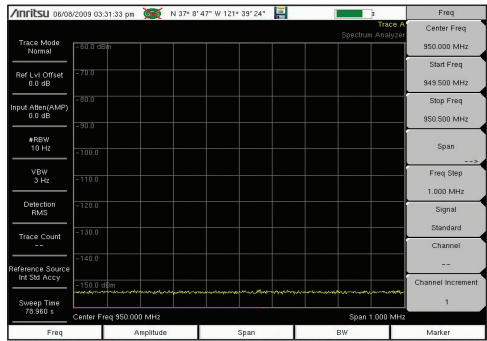
Low-level Performance

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.

Displayed Average Noise Level (DANL)

The Site Master series 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 Receiver Option 31, 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 series is equipped with features that will enhance productivity in the field:

- With limit lines for all user levels, create single limit lines and segmented limit lines in one step using the one-button limit envelope feature.

- The Site Master series 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 dBµV/Hz is a standard feature of the Site Master series.

Master Transmitter Testing

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), AM/FM demod, and emission mask.

Occupied Bandwidth
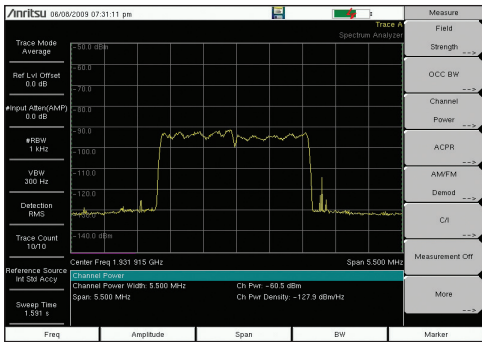
Occupied Bandwidth

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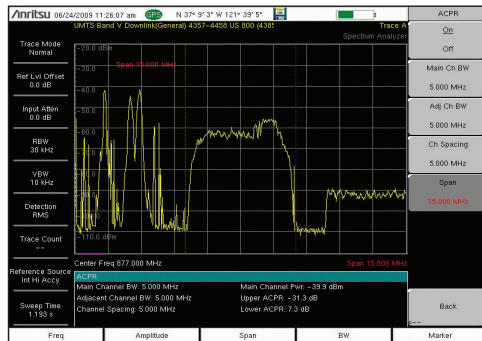
Adjacent Channel Power Ratio (ACPR)

ACPR 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.

Adjacent Channel Power Ratio

Field Strength Measurements

The Site Master series 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 can be displayed directly in dBµV/m. The Site Master series 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.
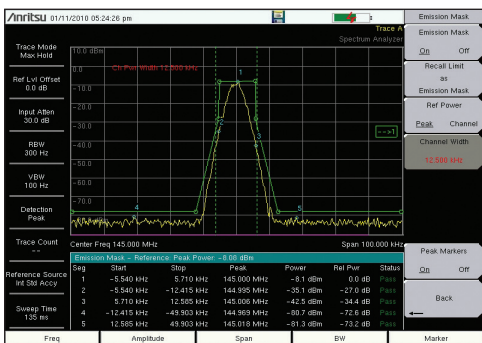
Emission Mask

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.


Emission Mask

Spectrum Analyzer Highlights

- Measurements: Occupied bandwidth, channel power, ACPR, C/I, AM/FM demod, field strength

- Interference analyzer: spectrogram, signal strength, RSSI, signal ID, interference mapping

- Dynamic range: > 95 dB in 10 Hz RBW

- DANL: -152 dBm in 10 Hz RBW

- Phase noise: -100 dBc/Hz @ 10 kHz offset at 1 GHz

- Frequency accuracy: < ± 50 ppb with GPS on

- Advanced marker functions: noise marker, frequency counter

- 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

Master the Location of Interference

As the wireless industry continues to expand, more diverse uses for the radio spectrum emerge and the number of signals that can 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 and robs the network of capacity. The goal of these measurements is to resolve interference issues as quickly as possible.
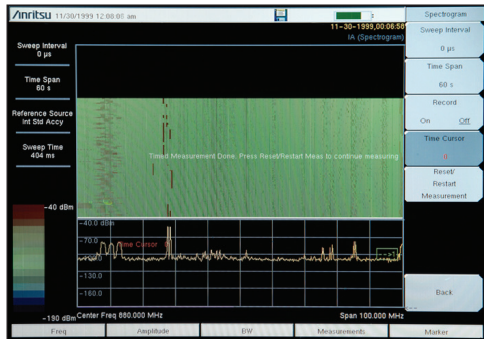

Spectrogram Display

Interference Analyzer (Option 25)

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

Spectrogram Display

The spectrogram display provides you with a 3D view 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 views. The Site Master series allows you to save a history of data up to 72 hours.
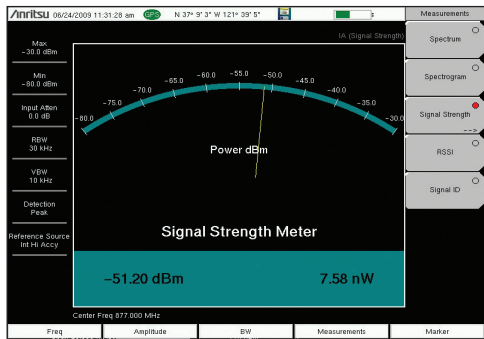
**Signal Strength Meter**

Signal Strength Meter

The 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.
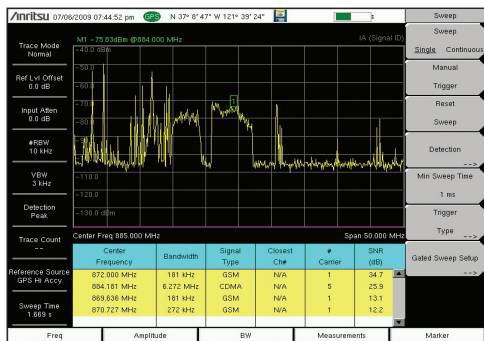
Signal ID

Signal ID

The signal ID feature in the interference analyzer can help you quickly identify the type of 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 series then displays results that include: center frequency, signal bandwidth, signal type, SNR (dB), etc.
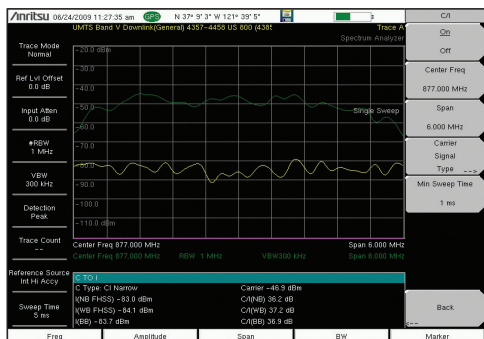

Carrier-to-Interference (C/I)

Carrier-To-Interference (C/I) Measurement

The C/I measurement capability makes it simple for you to determine if the level of interference will affect users in an 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.

Pinpoint Location of Interfering Signal with Interference Mapping
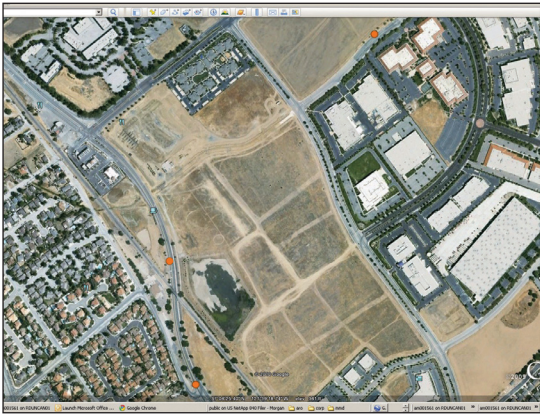
Interference Mapping with Google Earth™

Interference Mapping

The interference mapping measurement eliminates the need to use printed maps and draw lines to triangulate the interfering signal. Using easyMap™ Tools, it is easy to convert maps and make them compatible with the Site Master series. 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 estimated location of the interfering signal. The interference mapping can be done directly in the Site Master solution. 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. See Ordering Information for a list of compatible directional antennas available.
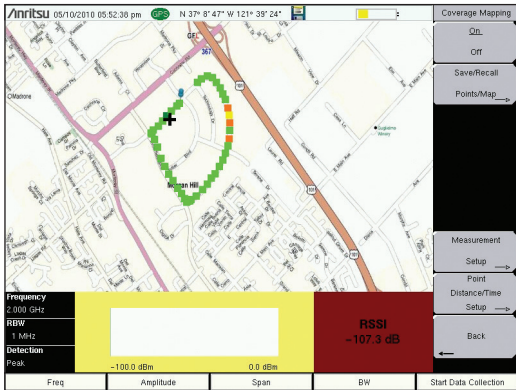
GPS Antenna

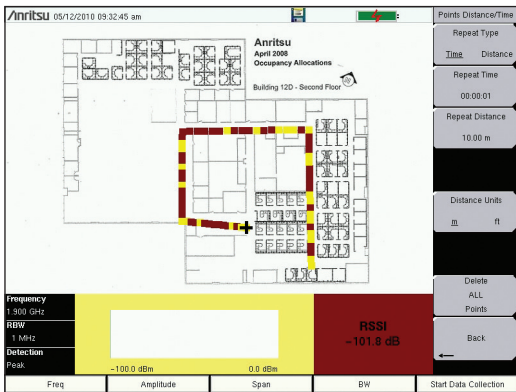The 2000-1528-R GPS antenna and Option 31 are required for the interference mapping and coverage mapping measurements.

On-Screen Interference Mapping

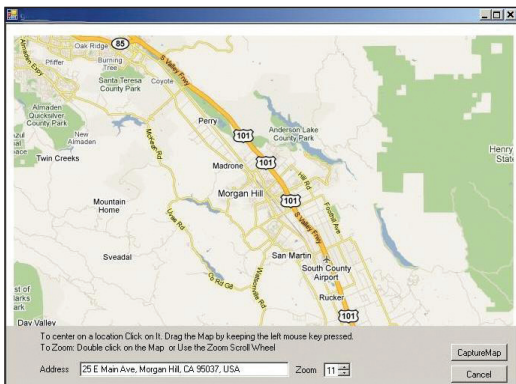# Indoor and Outdoor Coverage Mapping Solutions (Option 431)

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

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 easyMap Tools, the instrument displays maps, the location of the measurement, and a special color code for the power level. The refresh rate can be set as time or distance. The overall amplitude accuracy coupled with the GPS update rate ensures accurate and reliable mapping results.

Indoor Mapping

Indoor Mapping

When there is no GPS signal valid, the Site Master solution 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 easyMap Tools**

easyMap™ Tools

easyMap sources map data from either Google Maps or MapQuest. Maps sourced from Google 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 country-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.

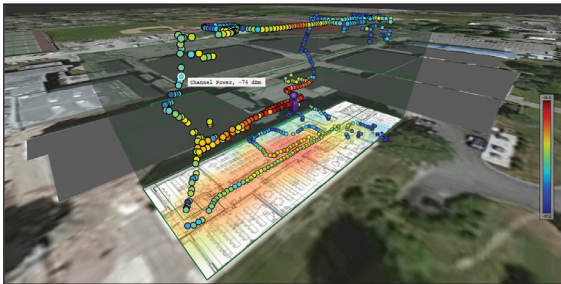# Site Master Valuable Options and Features

NEON® MA8100A Signal Mapper
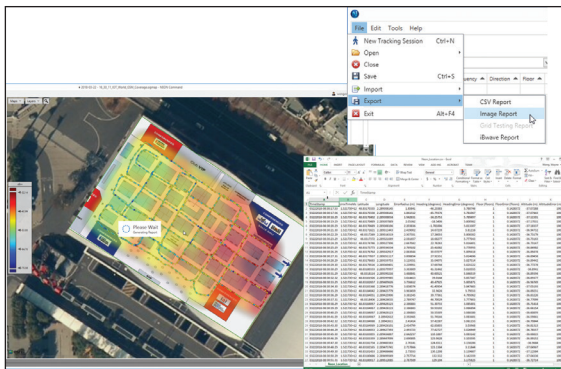

NEON Signal Mapping with Anritsu Handhelds
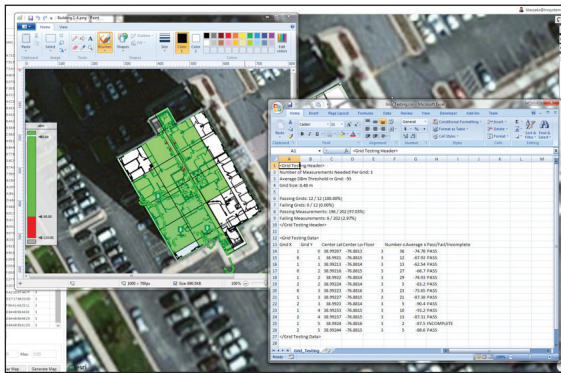
Support for NFPA Gridding Requirements

Automatically generate 3D Heatmaps

Automatic Report Generation

NEON MA8100A Signal Mapper*

The most powerful 3D in-building coverage mapping tool, the NEON MA8100A 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™.

This solution from 3rd party partner TRX Systems, consists of both hardware and software that includes: a NEON Tracking Unit, NEON Signal Mapper Software for Android devices, and NEON Command Software for a PC.

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

The 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's handheld spectrum analyzer product's and the data is sent to the Android device via a USB connection.

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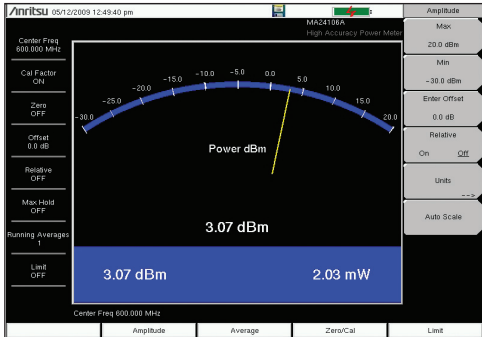
Key Features and Benefits

Integrating the NEON solution's capability to automatically collect geo-referenced test data with Anritsu's 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.
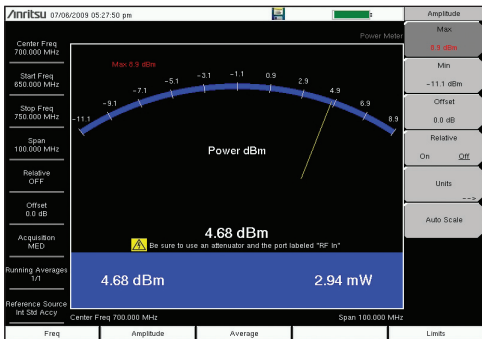
*Android device and PC are NOT included s part of the NEON MA8100A solution. Customers must purchase their own Android device and PC.

Power Measurements for a Wide Range of Applications

The Anritsu Site Master series provides many different power measurements options 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 make channelized measurements in a few keystrokes with minimal training. The channel power measurement also makes channelized measurements, but requires more knowledge and is recommended for more advanced users. When you are measuring multiple channels, the channel scanner is your perfect choice.
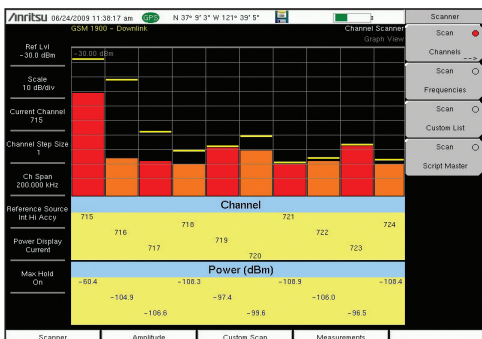

Power Meter

Channel Power

Use the 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)

The 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

High-Accuracy Power Meter (Option 19)

This 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.

High-Accuracy Power Sensors

PC Power Meter

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

Channel Scanner

Channel Scanner (Option 27)

This 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 scanned data to be displayed by frequencies or the channel number. 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.
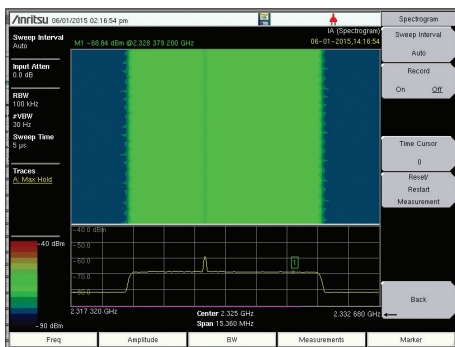
Site Master Valuable Options and Features

CPRI RF Measurements (Option 752 - requires Option 759)
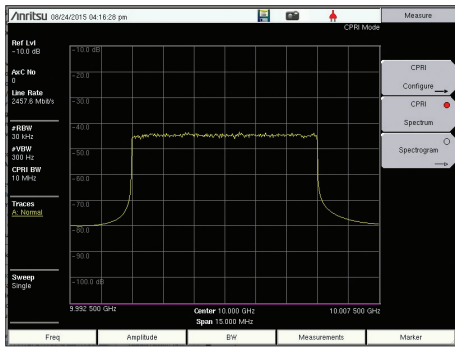
CPRI Spectrum

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

CPRI Alarms

Verify CPRI transport layer

SFP Data

Easily determine the type of SFP is installed in the Site Master S3xxE series

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
- CPRI 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.
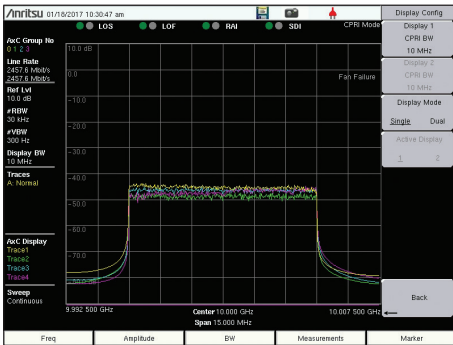
CPRI Alarms

Ability to verify and troubleshoot the CPRI (optical) connection with CPRI alarms. The key CPRI alarms are always visible at the top of the screen. Optical power is also available on the CPRI alarm screen.

SFP Data

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

Site Master Valuable Options and Features

CPRI LTE RF Measurements (Option 752 - requires Option 759) (continued)

Multi AxC Traces Single Display Spectrum

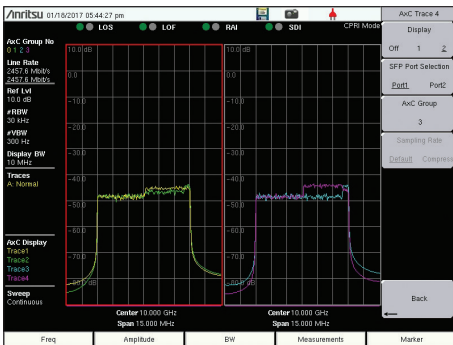Display up to four AxC group traces in a single spectrum display

Multi AxC Trace - Single Display Spectrum

Display up to four AxC traces on a single display. Compare MIMO radios (Diversity testing).

Multi AxC Traces Dual Display Spectrum

Display up to four AxC Group traces in any combination on the dual spectrum display

Dual Display – Spectrum

Ability to display multiple AxCs in two displays. Useful for diversity testing and system RF loading. One to four AxCs in any combination per display.

Multi AxC Traces Dual Display Spectrogram

Display up to four AxC Group traces in any combination on the dual Spectrogram display
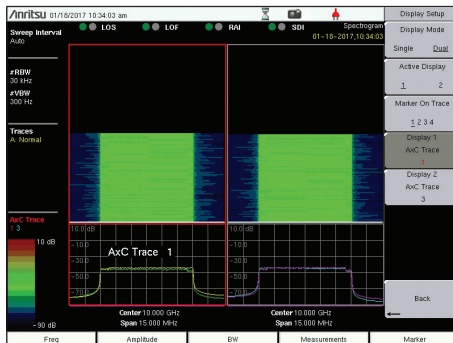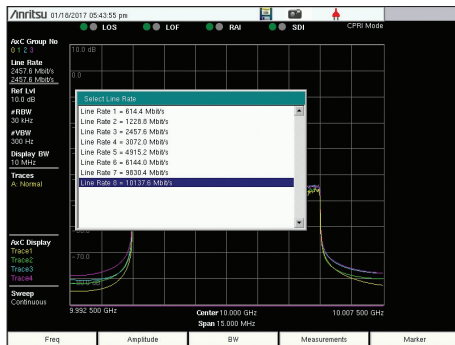
Dual Display – Spectrogram

Ability to display multiple AxCs in two displays. Choose One active AxC per display for Waterfall measurement.

One active AxC for Waterfall measurement. One to four AxCs in a display.

CPRI LTE RF Measurements (Option 752 - requires Option 759) (continued)

CPRI Line Rate
Support from Line Rate 1 to 8

CPRI Line Rates

Support for CPRI Line Rate 1 (0.6144 Gbps) through CPRI Line Rate 8 (10.1376 Gbps) as standard.

CPRI Compression
Supports compressed 20 MHz LTE CPRI signals
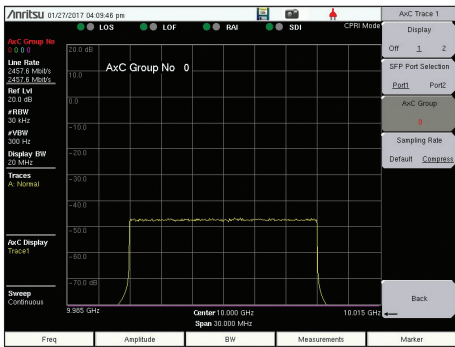
CPRI Compression

Support for re-sampling of 20 MHz bandwidth CPRI IQ data signals, from 30.72 Msps (mega samples per second) or 8 AxC containers to 23.04 Msps or 6 AxC containers — a 25% reduction known as "compression" in the market.
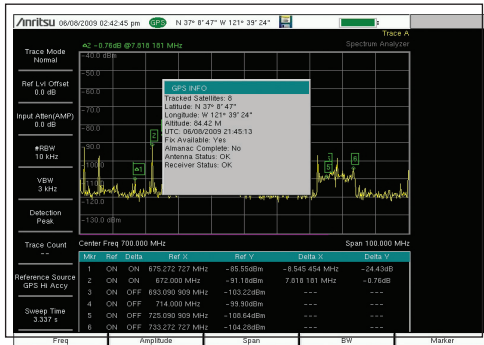
GPS Receiver

GPS Receiver (Option 31)

The 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, this 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.

Site Master Valuable Options and Features

OBSAI LTE RF Measurements (Option 753)

OBSAI RF Measurements

Anritsu's OBSAI Analyzer (Option 753) allows users to make RF-based measurements over a fiber optic link to look for interference problems affecting a radio frequency module (RFM). This is accomplished by tapping into the fiber link between the RFM and baseband module (BBM) using an optical splitter to connect to the Anritsu test instrument. The instrument will decode the OBSAI protocol IQ data and convert it to RF data.

The OBSAI protocol provides the information needed to configure the link within the layer of data you are decoding. This enables a one-button push to configure and display the OBSAI RF spectrum.

Two types of OBSAI measurements are available:

- Spectrum mode is typically used to test the OBSAI link in real time.
- Spectrogram mode lets you monitor for intermittent interference over a specifiable recording time.
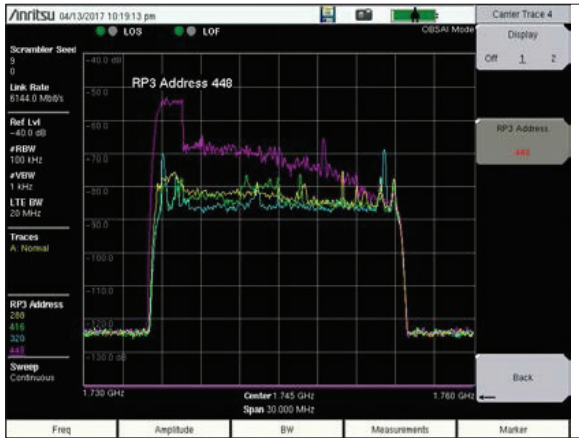
Spectrum Mode
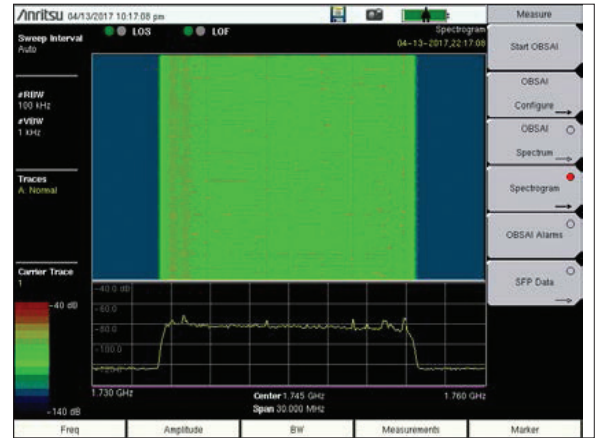
Spectrogram Mode

These OBSAI analyzer test and measurement functions can be performed from ground level, eliminating the risk and costs of climbing towers. The figure below illustrates a typical connection configuration for OBSAI testing with Site Master measurement.
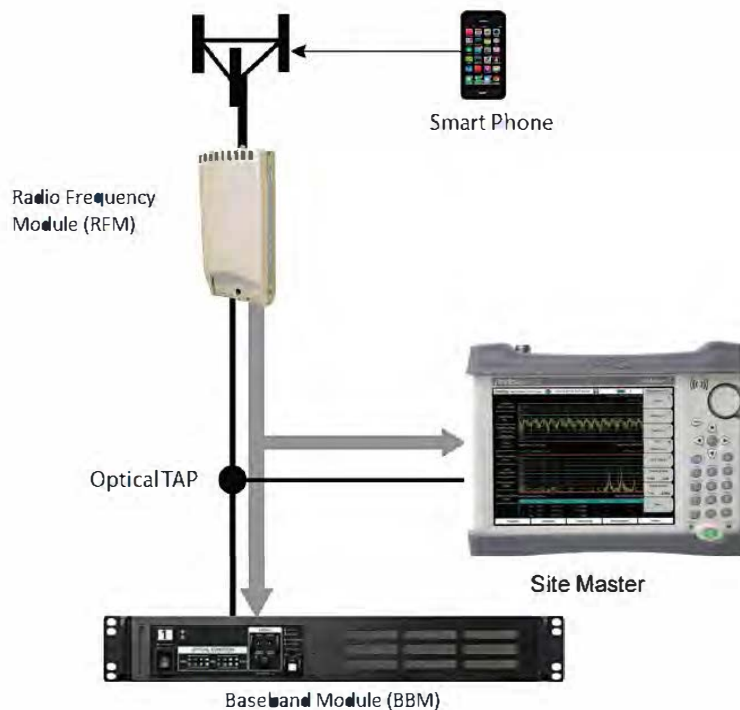
Site Master Valuable Options and Features
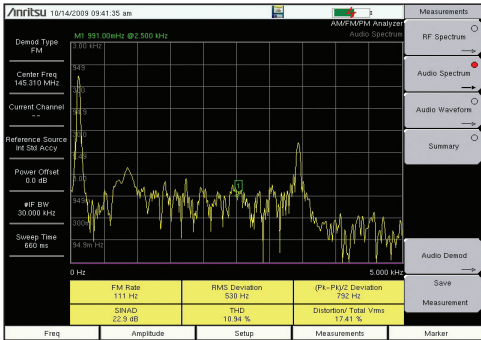
AM/FM/PM Analyzer

AM/FM/PM Analyzer (Option 509)

The AM/FM/PM analyzer provides analysis and display of analog modulation. Four measurement displays are provided: RF spectrum display shows the spectrum with carrier power, frequency, and occupied BW. 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.

• A summary table display includes all the RF and demod parameters.
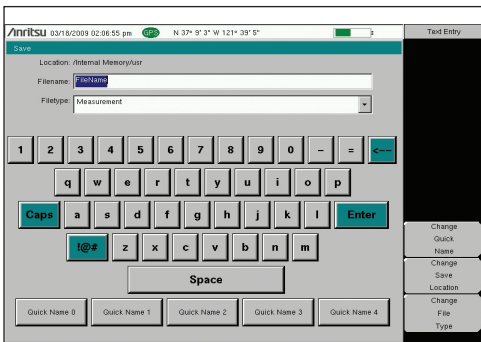
Touchscreen keyboard

Built-in Keyboard

The built-in, touchscreen keyboard saves 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 and provides the ability to generate signals as low as -110 dBm for receiver sensitivity measurements. The included splitter divides the signal and allows for a simultaneous power measurement.

Ethernet connectivity

Ethernet Connectivity (Option 413)

By enabling the Site Master series 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 nine 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

OBSAI LTE RF Measurements (Option 753) (continued)
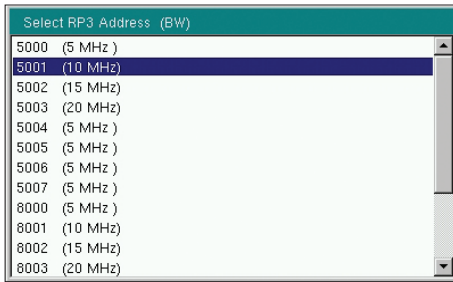
**Supports Multiple RP3 BWs**

Support for 5, 10, 15, and 20 MHz BWs.

OBSAI Alarms

OBSAI Alarms

Displays the SFP port alarm status, as well as, the Tx and Rx optical power levels.

- "Pass" status is shown as green.
- "Fail" is red (colors may appear differently depending on the display settings).
- No color, or grey, means there is no connection at the SFP port.
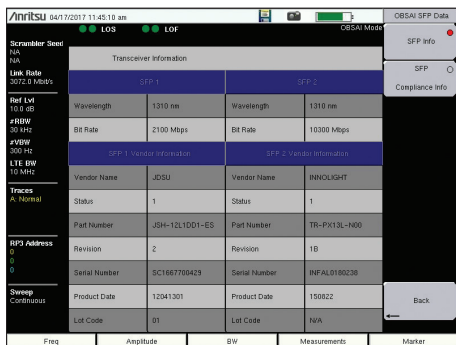
SFP Info

SFP Info

Displays a table that lists the signal data and vendor information at the SFP port.

SFP Compliance Info
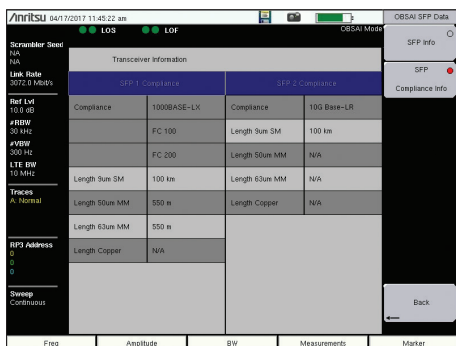
SFP Compliance Info

Displays the transceiver compliance information for the SFP port.

Site Master Valuable Options and Features

OBSAI LTE RF Measurements (Option 753)

Multi Trace Display

Multi Trace Display

Display up to four RP3 addresses associated with each of the four potential carrier traces on a single display.
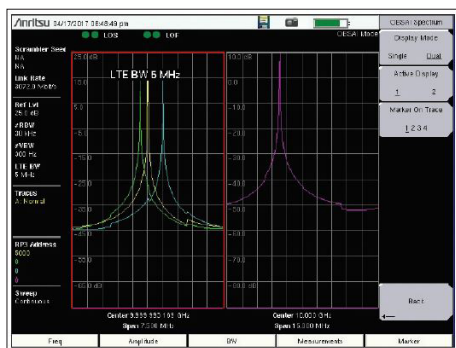
Dual Display – Spectrum

Dual Display – Spectrum

Ability to display multiple RP3 addresses in two displays. Useful for diversity testing and system RF loading.

- One to four RP3 addresses in a display.
- Using two SFPs, users can have RP3 address from different fiber connections and different OBSAI BW.
- Using two SFPs, users can look at uplink in one display and downlink on the other display.

Dual Display – Spectrogram

Dual Display – Spectrogram

Ability to display multiple RP3 addresses in two displays. Choose active RP3 per display for Waterfall measurement.

- One active RP3 for Waterfall measurement
- One to four RP3s in a display

Supports Highest OBSAI Link Rate

Supports the highest OBSAI link rate in a handheld test instrument.

- 6.144 Gbps (8x)

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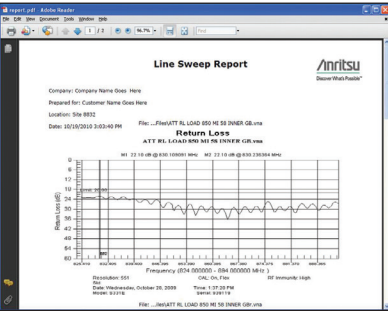
Report Generation
Create reports with company logo, GPS tagging information, calibration status, and serial number of the instrument for complete reporting.

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 (LST)
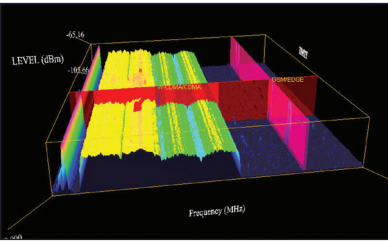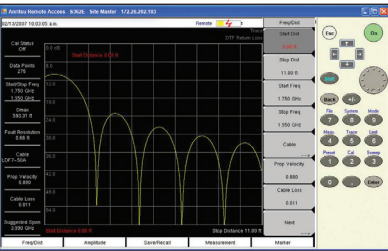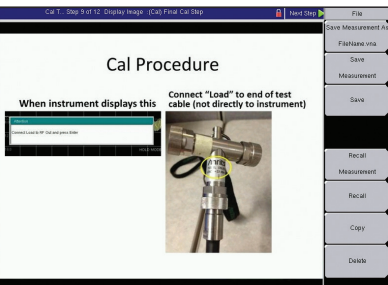
Line Sweep Tools increases productivity for people who deal with dozens of cable and antenna traces or passive intermodulation (PIM) traces every day.

- User interface will be familiar to users of Anritsu's handheld software tools. This will shortren the learning curve.
- Marker and limit line presets makes application 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 create 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.

- **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 PowerPoint 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, file name, 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™ 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**	
	S331E-0021	S332E-0021	S361E-0021	S362E-0021	2-Port Transmission Measurement
	S331E-0010	S332E-0010	S361E-0010	S362E-0010	Bias-Tee (requires Option 21 for S331E /S361E)
	S331E-0031	S332E-0031	S361E-0031	S362E-0031	GPS Receiver (requires Antenna)
	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 (requires Option 31)
		S332E-0027		S362E-0027	Channel Scanner
		S332E-0431		S362E-0431	Coverage Mapping (requires Option 31)
		S332E-0090		S362E-0090	Gated Sweep
		S332E-0028		S362E-0028	C/W Signal Generator (requires CW Signal Generator Kit, P/N 69793)
		S332E-0509		S362E-0509	AM/FM/PM Analyzer
	S331E-0752	S332E-0752	S361E-0752	S362E-0752	CPRI LTE RF Measurements (requires Option 759)
	S331E-0413	S332E-0413	S361E-0413	S362E-0413	Ethernet Connectivity
	S331E-0098	S332E-0098	S361E-0098	S362E-0098	Standard Calibration to ISO17025 and ANSI/NCSL Z540-1. Includes calibration certificate
		S332E-0444		S362E-0444	EMF Measurements (requires Anritsu Isotropic Antenna)
	S331E-0753	S332E-0753	S361E-0753	S362E-0753	OBSAI LTE RF Measurements (requires Option 759)
	S331E-0759	S332E-0759	S361E-0759	S362E-0759	RF over fiber hardware (requires Option 752 or 753)
	S331E-0099	S332E-0099	S361E-0099	S362E-0099	Premium Calibration to ISO17025 and ANSI/NCSL Z540-1. Includes calibration certificate, test report, and uncertainty data

Power Sensors (for complete ordering information see the respective data sheets 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 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 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)
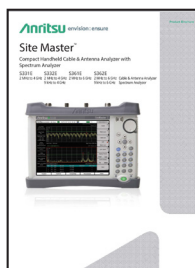
Part Number	Description
10100-00065	Product Information, Compliance and Safety
10580-00252	Site Master User Guide
10580-00241	Cable and Antenna Analyzer Measurement Guide
10580-00242	2-Port Transmission Measurement Guide
10580-00349	Spectrum Analyzer Measurement Guide
10580-00240	Power Meter Measurement Guide
10580-00415	CPRI LTE RF Analyzer Measurement Guide
10580-00434	OBSAI LTE RF Analyzer Measurement Guide
10580-00455	EMF Measurement Guide
10580-00256	Programming Manual

Troubleshooting Guides (available at www.anritsu.com)

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

Site Master™ Ordering Information

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

Part Number	Description
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
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 □
2000-1619-R	Precision Open/Short/Load, 7/16 DIN(f), DC to 6.0 GHz 50 □
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
SM/PLNF-1	Precision Load, N(f), 42 dB, 6.0 GHz, 50 Ω

Calibration Components, 75 Ω

Part Number	Description
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 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 6 GHz, N(m) to 4.3-10(m)
15N43F50-1.5C	Test Port Extension Cable, Armored, 1.5 meter, DC to 6 GHz, 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)

Site Master™ Ordering Information

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
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
2000-1689-R	EMI Near Field Probe Kit
2000-1374	External Charger for Li-Ion Batteries
633-75	7500 mAh High-capacity Battery Pack
2000-1371-R	Ethernet Cable, 213 cm (7 ft)
3-806-152	Cat 5e Crossover Patch Cable, 213 cm (7 ft)
MA2700A	Handheld Interference Hunter (For full specifications, refer to the MA2700A Technical Data sheet 11410-00692
2000-1884-R	PIM Hunter™ Test Probe (For full specifications, refer to the 2000-1884-R Technical Data Sheet 11410-00999)
2000-1797-R	Screen Protector Film 8.4 in.
66864	Rack Mount Kit, Master Platform

Directional Antennas
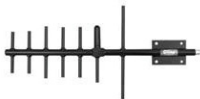
Part Number	Description
2000-1411-R	824 MHz to 896 MHz, N(f), 12.3 dBi, Yagi
2000-1412-R	885 MHz to 975 MHz, N(f), 12.6 dBi, Yagi
2000-1413-R	1710 MHz to 1880 MHz, N(f), 12.3 dBi, Yagi
2000-1414-R	1850 MHz to 1990 MHz, N(f), 11.4 dBi, Yagi
2000-1415-R	2400 MHz to 2500 MHz, N(f), 14.1 dBi, Yagi
2000-1416-R	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 dBi, typical
2000-1726-R	Antenna, 2500 MHz to 2700 MHz, N(f), 14.1 dBi, Yagi
2000-1747-R	Antenna, Log Periodic, 300 MHz to 7000 MHz, N(f), 5.1 dBi, typical
2000-1748-R	Antenna, Loc Periodic, 1 Ghz to 18 GHz, N(f), 6 dBi, typical
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, 2000-1200-R, 2000-1035-R, 2000-1361-R, and carrying pouch)

Mag Mount Broadband Antenna

Part Number	Description
2000-1616-R	20 MHz to 21000 MHz, N(f), 50 Ω
2000-1645-R	694 MHz to 894 MHz 3 dBi peak gain, 1700 MHz to 2700 MHz 3 dBi peak gain, N(m), 50 Ω, 10 ft
2000-1646-R	750 MHz to 1250 MHz 3 dBi peak gain, 1650 MHz to 2700 MHz 5 dBi peak gain
2000-1647-R	Cable 1: 698 MHz to 1200 MHz 2 dBi peak gain, 1700 MHz to 2700 MHz 5 dBi peak gain, N(m), 50 Ω, 10 ft Cable 2: 3000 MHz to 6000 MHz 5 dBi peak gain, N(m), 50 Ω, 10 ft Cable 3: GPS 26 db gain, SMA(m), 50 Ω, 10 ft
2000-1648-R	1700 MHz to 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
3030-112-R	2400 MHz to 2484 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, 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

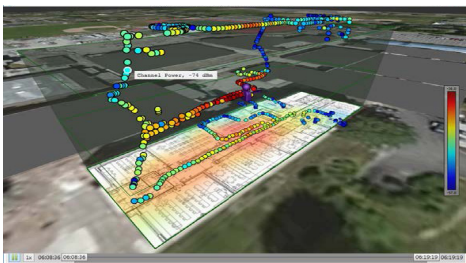| Part Number	Description
3-1010-122	20 dB, 5 W, DC to 12.4 GHz, N(m) to N(f)
42N50-20	20 dB, 5 W, DC to 18 GHz, N(m) to N(f)
42N50A-30	30 dB, 50 W, DC to 18 GHz, N(m) to N(f)
3-1010-123	30 dB, 50 W, DC to 8.5 GHz, N(m) to N(f)
1010-127-R	30 dB, 150 W, DC to 3 GHz, N(m) to N(f)
3-1010-124	40 dB, 100 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 50 μm
808-18-R	Fiber Optic Cable, 3 m, Ruggedized Simplex SM (Single Mode) LC/UPC LC/UPC LC/UPC
808-19-R	Fiber Optic Cable, 3 m, Ruggedized Duplex SM (Single Mode) LC/UPC LC/UPC 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	Fiber Ferrule Cleaner
2000-1849-R	SFP 4-slot ESD Box

MA8100A NEON® Signal Mapper (supported on S332E, S362E models only)

Model Number	Description
MA8100A-001	NEON Signal Mapper with Anritsu Integration and Tracking Unit. Includes 1 year NEON Software License with 1 year of maintenance and support and 1 year of Cloud Service.
MA8100A-003	NEON Signal Mapper with Anritsu Integration and Tracking Unit. Includes 3 years NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service.
MA8100A-005	NEON Signal Mapper with Anritsu Integration and Tracking Unit. Includes 5 years NEON Software License with 5 years of maintenance and support and 5 years of Cloud Service.
MA8100A-100	NEON Signal Mapper with Anritsu Integration and Tracking Unit. Includes Perpetual NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service.
2300-606	Perpetual NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service. Part number can also be used to order a perpetual license after a limited term license has expired.
2300-612	Renewal of 1 year NEON Software License with 1 year of maintenance and support and 1 year of Cloud Service.
2300-613	Renewal of 3 year NEON Software License with 3 years of maintenance and support and 3 years of Cloud Service.
2300-614	Renewal of 5 year NEON Software License with 5 years of maintenance and support and 5 years of Cloud Service.

Site Master™ Ordering Information

Optional Accessories (continued)

Portable Antennas

Part Number	Description
2000-1791-R	Isotropic Antenna, 700 MHz to 6000 MHz, N(m)
2000-1792-R	Isotropic Antenna, 30 MHz to 3000 MHz, N(m)
2000-1800-R	Isotropic Antenna, 9 kHz to 300 MHz, N(m)

Backpack and Transit 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 cm (22.07" x 17.92" x 10.42")
760-261-R	Large Transit Case with Wheels and Handle 63.1 cm x 50 cm x 30 cm (24.83" x 19.69" x 11.88"), space for MA2700A, antennas, filters, instrumentd inside soft case, and other interference hunting accessories/tools
760-262-R	Transit Case for MA2700A, several Yagi antennas and filters
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)
760-286-R	Compact Transit Case with Wheels and Handle 55.6 cm x 35.5 cm x 22.9 cm (21.89" x 13.98" x 13.98" x 9.01")

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
2000-1689-R	EMI Near Field Probe Kit
2000-1374	External Charger for Li-Ion Batteries
633-75	7500 mAh High-capacity Battery Pack
2000-1371-R	Ethernet Cable, 213 cm (7 ft)
3-806-152	Cat 5e Crossover Patch Cable, 213 cm (7 ft)
MA2700A	Handheld Interference Hunter (For full specifications, refer to the MA2700A Technical Data Sheet 11410-00692)
2000-1884-R	PIM Hunter™ Test Probe (For full specifications, refer to the 2000-1884-R Technical Data Sheet 11410-00999)
2000-1797-R	Screen Protector Film, 8.4 inch
66864	Rack Mount Kit, Master Platform

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