Quick Start Guide

MS27101A-IBCM
In-Building Coverage Mapper

MS27101A, 9 kHz to 6 GHz

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QSG-1 Introduction

The In-Building Coverage Mapper is a portable backpack-contained coverage mapping solution. This Quick Start Guide provides the following hardware installation and connection topics:

Additional Anritsu Documentation

Before proceeding, read the *MS27101A Product Information, Compliance, and Safety Guide* (PN: 10100-00064) for important safety, legal, and regulatory notices and refer to the MS2710xA Remote Spectrum Monitor User Guide (PN:10580-00419), which can be found on the product page:
http://www.anritsu.com/en-US/test-measurement/products/ms27101a

MA8100A TRX NEON® Signal Mapper User Guide (PN:10580-00422) can be found on the product page:
https://www.anritsu.com/en-us/test-measurement/products/ma8100a

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QSG-2 Unpacking Contents

The components and accessories included in the In-Building Coverage Mapper backpack kit are listed in Table QSG-1. Remove all components from their boxes and wrapping. Verify that all contents are present.

Table QSG-1. In-Building Coverage Mapper Kit

Part Number	Quantity	Item
MS27101A	1	Remote Spectrum Monitor
SM7004	1	Omni Power Bank
SM7005	1	DC Cable
2000-1752-R	1	Wireless Travel Router
2000-1852-R	1	TRX NEON Tracking Unit (Includes USB connection cable and belt clip)
2000-2015-R	1	TRX NEON Tracking Unit (Includes USB connection cable and belt clip) For Japan end-use orders only
SM7009	1	Foam Enclosure
10580-00470	1	Quick Start Guide
67135	1	Backpack

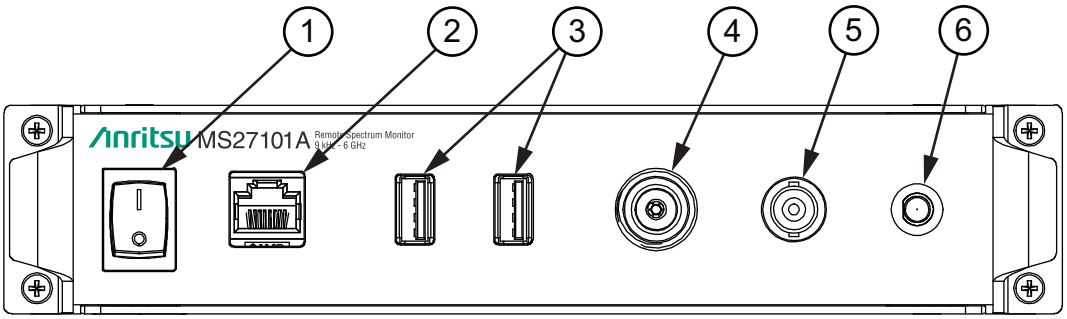
QSG-3 Equipment Front Panel Interfacing

The equipment front panels interfaces are shown below for the:

- MS27101A Remote Spectrum Monitor
- Wireless Travel Router
- SM7004 (Omni Power Pack)

MS27101A Front Panel

The MS27101A is the remote spectrum monitor that performs the signal monitoring. The MS27101A front panel is shown in Figure QSG-1.



1. Power Switch
2. Ethernet Port
3. USB Type A Port (2)
4. RF Input Type-N (Torque specs listed in Table QSG-2)
5. External Reference Input
6. GPS Antenna Input

Figure QSG-1. MS27101A Front Panel

MS27101A Type-N Torque

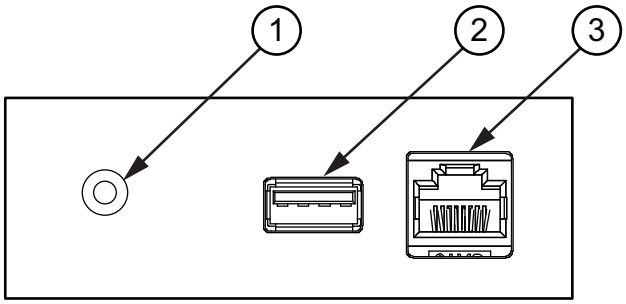
The antenna Type-N connector types and the recommended torque specs are listed in Table QSG-2.

Table QSG-2. Type-N Connector Torque Setting

Connector Type	Torque Setting	Recommended Tools
20 GHz, Type-N	1.35 N· m 12 lbf· in	3/4 in.Torque End Wrench
Twist-On, Type-N	–	Twist-on connector version: Align connectors, thread, and then twist on until finger tight. Do not use a wrench or pliers to tighten.

Wireless Travel Router

The wireless travel router is used to interface between the MS27101A and the Android application. The wireless travel router front panel is shown below in Figure QSG-2.

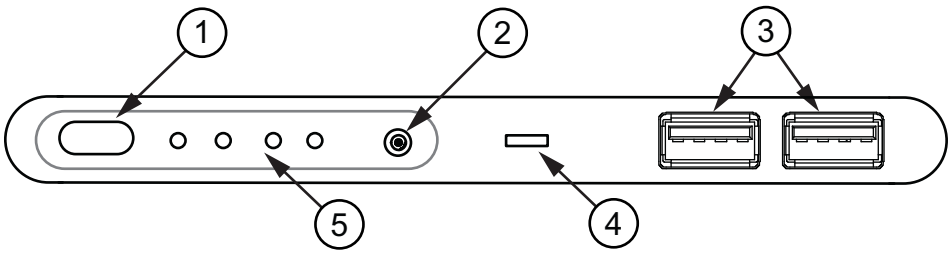


1. Powered On Indicator LED
2. USB Type A Port
3. Ethernet Port

Figure QSG-2. Wireless Travel Router Front Panel

SM7004 (Omni Power Bank)

The SM7004 is the power source for the MS27101A. The SM7004 front panel is shown in Figure QSG-3.



1. Powered Button/Voltage Selector
2. DC In/Out Jack
3. USB Type A Ports (2)
4. USB Type C Port
5. Battery and Voltage Indicator

Figure QSG-3. SM7004 Front Panel

QSG-4 Setting the SM7004 Voltage

The SM7004 is the re-chargeable battery bank that provides DC power to the MS27101A. Set the SM7004 voltage to 12 VDC to operate the MS27101A.

Caution	Do not adjust the SM7004 to 12 VDC when the SM7005 cable is connected to the MS27101A. Use the steps below to set the SM7004 to 12 VDC before making connection. Damage to the MS27101A internal circuitry may result if incorrect DC power is applied.

To set to 12 VDC:

1. Press and hold the SM7004 power button for two seconds and release. Each of the four SM7004 voltage indicator LEDs sequence through during the power on. If the four LEDs do not light, the battery is not fully charged and will need to be charged before continuing.
2. Set the SM7004 to DC output mode by double-pressing the power button.
3. In DC output mode, set to 12 VDC by single-pressing the power button to sequence through each voltage setting.
4. Set to the 12 VDC position as shown in Figure QSG-4. The voltage output is now set to 12 VDC.

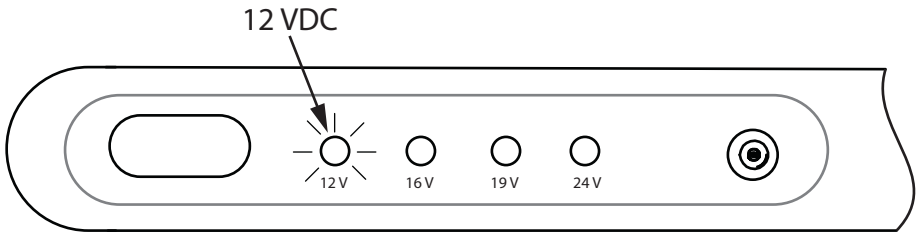
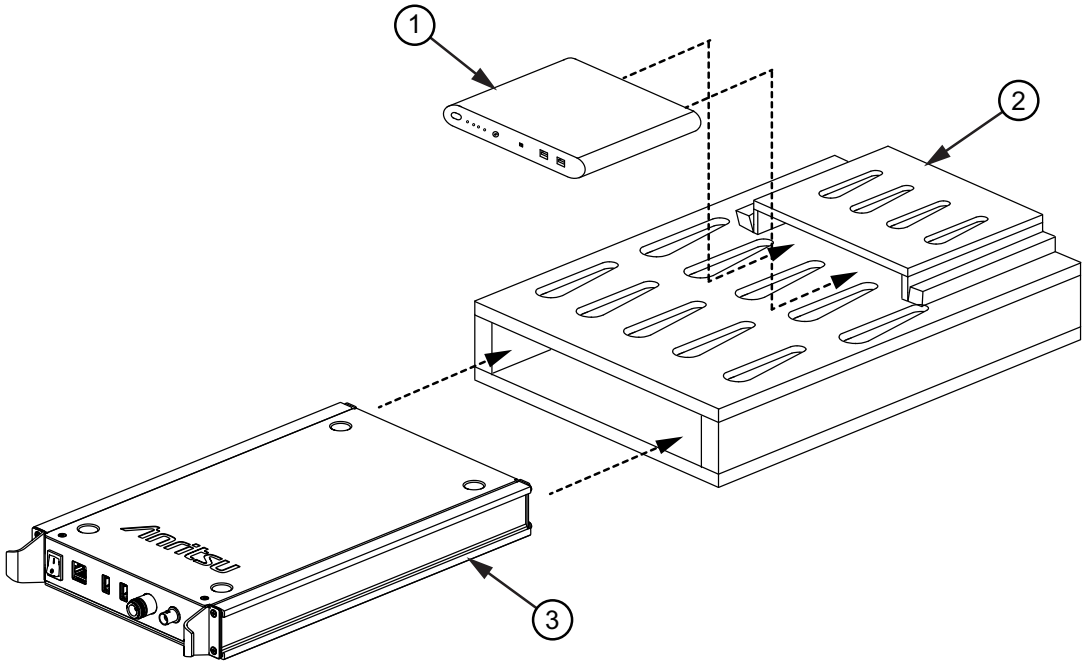


Figure QSG-4. 12 VDC

QSG-5 Inserting Into the SM7009

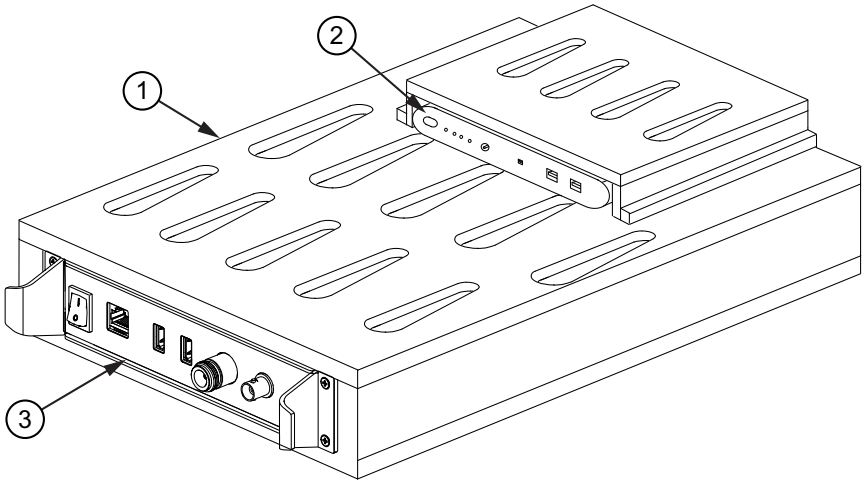
The MS27101A and the SM7004 are assembled into the SM7009 foam enclosure for performing the In-Building Coverage Mapping as shown in Figure QSG-5.



1. SM7004
2. SM7009
3. MS27101A

Figure QSG-5. MS27101A, SM7004, and SM7009 Assembly

Ensure the MS27101A and SM7004 fit flush into the SM7009 foam slots as shown in Figure QSG-6.



1. SM7009
2. SM7004
3. MS27101A

Figure QSG-6. MS27101A and SM7004 Inserted Into SM7009

QSG-6 Connecting the Hardware

The In-Building Coverage Mapping equipment interface connections are described in this section.

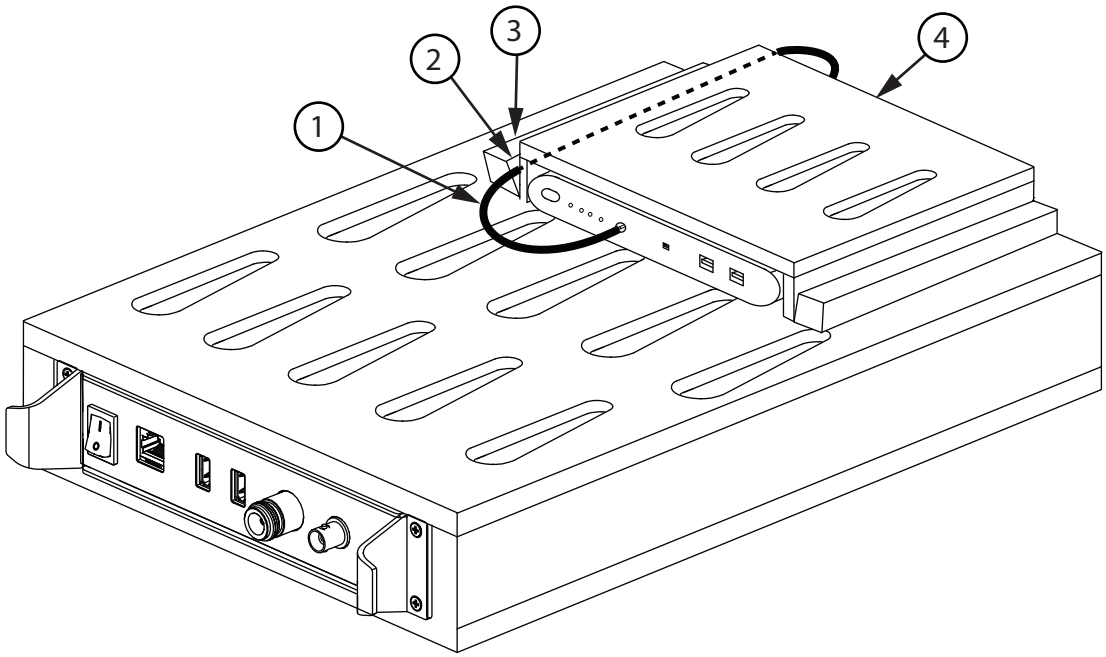
Connect the SM7004

The MS27101A rear panel battery jack is accessible through the foam cutout as shown in Figure QSG-7.

1. MS27101A Rear Panel View
2. SM7009 Rear Panel View
3. MS27101A/SM7009 Rear Panel Battery Input Jack

Figure QSG-7. MS27101A Battery Input Jack

1. Connect the SM7005 from the SM7004 to the to the MS27101A rear panel battery input jack.
2. Slightly separate the foam side piece from the main battery foam enclosure to form a groove as shown in Figure QSG-8.
3. Route the SM7005 through the groove.
4. Insert the entire foam enclosure assembly consisting of the MS27101A, SM7004, and the SM7005 into the backpack.



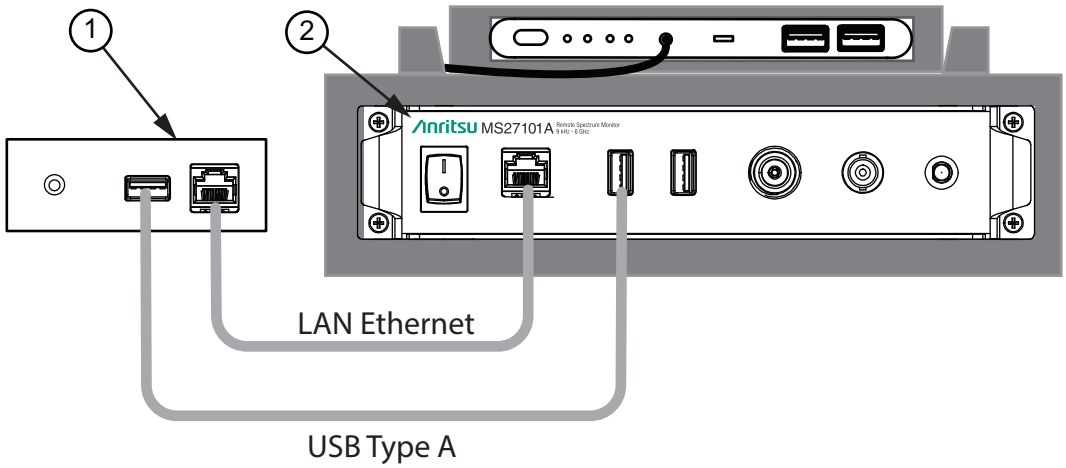
1. SM7005
2. Groove
3. Foam Side Piece
4. Main Battery Foam Enclosure

Figure QSG-8. Battery Cable (SM7005) Routing

Connecting the Wireless Travel Router

The wireless travel router connects to the MS27101A.

1. Refer to Figure QSG-9.
2. Connect the LAN Ethernet and USB type A cables to the wireless travel router.
3. Connect the wireless travel router USB Type A cable to the USB Type A port on the MS27101A.
4. Connect the wireless travel router LAN Ethernet cable to the Ethernet port on the MS27101A.



1. Wireless Travel Router
2. MS27101A

Figure QSG-9. Ethernet and USB Cable Connection

Powering On the In-Building Coverage Mapper

1. Disconnect the SM7005 cable from the SM7004 front panel if connected.
2. Set the SM7004 voltage to 12 VDC to operate the MS27101A as described in "Setting the SM7004 Voltage" on page QSG-4.
3. Connect the SM7005 cable to the SM7004 front panel DC In jack.
4. Power on the MS27101A. After a few seconds, the green LED on the wireless travel router will power on. This confirms that the MS27101A and the wireless travel router are communicating properly. The In-Building Coverage mapper is now powered on.

5. Fit the wireless travel router with the Ethernet and USB cable into the netted pouch located inside the backpack as shown in Figure QSG-10.

The In-Building Coverage Mapper hardware installation is now complete. For information on Anritsu antennas and antenna applications visit the Anritsu Website at: https://www.anritsu.com/en-US/.

Figure QSG-10. Router Fitted Inside Backpack

Installing Software

Download and install the MA8100A In-building Coverage Mapping with TRX NEON® Signal Mapper software at: https://www.anritsu.com/en-us/test-measurement/products/ma8100a

Powering Off the In-Building Coverage Mapper

The battery does not auto shut-off. The battery will continue to discharge if not powered off manually. To power off the battery:

1. Power off the MS27101A.
2. Hold the SM7004 power button for about two seconds until the LEDs are off. The In-Building Coverage Mapper is now powered off.
3. Disconnect the SM7005 from the MS27101A and SM7004.

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