Kymeta u8 Products Installation and User Guide

Covers u8 terminal and u8 ODU configurations

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1 Introduction

This document contains important step-by-step details for the installation and setup of the Kymeta™ u8 terminal and Kymeta™ u8 outdoor unit (ODU). Read this document in its entirety.

For information on the Kymeta u8 antenna web-based user interface and instructions on checking the antenna status, refer to *700-00139-000 Kymeta™ u8 antenna software user guide*.

For your safety, read *700-00122-000 Kymeta™ u8 products safety and handling guide* before beginning installation.

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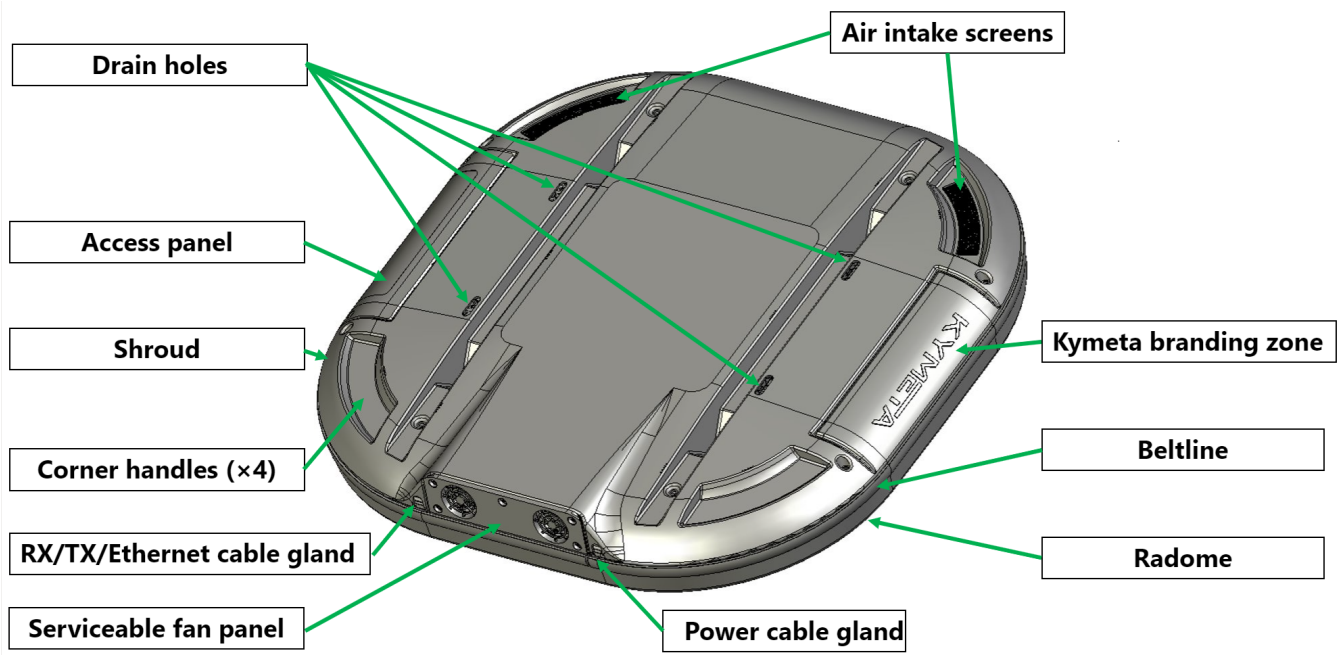
2 General considerations

Before beginning installation, read *700-00122-000 Kymeta™ u8 products safety and handling guide* and ensure you have all the installation hardware and tools required for u8 terminal assembly. Refer to the installation instructions shipped with the u8 product kits. Installation tools are not provided with the product.

Place a piece of foam, fabric, or non-abrasive material on the clean flat surface to prevent marks or damage to the face of the u8 antenna. Lift the u8 out of the case with two people (one person on each side), keeping the u8 parallel to the floor, and lay it face down on the surface.

During installation, avoid obstructing the air intake screens or drain holes.



2.1 Reduce the risk of RF exposure

Install the u8 ODU or u8 terminal in an area above accessible range of personnel within the operational range of the antenna to reduce the risk of RF exposure. Mount the terminal in an area that has limited access by people and does not allow for people to pass through the path of the antenna beam in any direction the antenna beam may point.

2.2 Prevent RF interference

Do not install the u8 ODU or u8 terminal closer to radar equipment than the minimum safe distance specified in the *700-00122-000 Kymeta™ u8 products safety and handling guide*. It may cause damage to the ODU.

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2.3 Prevent magnetic interference

Proximity to magnetic interference caused by motors, fans, or ferrous metals may increase acquisition times. Install the u8 ODU or u8 terminal as far as possible from any equipment or materials that may cause magnetic interference for faster acquisition times.

2.4 Check electrical systems for safety

Prior to installation, check that:

- the ODU or terminal is grounded;
- the electrical power is disconnected from the ODU or terminal;
- in an ODU configuration, electrical connections are made to the ODU first and then to the modem; and
- the power switch is in the off position before connecting electrical power to the modem.

Practice basic electrical safety measures. Follow local, national, and other regulations with respect to these devices.

2.5 Site selection

- Obstructing the direct path to the satellite degrades performance and may cause a loss of connection with the satellite. The antenna should have a clear line of sight: 15° – 90° elevation (broadside to 75° scan angle), full 360° azimuth (broadside to 75° scan angle).
- Obstructing the face of the antenna degrades RF performance and could impair the GPS capability of the antenna.
- Satellite reacquisition is most efficient if you install the antenna in direction of travel; refer to *7 u8 antenna orientation setup* for more details.

> If you need support in assessing your mounting configuration, contact Kymeta customer support at support@kymetacorp.com for additional information.

The following images show example installation sites.

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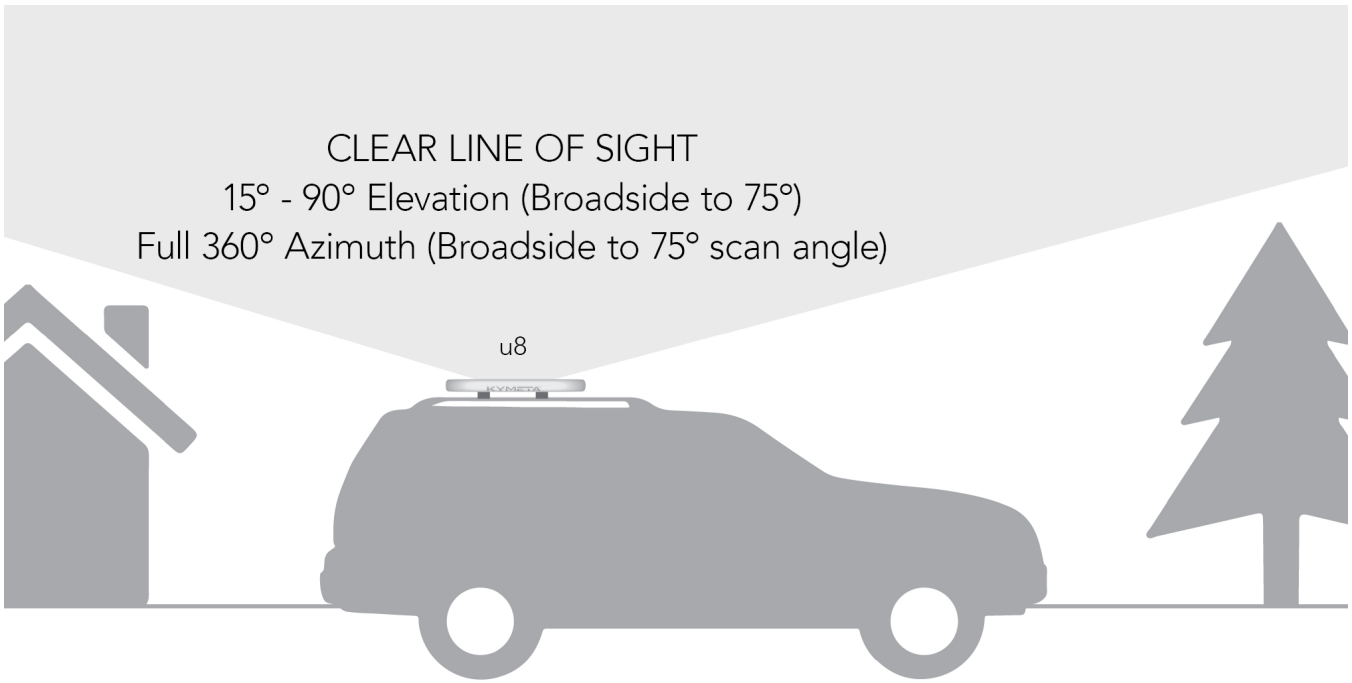

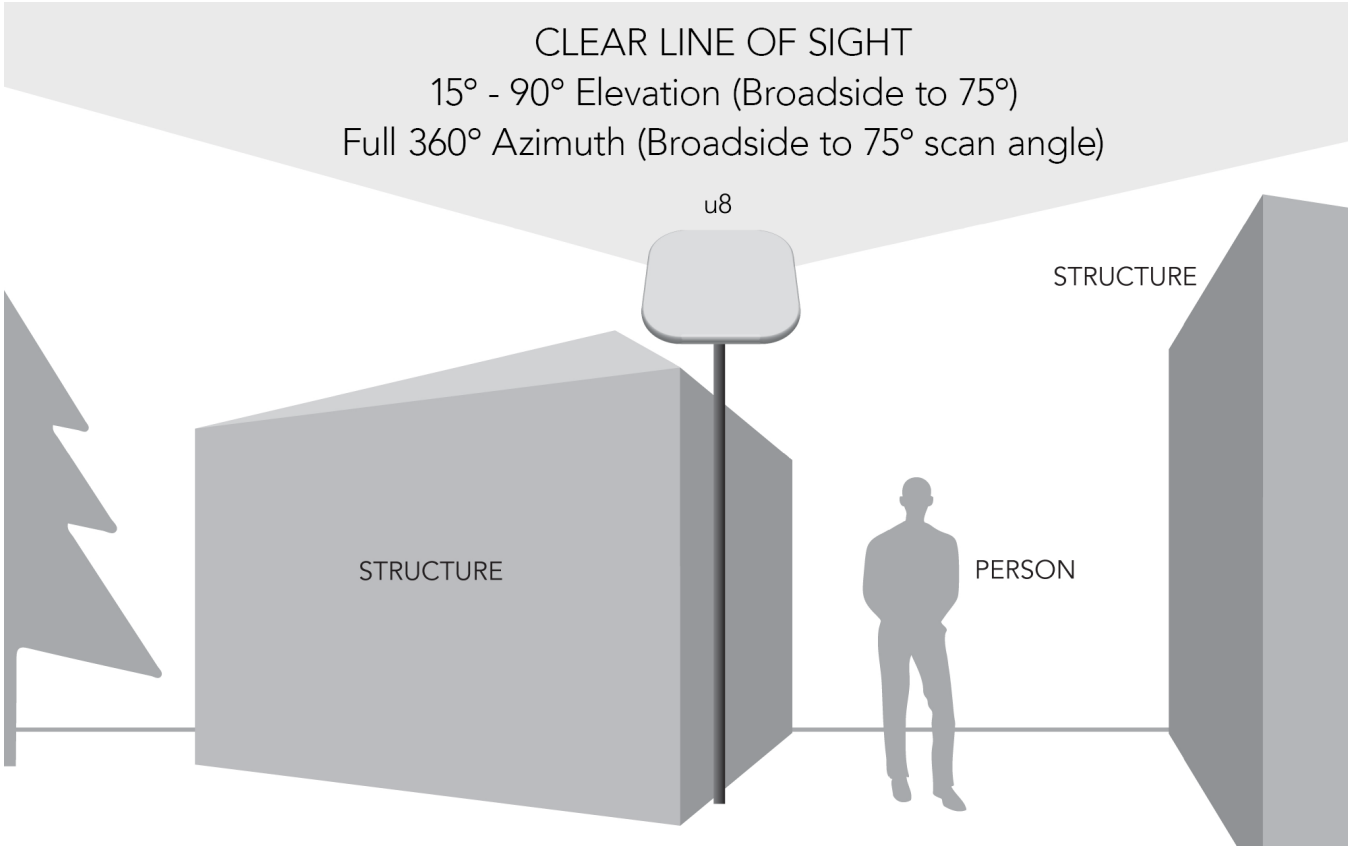

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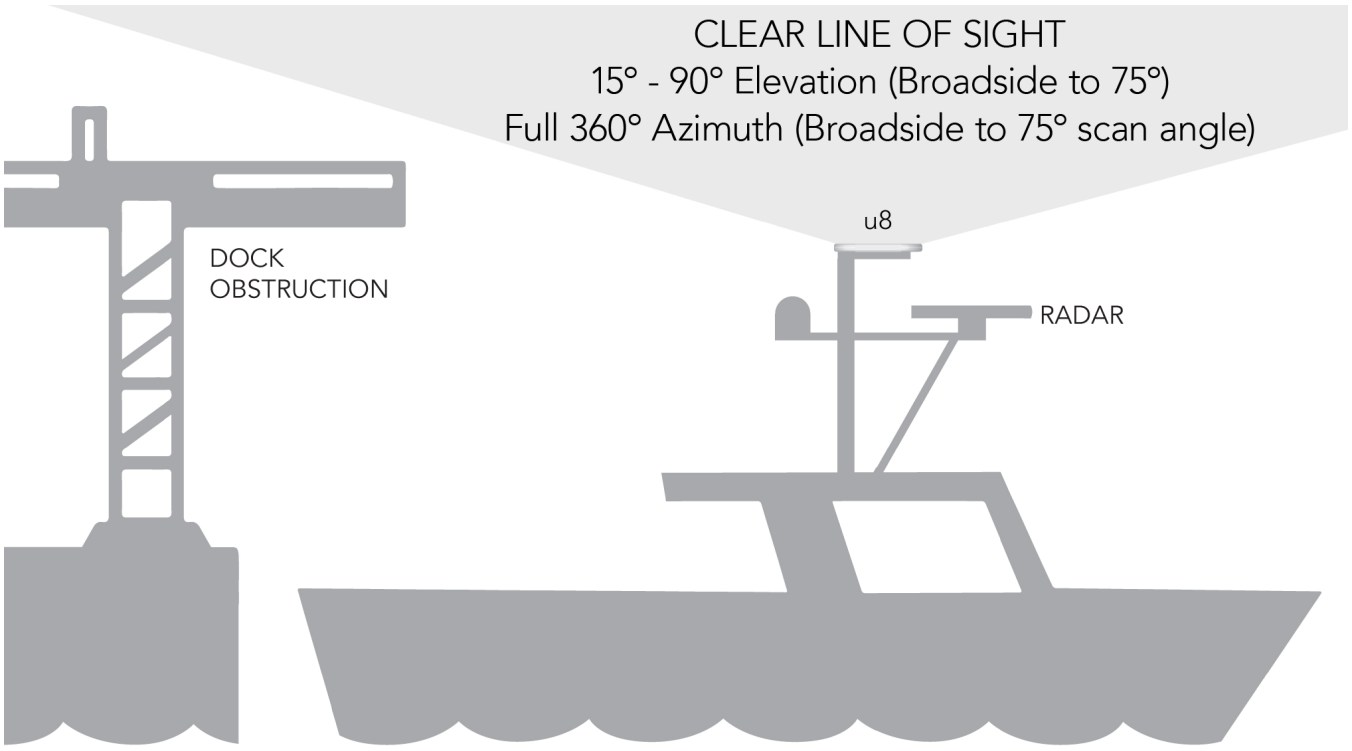

2.6 QR code

The u8 includes a QR code on the antenna communications module next to the LED status panel to show the as-built configuration of the system. The following is an example of the information included in the QR code:

PRODUCT NAME: (E.G KYMETA U8 GEO TERMINAL, 20W)

PRODUCT_CODE: (E.G U8911-11113-P)

PRODUCT_SN: (E.G ABQ000K200624006)

ANTENNA SN: (E.G ABP511K200710025)

MODEM SN: (E.G 017806)

HD1 SN: (E.G 2937E989A746)

HD1 IMEI: (E.G 353533100504078)

IP ADDRESS: 192.168.44.2

SIM ID: (E.G. 8900340110092000000000000000016259)

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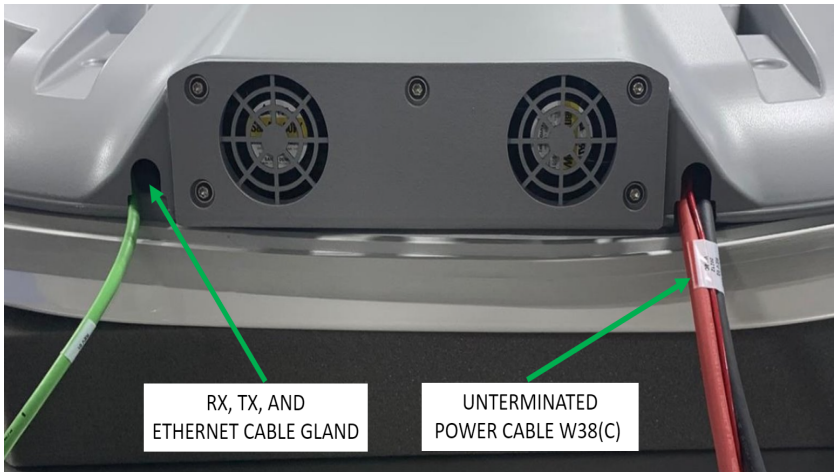
3 Mount and power the u8

Any mounting solution designed for the u8 antenna, u8 ODU, or u8 terminal must allow for lateral and vertical thermal expansion and contraction of the unit. Rigid constraint of the unit may result in permanent damage to the unit, including catastrophic failure, and voids the warranty of the u8 product. Kymeta recommends a minimum clearance of 1.5 cm (0.6 in.) of clearance from the antenna/ODU terminal edge to account for this thermal expansion.

u8 terminals and u8 ODUs come with three non-terminated power cables exiting the shroud, as shown below:



Kymeta offers mounting solutions and power options for land-mobile and stationary installations of the u8 products series. Depending on your installation specifics, follow the instructions provided with the mounting and power kits.

The u8 shroud includes the fan panel, the access panel, drain slots, and the egress for the cable bundles. Before mounting the unit, you can open and remove the shroud without affecting the warranty or IP-rating. Open the shroud if you need to access the connections or cables inside including the RX, TX, and Ethernet cable jumper or the power cable connector to install an AC-to-DC power kit. See *3.1 Connect the cables to the u8 ODU* for details. Refer to *Appendix B. Kymeta u8 ODU cabling* for the cabling diagram.

When mounting the u8, keep at least a 12 in. (305 mm) open distance behind the fans and a minimum single exhaust zone vertically (up or down), horizontally (right or left), or some combination to minimize backpressure.

The table below describes what u8 accessory kits are available to meet your installation needs.

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Product configuration	Land-mobile installation	Stationary installation
u8 terminal (U8911-11113-0 or U8911-12113-0) **u8 ODU** (U8901-00112-0)	**u8 terminal vehicle power kit (U8ACC-00001-0)** see *700-00111-000 Kymeta u8 terminal vehicle power kit installation instructions* shipped with the kit for installation instructions **u8 terminal vehicle mounting kit (U8ACC-00003-0)** see *700-00141-000 Kymeta u8 vehicle mounting kit installation guide* shipped with the kit to for installation instructions	**AC-to-DC power kit (U8ACC-00002-0)** see *700-00142-000 AC-to-DC power kit installation instructions* shipped with the kit for installation instructions **universal mounting plate (U8ACC-000004-0)** see *700-00143-000 Universal mounting plate installation instructions* shipped with the kit for installation instructions

3.1 Connect the cables to the u8 ODU

The RX, TX, and Ethernet cables are shipped in a separate bag and you need to connect them before mounting the unit. Refer to *Appendix B. Kymeta u8 ODU cabling* for the cabling diagram.

1. Place Kymeta u8 ODU shroud-up on a soft surface to protect the radome.

2. Loosen the five M6 captive fasteners on the fan panel. Gently remove the panel and reach under the shroud to disconnect the fan cable (W47B), then place the fan panel aside.

3. Remove the eight M6 fasteners on the shroud using the T20 Torx driver. Gently lift the shroud off the terminal and set it aside. Note that the cable glands on either side of the fan panel are not fixed to the shroud and must be removed to modify power cable routing.

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4. Install the RX, TX, and Ethernet cables. Ensure they are routed through the correct cable gland.

   ✎ If you use the AC-to-DC power kit, switch the power jumper cable now, while the shroud is open.

5. Set the shroud back in place and ensure the cable glands are properly secured. Re-install the eight M6 fasteners from Step 3 and torque to 7.0 N-m (5.16 ft.-lb.). These fasteners have a nylon patch so Loctite is not required.
6. Set the fan panel in place and reconnect W47B under the shroud. Tighten the five M6 captive screws and torque to 1.5 N-m (1.1 ft.-lb.). These fasteners have a nylon patch, so Loctite is not required.
7. Mount the Kymeta u8 ODU as required.

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4 Power on the u8 and access the antenna

4.1 Power on the u8 terminal and access the antenna

1. Ensure the terminal is in place with view of the sky, preferably, according to the guidelines in *2.5 Site selection*.
2. Check that all power cables are connected.
3. Power on the u8 terminal. You may hear the shroud fans power up, and then reduce speed.
4. Connect to the antenna's Wi-Fi. After 1-3 minutes, the Wi-Fi SSID of the terminal multi-WAN device becomes active and available to interact with the terminal via the Kymeta Access application or Kymeta software administrative web-based user interface (UI). Refer to the *700-00139-000 Kymeta™ u8 antenna software user guide* for details. *Note: ####* are four digits unique for each terminal.

Antenna Wi-Fi	SSID	Default password	Purpose
Administrative access Wi-Fi	`u8_Admin_####`	`Gen2 for the World.` *(Including the period)*	Terminal administration including accessing the Kymeta antenna web-based UI and modem commissioning
Data access Wi-Fi	`u8_Internet_####`	`Kymeta brings us together.` *(Including the period)*	Applications like general internet browsing or streaming services that do not permit operations through a VPN
Data access Wi-Fi with session continuity	`u8_SFC_####`	`Kymeta brings us together.` *(Including the period)*	Applications that require continuity like Wi-Fi calls or video conferences

5. *(optional)* Access the u8 system for administration or monitoring. Full system status is available through the Kymeta Access application. This application also connects you to other system components for Administration.

Administration access	Username	Password
The antenna is available at the IP address 192.168.44.2	`admin`	`2Cfg^Ant`
Before commissioning, the satellite modem is available at the IP address: 192.168.44.1	`admin`	`P@55w0rd!`
After commissioning with Kymeta Broadband, the satellite modem is available at the IP address: 192.168.44.1.	`admin`	`iDirect`

6. *(optional)* Change your Wi-Fi passwords using Kymeta Access application.

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Physical Ethernet access is also available. Access to the data network of the u8 is available by connecting to the weatherized RJ45 connector on the Ethernet jumper cable from the shroud near the fan panel.

Physical access to the administrative network of the u8 is available by connecting to the Admin Ethernet port after opening the access panel on the side. You need to set the static IP address of your administrative device to connect to the antenna IP address 192.168.44.2 (e.g. 192.168.44.30). Operation in motion with the access panel open or with an administrative Ethernet connection is not recommended. Refer to *4.3 Open the shroud access panel*.

In the u8 terminal configuration, you have the option to install a second SIM for terrestrial communications. Refer to *6 Set up the u8 terminal secondary SIM* for details.

4.2 Power on the u8 ODU and access the antenna

1. Ensure the ODU is in place with view of the sky according to guidelines in *2.5 Site selection*.
2. Check that all cables are connected:
   a. RX and TX cables are connected to the modem.
   b. The Ethernet cable is connected to administrative port of modem or a network switch.
   c. The power cable is connected to power source.
3. Power on the u8 ODU and external modem. You may hear the shroud fans power up, and then reduce speed.
4. After modem has booted, the antenna becomes accessible via wired Ethernet.
   a. Set your local IP device to static IP address 192.168.0.11.
   b. Access the Kymeta web-based UI at IP address 192.168.0.10.
      Refer to *700-00139-000 Kymeta™ u8 antenna software user guide* for more details.
      » Username: `admin`
      » Password: `2Cfg^Ant`

A second physical Ethernet connection to the u8 ODU is available after opening the access panel on the side. Operation in motion with the access panel open or with an administrative Ethernet connection is not recommended. See section *4.3 Open the shroud access panel* for details on accessing the shroud access panel.

4.3 Open the shroud access panel

The shroud access panel provides access for:

» Viewing LED status lights for the antenna, modem, and/or multi-WAN – refer to *Appendix C. LED status indicators* for information about what each LED state indicates.

» Accessing Ethernet port for physical administrative access

» Utilizing the reset functionality of the antenna, modem, and/or multi-WAN

» Adding a SIM

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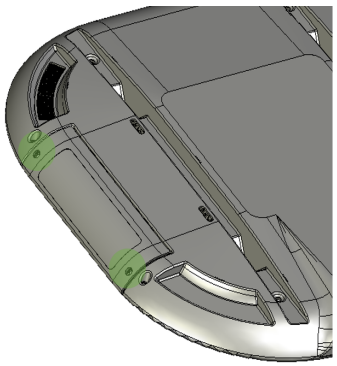
To open the shroud access panel, do the following:

1. Remove the two captive pan washer screws M6×16mm. Use a T20 Torx drive.
2. Slide the panel toward you to remove. *Note:* The access panel does not hinge. Downward pressure may damage the panel.



✎ Operation in motion with the access panel removed or open is not recommended.

4.4 Obtain u8 antenna status information

After the terminal has booted, you can obtain status information in several ways.

1. In a terminal configuration, utilize the Kymeta Access application to view full terminal status.
2. In a terminal or ODU configuration, open the shroud access panel to view status LEDs. Solid green LEDs indicate normal functioning, and blinking blue LEDs indicate connectivity. Refer to *Appendix C. LED status indicators* for full LED status indicator definitions.
3. In a terminal or ODU configuration, open the shroud access panel and connect an Ethernet cable to the available port. This Ethernet connection provides Kymeta Administrative web-based UI access according the directions in the section above relevant to your configuration.

Refer to *700-00139-000 Kymeta™ u8 antenna software user guide* for details on interacting with the features of the Kymeta antenna. The software user guide provides you with details on all available features and modes of operation.

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5 Provision and commission the u8

5.1 u8 terminal with Kymeta™ Broadband

Contact support@kymetacorp.com to request a commissioning window. Provide your terminal serial number, contact name and number, and requested commissioning window (7:00-18:00 PST).

Kymeta support will provision your terminal and provide you options files, which you will load with Kymeta support during your commissioning window.

During your commissioning window, ensure your terminal has a clear view of the sky, and then contact Kymeta support according to the instructions provided by the support team during the confirmation of your commissioning time. They will guide you through the process of bringing your terminal online for the first time.

5.2 u8 ODU or terminal without Kymeta™ Broadband

For instructions refer to the *700-00139-000 Kymeta™ u8 antenna software user guide*, section "Software Commissioning Mode support".

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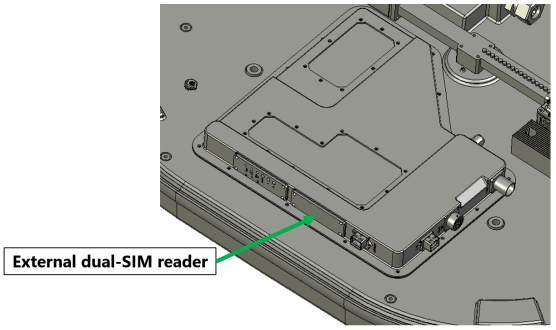
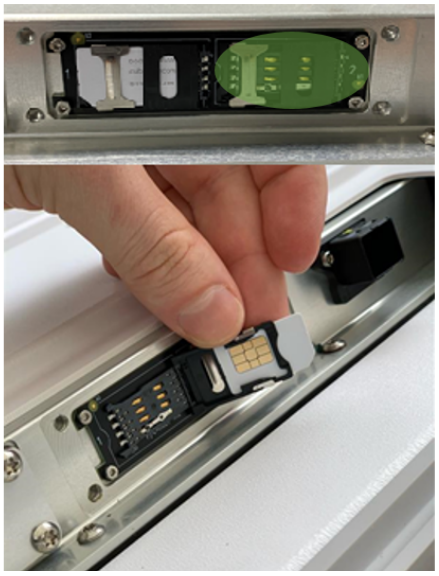
6 Set up the u8 terminal secondary SIM

In the u8 terminal configuration, you have the option to install a second SIM for terrestrial communications. To install a second SIM card, do the following:

1. Remove the shroud access panel as described in *4.3 Open the shroud access panel*.
2. Use a screwdriver to remove the SIM cover.



3. Insert the second SIM in slot 2 by sliding the metal lock mechanism to the "open" position. Flip out the empty SIM card holder "2" and insert the second SIM.
4. Return the SIM holder to its original position ensuring that the card is aligned properly and that the electronic pad of the card mates with the contacts on the terminal. Then, slide the metal locking mechanism back into position.



5. Attach the SIM cover with the four M4 x 6 mm screws.
6. Attach the access panel with the two captive pan washer screws M6 × 16mm. Use a T20 Torx drive.
7. Enable second SIM WAN through Kymeta Access or contact Kymeta customer support.

You will be able to adjust priority between all SIMs and satellite through the Kymeta Access application. Until this feature is ready in Access in October 2020, contact Kymeta customer support for configuration experiments and adjustments.

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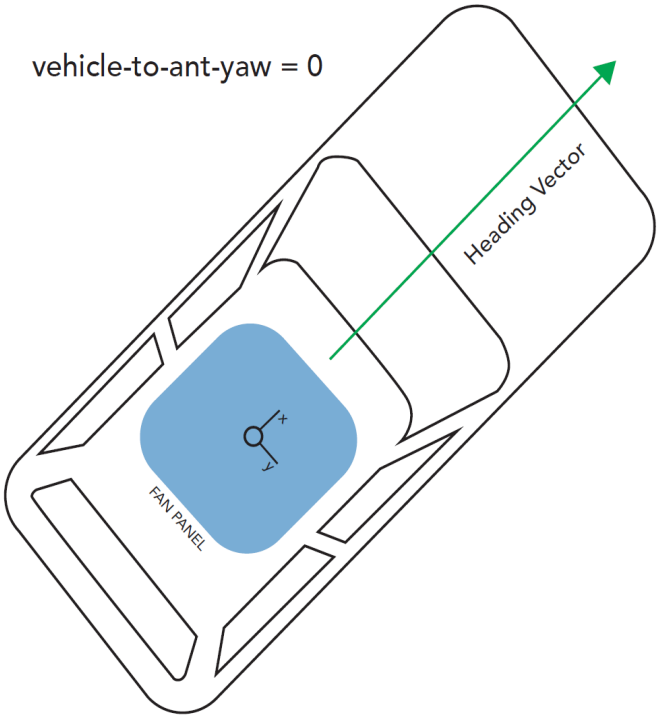
7 u8 antenna orientation setup

When in motion, the antenna's yaw (heading), relative to north, is provided by the GPS heading. The Kymeta u8 antenna out-of-the-box configuration assumes that the X axis of the antenna is aligned with the heading vector of the vehicle. If this is not the case, you can set the vehicle to ant-yaw value to inform the antenna of the offset. Set the offset correctly to expedite acquisition of the satellite while in motion.

> ✎ If the offset is not set or is set incorrectly, the antenna can acquire the satellite, but it may take longer and will result in more out-of-network time.

In the figure below, the antenna is correctly aligned, using the antenna's default value of zero.



> ✎ Make sure the Kymeta logo is front-facing and the fans are facing towards the rear of the car.

For an unaligned antenna, set vehicle-to-ant-yaw to the angle between the X axis and the heading vector as in the figure below. The range is from -360° to 360° with positive angles representing a clockwise rotation of the antenna from the vehicle heading vector.

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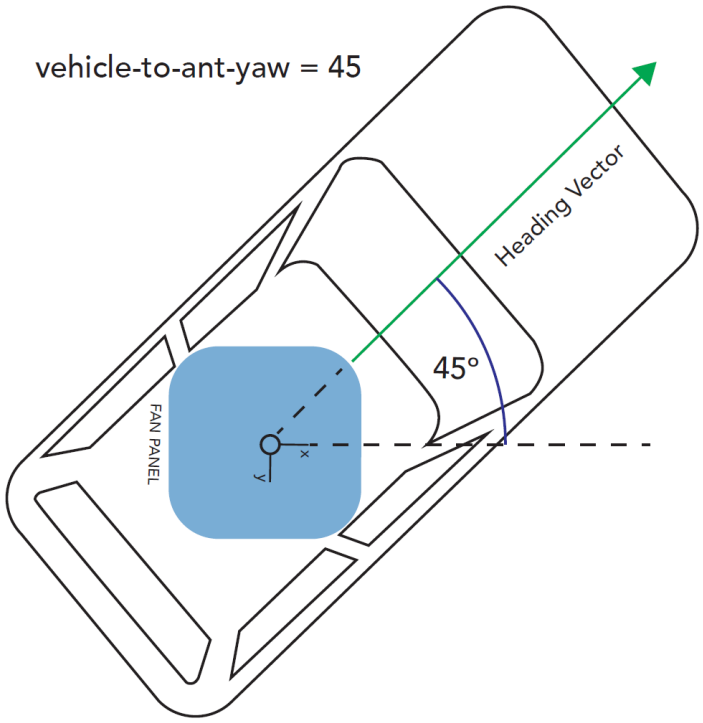

✎ Ensure vehicle-to-antenna-roll and vehicle-to-antenna-pitch are set to their default values of 0. The onboard accelerometers measure these values directly, so no offset is required.

You can adjust the vehicle-to-antenna-yaw offset value using the antenna's API. Navigate to **Help** > **API Documentation** > **/setup/vehicle-to-ant**. Then, set the necessary value. Refer to *700-00159-000 Kymeta™ u8 antenna public RESTful application programmers' interface reference* for further information on using the RESTful API.

✎ The vehicle-to-antenna-yaw value will persist through software updates once set, but it will be removed with a factory reset of the antenna.

✎ For an adjustment to the vehicle-to-antenna-yaw to expedite acquisition under motion, the offset must be accurately estimated to within 3°.

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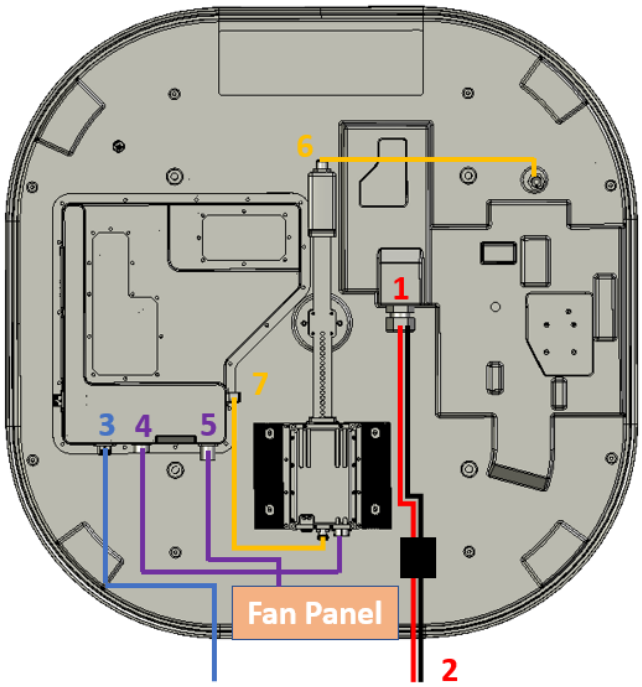
8 Physical connection interfaces

The u8 has 7 external cables under the shroud. The Power jumper and Ethernet cable move connection interfaces outside the shroud to improve installation experience. The physical connections under the shroud are the following:

1. **Power main cable (W38A)**
2. **Power jumper cable (W38C)**
3. **Ethernet cable (W57)**
4. **BUC power, M&C cable (W44)**
5. **Fan power and control cable (W47)**
6. **RX LNB cable (W46)**
7. **TX cable (W43)**



8.1 Power main cable (W38A)

The power cable connects the external power supply to the power interface box.

When attaching the power cable, check the keying: the threads may engage slightly when the connector is rotated by 180° from the correct alignment. Ensure that the threading fully engages. If the power cable is correctly attached and fully seated, the metal nut at the end of the cable will cover the gasket on the power box input.

⚠ Incorrectly seating the power connector will likely result in a short circuit, which will damage the cable and interface box.

8.2 Power jumper cable (W38C)

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8.3 Ethernet cable (W57)

This cable connects the data interface box to port 1 on the modem. The Ethernet port is for a standard 10/100/1000 network and is the primary monitor and control (M&C) port. It supports multiple protocols for a web server (GUI), ACU-Modem Interface (OpenAMIP), and an M2M (machine-to-machine) RESTful API. Installation engineers can make multiple connections with an external switch.

8.4 BUC power, M&C cable (W44)

8.5 Fan power and control cable (W47)

8.6 RX LNB cable (W46)

This LMR-195 cable connects the LNB to the antenna RX IN port. The cable requires a right-angle N-type connector at the antenna end to maintain the low profile of the antenna without sharp or protruding cable bends. The connector has standard N-type connectors at teach end.

8.7 TX cable (W43)

This N-type IF cable connects the BUC in the ODU to the TX Out of the modem. The TX cable works in the frequency range from 1050 MHz to 1700 MHz and passes a 10 MHz reference signal to the BUC. This protocol and the cabling is dependent on the specific modem and BUC used for each solution. Kymeta provides an N-type to F-type adapter to connect this cable to the modem.

9 u8 antenna automatic reboot schedule

The u8 antenna detects the operator's time zone from the computer being used to set the time of day; that is, if the operator's laptop is set to EST and the time of day is set to 3 AM, the automatic reboot will occur at 3 AM EST. If the antenna changes time zones, the reboot time will need to be updated accordingly.

10 Over-the-air (OTA) updates

The u8 antenna requires factory installed software to operate, which is pre-installed at the factory. Users with software version 1.0.0.2210 or later can manage OTA updates as new software releases in the Kymeta Access portal.

OTA updates are available to all Kymeta customers if their u8 has access to the internet and Kymeta Access portal.

Users may have permission to adjust OTA settings in the Kymeta Access portal. If not contact your reseller or Kymeta customer support.

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10.1 OTA update process

1. The antenna checks on start-up to determine if an OTA update is available. The antenna performs this check through secure web services calls to Kymeta Access portal.
2. If the antenna is eligible for an update, a package is downloaded and installed. If the antenna is not eligible, no action is taken.

The u8 operates normally during the OTA update process. The newly-installed software version takes effect on the next restart of the antenna. Restart is triggered on completion of the software installation in version 1.1.0 and later. Software version 1.0.0 reboots on the next scheduled reboot. You will experience a brief internet outage during the restart.

> ✎ It is not possible to monitor the status of the OTA download. However, you can verify the update has completed by the software version number displayed in the top right corner of the web-based user interface. Refer to *700-00139-000 Kymeta™ u8 antenna software user guide* for details.

If the OTA update download is interrupted, the u8 retries up to 10 times to successfully download the update package. You will not see any indication of the activity. If after 10 attempts the download does not complete, it retries on the next restart.

If the OTA update install is interrupted, the software reverts to the original version, and the antenna retries installation on the next restart.

10.2 Software rollback

Contact Kymeta customer support if you want to roll back to a previous software version.

11 Package the Kymeta u8 terminal

> ✎ Kymeta recommends boxing the u8 in the original packaging. If you need to return a terminal, Kymeta provides the replacement terminal first. Use the packaging from the replacement terminal to ship the original one back.

The order of the following steps may vary depending upon your mounting structure. Always follow the guidelines in *700-00122-000 Kymeta™ u8 products safety and handling guide* for best practices.

1. Power off the terminal using the power switch on the power interface box.
2. Carefully disconnect and cap the power cable and Ethernet cable, being mindful of pins and connectors.
    a. Ensure cable ends do not drop into water or dirt.
    b. Dry off cables and coil them into the box, binding with cable ties.
    c. Do not leave adapters on cables.

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3. Remove the u8 from the mounting structure and place face-down on a non-abrasive surface for safe and easy access.
4. Dry off all equipment and remove any debris.
5. Place the u8 back into the shipping compartment in the original cardboard box.
    a. Secure any loose items (e.g., screws, tools, cable ends).
    b. Close the box.
6. Place the u8 original shipping box inside a reusable container.
7. Close the container and fasten the latches carefully.

12 Clean the u8

Prior to cleaning any part of the u8, ensure it is powered off.

General cleaning

Blow or rinse off loose debris first, and then apply a cleaning agent and use a clean, soft towel to clean the stained area. Avoid scrubbing and do not use abrasive materials when cleaning the terminal components.

Avoid exposing rubber parts (for example, gaskets) to alcohol or alcohol-based cleaners, for these can deteriorate the rubber.

General cleaning agents

Clean fingerprints, smudges, salt spray, and light marks with isopropyl alcohol products (CAS Number 67-63-0). It is safe to use isopropyl alcohol on the antenna.

Clean difficult stains, such as oil, grease, soot, ink, and other soils with LPS Precision Clean Multi-Purpose Cleaner Degreaser at 10 to 1 dilution.

Connectors

Use a soft bristle acid brush or cotton swab with isopropyl or denatured alcohol to gently clean all connectors. Take extra care when cleaning RF air-dielectric connectors and don't damage, bend, nick, push in, or pull out the center connector as this can affect your signal. Carefully clean any surface corrosion on the exterior of the connector. Do not scrape or overscrub the connector as this can damage the connector coating and render it more susceptible to corrosion.

Ensure connectors are completely dry before reconnecting.

Screws

Use a soft bristle brush and isopropyl or denatured alcohol to clean lightly oxidized screws. Replace heavily corroded or oxidized screws when possible.

13 Replace components

Before replacing any terminal components, take inventory to ensure you have all required hardware.

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Kymeta provides all hardware for any accessory component for the terminal in accessory kits:

- U8ACC-00001-0 u8 terminal vehicle power cables
- U8ACC-00002-0 AC-to-DC power kit
- U8ACC-00003-0 u8 antenna vehicle mount
- U8ACC-00004-0 Universal mounting plate
- U8ACC-00007-0 u8 terminal flyaway case
- U8ACC-00013-0 u8 terminal cable extensions
- U8ACC-00023-0 u8 terminal MRZR mount

Kymeta provides all hardware for any replacement component for the terminal in field replaceable units (FRU):

- U8ACC-00005-0 u8 terminal iQ200 modem
- U8ACC-00006-0 u8 antenna diplexer
- U8ACC-00008-0 u8 antenna shroud
- U8ACC-00009-0 u8 terminal BUC
- U8ACC-00010-0 u8 terminal LNB
- U8ACC-00011-0 u8 terminal 950MP modem card
- U8ACC-00012-0 u8 antenna shroud fan assembly
- U8ACC-00014-0 u8 terminal LTE advanced pro Global
- U8ACC-00015-0 u8 terminal LTE advanced pro FirstNet
- U8ACC-00016-0 RX-in to LNB cable
- U8ACC-00017-0 Power jumper cable
- U8ACC-00018-0 Data jumper cable
- U8ACC-00019-0 BUC power cable
- U8ACC-00020-0 Fan cable
- U8ACC-00021-0 TX cable
- U8ACC-00022-0 RX or TX jumper cable

14 u8 common troubleshooting steps

This section describes common issues and basic troubleshooting steps. If these steps fail to resolve your issue, please contact Support.

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1. The Wi-Fi never appears available to my device.
    a. Check that the unit has power.
    b. Open the access panel and check LED status indicators. If any indicators are yellow or red and/or flashing rapidly, contact Kymeta customer support. Refer to *Appendix C. LED status indicators* for LED status indicator definitions to assess if an error condition has been encountered. If any LEDs indicate an error condition, contact Kymeta customer support.
2. My device is not able to access the IP addresses of the antenna or modem when connected via Wi-Fi.
    a. Check the IP settings on your machine. The Wi-Fi should provide you an IP address either in the 10.10.10.XX range (Admin Wi-Fi) or in the 192.168.55.XX range (Internet Wi-Fi). If you did not receive any of these IP addresses, turn off and on your Wi-Fi or try connecting to the other Wi-Fi network.
3. My device is not able to access the IP addresses of the antenna or modem when connected via physical Ethernet.
    a. Check that you are connected to the expected Ethernet port (Admin or Data in the terminal configuration).
    b. Check that your machine has a static IP address that can address the antenna at its IP address indicated in *4.1 Power on the u8 terminal and access the antenna*.
4. I changed network configuration of one of the devices in my terminal and now cannot see it.
    a. Use the **Reset** button under the access panel to reset the unit to default factory configuration.
5. The terminal is powered on, but the modem is not responding.
    a. This is a known issue. Please review the software release notes and wait at least 6 minutes before rebooting the terminal.

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15 Customer support

Contact Kymeta customer support at support@kymetacorp.com or **1-855-525-6638** (Monday to Friday, 07:00-18:00 PT (UTC-8)).

16 Revision history

Revision	Change
A	Initial Production version.

17 Copyright and trademark information

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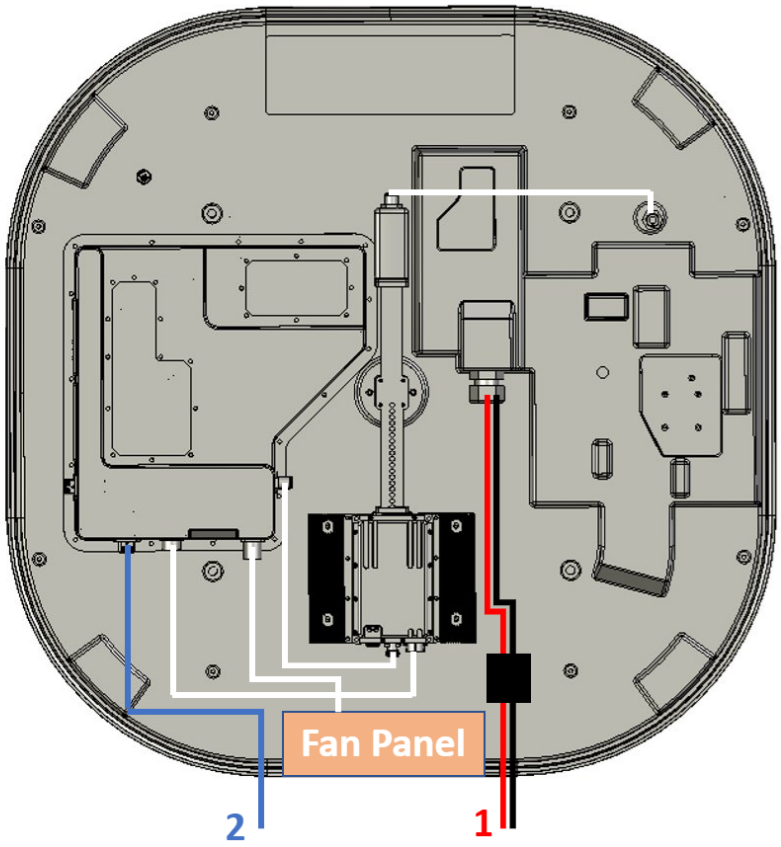
Appendix A. Kymeta u8 terminal cabling

The power and Ethernet jumper cables move connection interfaces outside the u8 terminal shroud.

1. Power jumper cable (W38C)
2. Ethernet jumper cable (W57)



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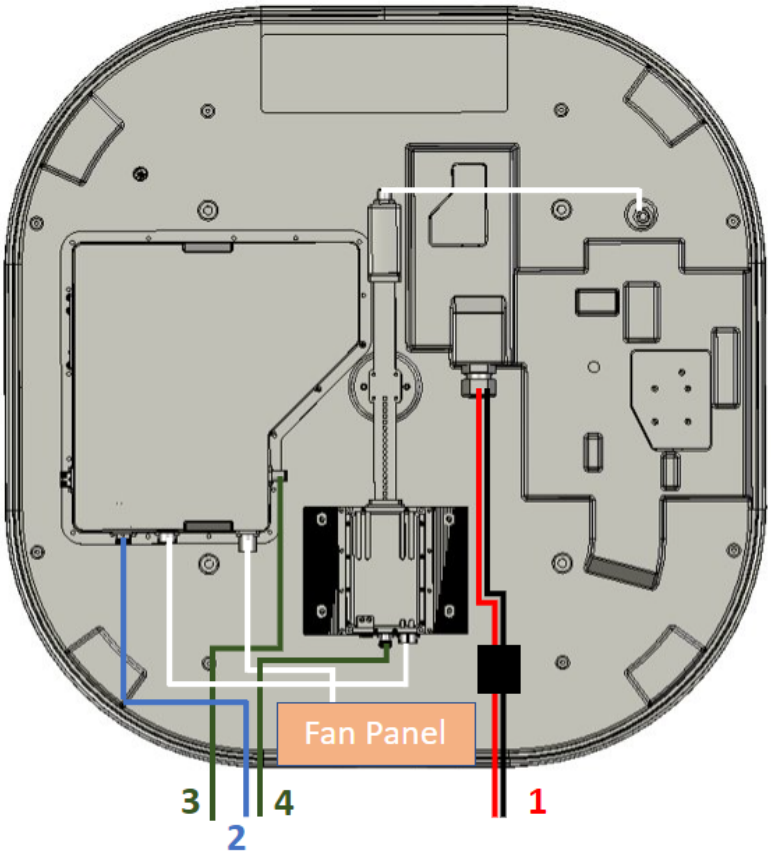
Appendix B. Kymeta u8 ODU cabling

The power, Ethernet, RX, and TX jumper cables move connection interfaces outside the shroud.

1. Power jumper cable (W38C)
2. Ethernet jumper cable (W57)
3. RX jumper cable (W58)
4. TX jumper cable (W59)



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Appendix C. LED status indicators

Antenna status LED indicator

LED state	Indication
Off	Antenna not powered
Solid amber	Antenna powered but not successfully booted
Solid green	Antenna powered and successfully booted
Blink green, then solid green	Antenna reset successful

Satellite modem status LED indicator

LED state	Web-based UI indicator	Indication
Off	OFF	Satellite modem not powered
Blinking amber	WAITING	Satellite modem not powered due to attempted operations outside of operating thermal specification
Solid amber	BOOTING	Satellite modem powered but not successfully booted
Fast blink green	ON	Satellite modem successfully booted but LNB not detected
Solid green	READY	Satellite modem successfully booted and LNB detected
Slow blink blue	RX LOCK	RX lock
Fast blink blue	TX ENABLED	TX enabled
Solid blue	CONNECTED	Satellite modem in network
Solid red	ERROR	Fault detected by built-in self test

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Multi-WAN status LED indicator

LED state	Web-based UI indicator	Indication
Off	OFF	Multi-WAN not powered
Solid amber	BOOTING	Multi-WAN powered but not successfully booted
Solid green	NO SERVICE	Multi-WAN successfully booted but no WAN available for internet
Solid green	DISABLED	Multi-WAN successfully booted but all WANs are disabled in Multi-WAN configuration
Solid green	DISCONNECTED	Multi-WAN successfully booted but no WAN is reporting status
Slow blink blue	CONNECTING	Multi-WAN connecting to cellular networks
Solid blue	CELLULAR | SATELLITE | SAT & CELL	Multi-WAN connected to networks
Solid red	ERROR	Fault detected by built-in self test

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