

Pivotal Commware Pivot 5G™ Installation Manual

745-0013-01
Version 2025.1

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Revision History

Version	Release date	Section	Revision Notes
v2025.1	April 2025	Commissioning (removed) Various	Software information moved to Software Manual – link provided. PoE support added. Small pole guidance added
v2024.4	October 2024	Wiring & Commissioning	Updated to provide RF cable support guidance for MQ5 connector and to reflect IBMS Marvel RC2 features and functionality.
v2024.3	June 2024	Wiring	Updated guidance for power connections
v2024.2	May 2024	Safety Information	Updated wording for “restricted access”
v2024.1	February 2024	Commissioning	Updated instructions
v2023.2	October 2023	Installation Commissioning	New power connector and guidance added Commissioning updated
v2023.1	April 2023	N/A	Initial Release

Table of Contents

- REVISION HISTORY2**
- SAFETY AND REGULATORY INFORMATION5**
 - FCC Industrial Signal Booster User Information5*
 - FCC Part 15 User Information.....5*
 - FCC Radiation Exposure Statement.....5*
 - Safety Information and Guidance6*
- INTELLECTUAL PROPERTY7**
- DISCLAIMER OF WARRANTIES; EXCLUSION OF LIABILITY7**
- CONTACT INFORMATION7**
- OVERVIEW OF PIVOT 5G | 56208**
 - PIVOT 5G MODEL 5620 UPDATES8
- INSTALLATION9**
 - OVERVIEW9
 - Power over Ethernet Installation.....9*
 - During Installation.....9*
 - REQUIRED TOOLS (NOT INCLUDED WITH PIVOT).....9
 - GENERAL CONFIGURATION (1 DONOR UNIT, 1 OR 2 SERVICE UNITS)10
 - SYSTEM COMPONENTS11
 - Units11*
 - Accessories11*
 - MOUNTING THE PIVOT 5G.....12
 - Choosing the best location for mounting12*
 - Mounting the Brackets (Wooden Pole Mount)12*
 - Assembling the Mounting Bracket14*
 - Parts List:.....14
 - WIRING FOR PIVOT 5G.....15
 - Overview15*
 - Wiring Guidelines15*
 - RF Connection Guide: 1 Service Unit, 1 Donor Unit.....16*
 - RF Connection Guide: Multiple Service Units, 1 Donor Unit.....17*
 - Power Wiring and Connector18*
 - Overview18
 - Requirements.....18
 - Connecting to the Units18
 - Ground Wiring.....19*
 - Overview19
 - Required Materials.....19
 - Process19
 - Cable Weatherproofing.....22*
- SETUP & COMMISSIONING22**

OVERVIEW **ERROR! BOOKMARK NOT DEFINED.**

CHANGING FROM A SINGLE SERVICE TO DUAL SERVICE DEPLOYMENT 23

Overview 23

Mounting..... 23

MANAGEMENT AND TROUBLESHOOTING 24

 GETTING TECHNICAL ASSISTANCE 24

APPENDIX A – FULL BAND-IT® INSTRUCTIONS 26

APPENDIX B – FULL WARRANTY INFORMATION 25

 WHAT ARE THE LIMITS ON PIVOTAL’S WARRANTY/LIABILITY? 25

APPENDIX C - GLOSSARY 26

Safety and Regulatory Information

This manual should be read and used as a guideline for properly installing and operating the Pivot 5G device. This manual may be changed for system improvement, standardization, and other technical reasons without prior notice. Updated manuals are available at: <https://pivotalcommware.com/pivot-5G-installation-help>.

For questions on the manual or their content, contact support@pivotalcommware.com.

FCC Industrial Signal Booster User Information

WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of \$100,000 for each continuing violation.

Modification of the device, cabling or antennas is prohibited and may violate your authority to operate the licensed device.

Operation in the **37.0-37.6 GHz** of the **n260** band shall only be available on a site specific, coordinated shared basis with eligible Federal entities.

FCC Part 15 User Information

Device Name	Model Number	FCC ID	Contains FCC ID's	Minimum Separation Distance
Pivot 5G 5620 (n257) – Donor Unit	5620-12-28	2AUVU-5620-12-28	XMR201906EG21G	109 cm
Pivot 5G 5620 (n257) – Service Unit	5620-23-28	2AUVU-5620-23-28	None	101 cm
Pivot 5G 5620 (n260) – Donor Unit	5620-12-39	2AUVU-5620-12-39	XMR201906EG21G	122 cm
Pivot 5G 5620 (n260) – Service Unit	5620-23-39	2AUVU-5620-23-39	None	60 cm

Pursuant to part §15.21 of CFR Title 47, you are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

To ensure the safety of users, the FCC has established criteria for the amount of radio frequency energy various products may produce depending on their intended usage. This product has been evaluated to comply with the FCC's exposure criteria. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The Pivot unit installation shall allow at least the separation distance listed in the table above between the device and persons to comply with FCC RF exposure guidelines. Use only Pivotal Commware approved power supplies and accessories that are specifically designed for your Pivot device.

Safety Information and Guidance

The equipment is suitable for installation outdoors with an IP66 rating (watertight and dusttight enclosure).

Equipment is intended for installation in Restricted Access Area / Les matériels sont destinés à être installés dans des EMPLACEMENTS À ACCÈS RESTREINT.

For outdoor pole mounted installations, the unit requires a surge protector device (SPD) or surge arrester as part of the installation to address transient overvoltages exceeding 1500 Vpk.

Connecting the supplemental ground to the unit in accordance with the NESC is essential before connecting the input supply cable.

Only authorized service personnel should attempt to repair this equipment.

Intellectual Property

All Intellectual Property, as defined below, owned by or which is otherwise the property of Pivotal Commware, Inc. (“Pivotal”) or its respective suppliers relating to the Pivotal device, i.e., Pivot 5G, including but not limited to, accessories, parts, or software relating thereto (the “Pivot 5G”), is proprietary to Pivotal and protected under federal laws, state laws, and international treaty provisions. “Intellectual Property” means any Pivotal (or where applicable, Pivotal’s supplier’s) intellectual property including, but not limited to, inventions (patentable or unpatentable), patents, trade secrets, copyrights, software, computer programs, and related documentation and other works of authorship. You may not infringe or otherwise violate the rights secured by the Intellectual Property. Moreover, you agree that you will not (and will not attempt to) modify, prepare derivative works of, reverse engineer, decompile, disassemble, or otherwise attempt to create source code from the software. No title to or ownership in the Intellectual Property is transferred to you. All applicable rights of the Intellectual Property shall remain with Pivotal and its suppliers.

Disclaimer of Warranties; Exclusion of Liability

This document provides an introduction to features, functions, setup, and operation of Pivotal Commware’s Pivot 5G. For more information, refer to the [Warranty Information](#).

Contact Information

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Pivotal Commware Pivot 5G Technical Support:

- Phone – 1-855-956-2016
- Email – support@pivotalcommware.com
- File a Ticket – <https://pivotalcommware.freshdesk.com/support/home>
- Pivotal Support Resources: <https://pivotalcommware.com/pivot-5g-installation-help/>

Overview of Pivot 5G | 5620

The Pivot 5G® model 5620 outdoor network repeater can extend, redirect, and shape mmWave signals from 5G base stations on demand and with low latency. The Pivot is a professionally-installed on-the-pole / on-the-building repeater that uses Pivotal's patented Holographic Beam Forming® technology to achieve the lowest available cost, size, weight, and power consumption profile.

Pivot 5G Model 5620 Updates

- Increased maximum Donor Unit range
- Up to 3 Service Units on single Donor Unit
- Simplified cabling and installation
- Designed for n257 (26.5 to 29.5 GHz) and n260 (37 to 40 GHz) operating frequencies
- Increased MIMO Max EIRP
- NEBS certification
- Power over Ethernet support available

Installation

Overview

The Pivot 5G is designed to be installed by a crew with experience installing pole- and building-mounted equipment. The following material provides guidance to perform a typical installation for both a [Single Service Unit, Single Donor Unit deployment](#) and a [Dual Service Unit, Single Donor Unit deployment](#).

For installations where a Single Service, Single Donor deployment is upgraded to a Dual Service deployment there are [special considerations noted](#).

Power over Ethernet Installation

For Power over Ethernet installations, consult the PoE Service Bulletin, document [765-0010-01].

During Installation

The Installer will need the devices' serial numbers for the commissioning process. These are located on the bottom of each device and on the device packaging boxes.

Recommended Tools (Not Included with Pivot)

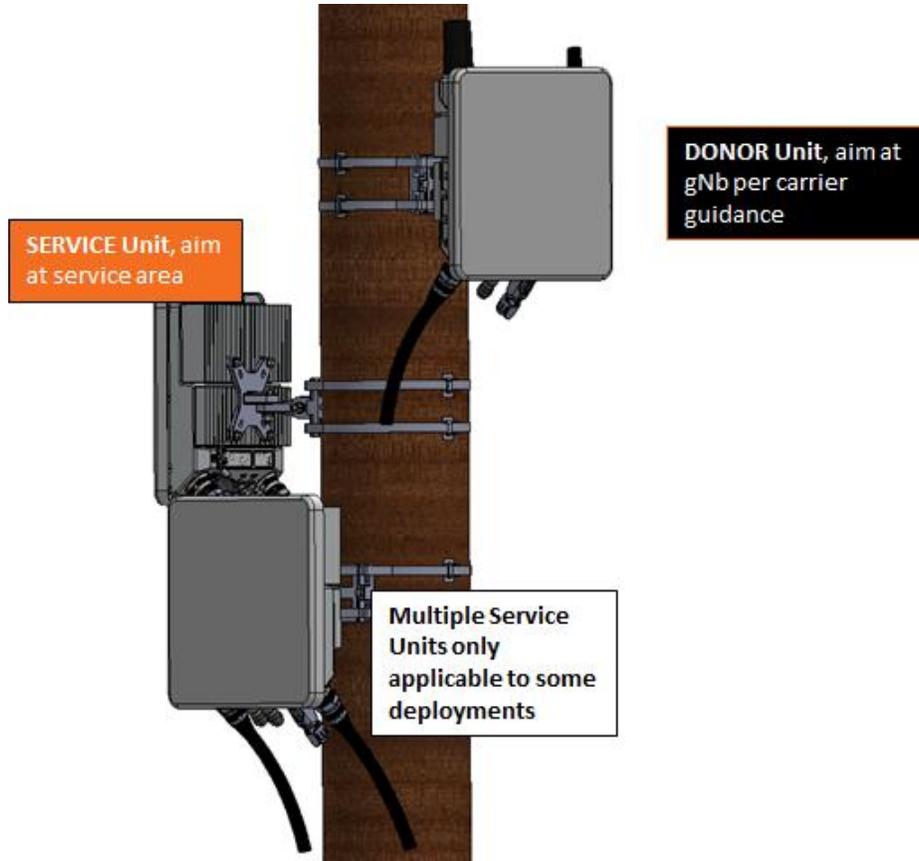
These are the recommended tools for a standard installation. For a Power over Ethernet installation consult the PoE Service Bulletin referenced above.

	<p>Band-It® ½-inch stainless steel band C20499</p> <p>Packaged in rolls of 100-feet.</p>
	<p>Band-It® ½-inch steel buckle C35499</p> <p>Secures ends of band in place</p>
	<p>Band-It® Standard Banding Tool C00169</p> <p>Tightens and cuts band</p>
	<p>Band-It® Band and Buckle Kit C27699</p> <p>Includes all of the above Band-It® equipment</p>

General Configuration (1 Donor Unit, 1 or 2 Service Units)

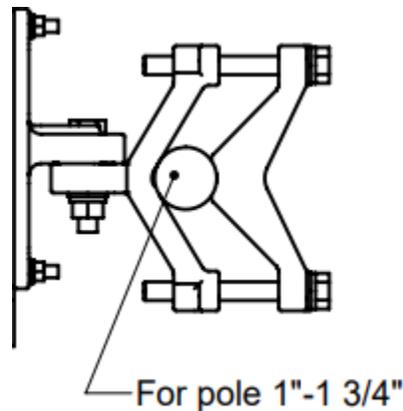
The carrier will provide instructions that detail the angle at which the units should be separated around the pole.

Note: The second service unit is optional.



Small Pole Assembly

For a 1-inch to 1.75-inch pole installation, turn the backplate to the MTi bracket so the ridge is facing inward as shown below.



System Components

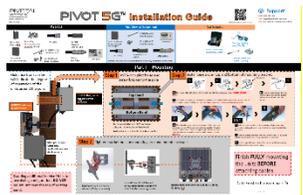
Units

Unit Types (Ships (1) per box with the below Accessories)		
Donor Unit (DU)	Service Unit (SU)	
n257 – 26.5 to 29.5 GHz n260 – 37.0 to 40.0 GHz	n257 – 26.5 to 29.5 GHz	n260 – 37.0 to 40.0 GHz
Beam Azimuth: $\leq 12^\circ$ Beam Elevation: $\leq 12^\circ$	Beam Azimuth: 70° Beam Elevation: 32°	Beam Azimuth: 75° Beam Elevation: 45°
Pointed at the gNB to receive the 5G mmWave signal.	Contains 70° beam pointed towards the service area receiving 5G. Some deployments will utilize multiple (up to 3) Service Units.	Contains 75° beam pointed towards the service area receiving 5G. Some deployments will utilize multiple (up to 3) Service Units.
		
Note: Band n261 (27.5 GHz to 28.35 GHz) is a supported subset of band n257 .		

Accessories

Each unit ships (1) per box with each box containing the below accessories.

Item	Qty	Description
Present in both boxes		
	1	Mounting bracket Connects both the Donor Unit and the Service Unit ((1) bracket per unit) to the mounting surface
	2	5" L hex screw Connects the mounting bracket ((2) screws each) to the pole
	4	1/2" L hex screw Connects the mounting bracket to the Donor Unit or Service Unit
	1	Power Connector & Ground Lug Installer to supply cable and terminate in field

Service Unit Box Only		
	2	Ethernet Connector Installer to supply cable and cut to length
	1	RF Cable
	1	RF Cap The RF connector cap comes on each RF connection to protect the contacts and should be left on when no additional service unit is to be deployed.
	1	COAX-SEAL packet For weatherproofing Ethernet cable connectors
	1	Quick Start Guide (Service Box Only) Instructions for installation and cable connections

Mounting the Pivot 5G

Choosing the best location for mounting

The mounting location for the Pivot will be determined in part by site conditions and guidance from the carrier. However, there are some best practices that may dictate mounting location.

Mounting Best Practices

- Choose a mounting location where the hex screws will not back out of old or damaged wood (if attaching to a wood surface).
- **Record the device's serial number before mounting.** This can be found on the bottom of both the Donor and Service Unit and on the packaging boxes and will be needed for commissioning.

Rotating the Units

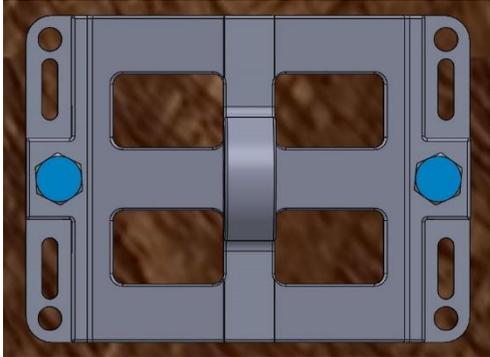
Due to the properties of the MQ5 RF cable, the units cannot be mounted at different rotational positions. For example: if the Donor Unit is rotated 90 degrees (on its side), then all Service Units must also be rotated the same amount in the same direction.

Mounting the Brackets (Wooden Pole Mount)

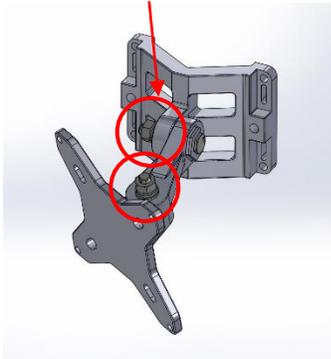
Note: The brackets come with instructions for proper assembly.

- [1]** Drill full 5-inch pilot holes into the mounting surface for the 5-inch screws where each bracket will be mounted.
 - a. Recommended bit size: 3/32 (softwood)- or 3/16-inches (hardwood).

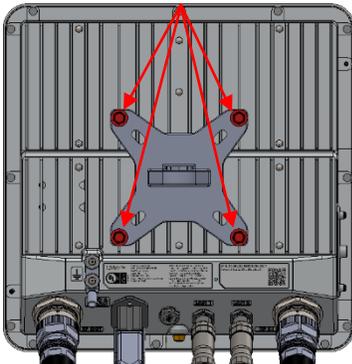
- [2] Use bracket-to-pole screws to secure each bracket **without** an attached unit to the pole at center holes.
Note: There are **two** screws to mount each bracket to the pole. **Do not** use four screws for a bracket, or mount screws along the same side.



- [3] Tighten hex nuts on bracket arm to 18 ft-lbs (216 in-lbs).



- [4] Attach each unit and tighten bracket-to-unit hex nuts to 4-5 ft-lbs (48-60 in-lbs).

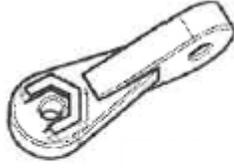


Assembling the Mounting Bracket

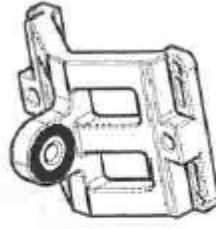
Parts List:



Item 1
Unit Bracket
Qty: 1



Item 2
Bracket Arm
Qty: 1



Item 3
Wall/Pole Bracket
Qty: 1



Item 4
Bolt M8x40
Qty: 4



Item 5
Flat Washer M8
Qty: 4



Item 6
Spring Washer M8
Qty: 4



Item 7
Nut M8
Qty: 2



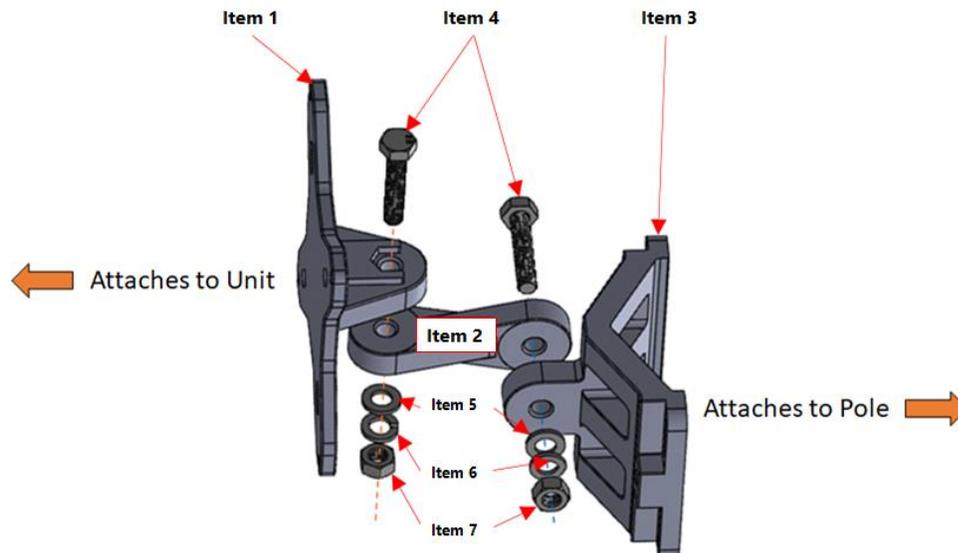
Item 8
Clamping Bracket
Qty: 1



Item 9
Bolt M8x70
Qty: 2

Notes:

- It is recommended to first secure mounting bracket *Item 3* to the pole **before** assembling the entire bracket.
- Item 8* and *Item 9* are provided for installation on a small-diameter pole but are not necessary for a large (greater than 3-inch diameter) pole installation.



Tighten bolts to 18 ft-lbs (216 in-lbs)

Wiring for Pivot 5G

Overview

The Pivot 5G is designed to be powered by a -48 VDC input. Guidelines for connecting the RF, Ethernet, and Power & Ground cables to the unit are below.

Wiring Guidelines

While connecting cables, follow these guidelines:

Cable Constraints

All cables come with a manufacturer-stipulated minimum bend radius. Do not loop or bend cables tighter than this bend radius. Follow all cable requirements and restrictions.

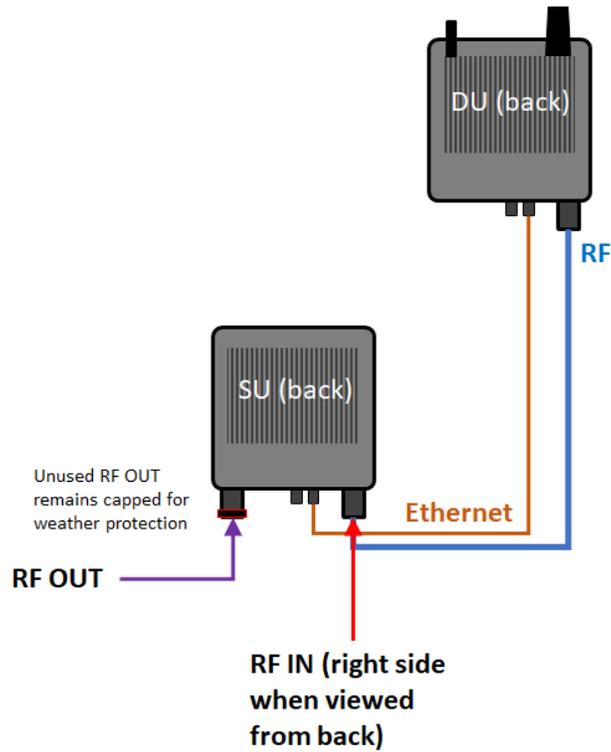
DO NOT install any cables under ANY weight or tension.

DO NOT use band-it straps to secure ANY cables to the pole. **DO NOT** use any method to secure cables that may damage the cables. Non-metal zip ties that meet this criteria may be used.

RF Cable Guidelines

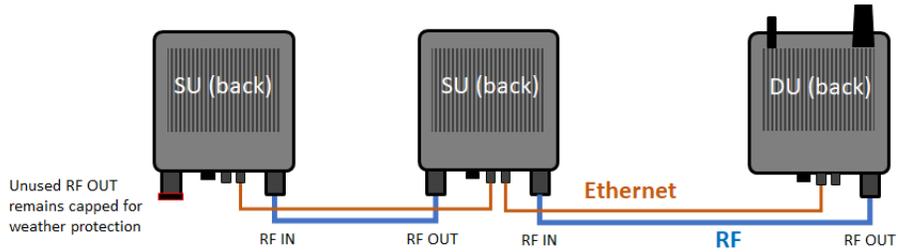
- **DO NOT** use plastic tie wraps.
- **DO NOT** remove dust caps on cables or connectors until connecting.
- **DO NOT** get water or dirt in cable connectors.
- **DO NOT** leave connections exposed (without dust caps). Install cables **IMMEDIATELY** after mounting and removing caps.
- **DO NOT** power either unit on until all connections have been made and tightened to specifications.
- **DO NOT** crimp, crush or tug on cables.
- Cables shall **NOT** be installed under tension or remain under tension once installed.
- Cables **MUST** run uphill to **BOTH** units to create a drip loop between units.
- Cables longer than ten (10) feet must have additional support to avoid damage to the units or MQ5 connector.

RF Connection Guide: 1 Service Unit, 1 Donor Unit



Power cables not shown. RF IN and RF OUT labeled on connection plate of units. The unused RF OUT connector should REMAIN CAPPED for weather protection.

RF Connection Guide: Multiple Service Units, 1 Donor Unit



The Ethernet cables MUST be wired to the service units in the same order as the RF cables.

A third service unit may be wired in the same manner with the RF OUT from the second service unit connecting to the RF IN for the third service unit. The unused RF OUT connector should REMAIN CAPPED for weather protection.

Power Wiring and Connector

Overview

Instructions for assembling the Mean Well power supply and the Octis power connector can be found in the Service Bulletin: Mean Well Power Supply Wiring (765-0007-01), located on the [Pivot 5G Installation Help page](#). The Mean Well power supply is the recommended power supply. If a different power supply is used, the installer assumes all responsibility for the installation and wiring of that power supply.

If the Octis connector has been assembled prior to installation, it should come with a black cap over the connectors that is locked into place by the black hinge and red switch.



Requirements

Mean Well Power Supply

- **Single Sector:** Maximum 500-feet between Mean Well power supply and Pivot unit(s).
- **Dual Sector:** Maximum 350-feet between Mean Well power supply and Pivot unit(s).

Octis Connector

- Measure cable to confirm diameter
- Ensure connector gland is properly sized from table based on cable measurement. This table can be found on the Octis Service Bulletin.

Connecting to the Units

- [1] With the hinging gate lock open, slide the connector all the way into the power connection port on the Pivot Unit.



- [2] The hinging lock should swing into place and lock over the pegs on the unit connector housing.
- [3] Once the hinging lock is in place, the red slide lock should be slid towards the green ring to lock the connector into place.
- [4] **IMPORTANT:** Make sure the connector has been assembled properly by doing a pull test on both the gate lock and the cable. The red switch should catch on the green ring and be unable to open. The cable should be tight with no gaps between the gland and cable.

Ground Wiring

Overview

The Pivot 5G is suitable for installation under these environments:

- Indoor or Outdoor Building Mounted Locations where the National Electrical Code Applies
- Outdoor Pole Mounted Locations where the National Electrical Safety Code Applies

And is designed to be grounded per the following specifications:

- The ground wire is #6 AWG
- Grounding Environments
 - CBN (Common Bonding Network)
 - IBN (Isolated Bonding Network)

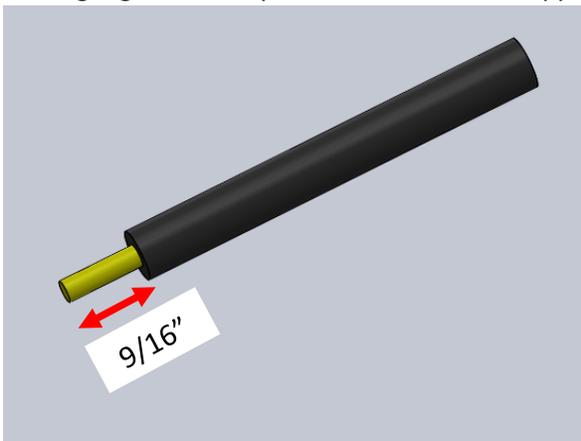
The system ground must be connected to a building-installed ground point for proper protection. The shortest possible wire should be used for grounding and the ground wire shall be safety listed (marked on the outside of the sheathing).

Required Materials

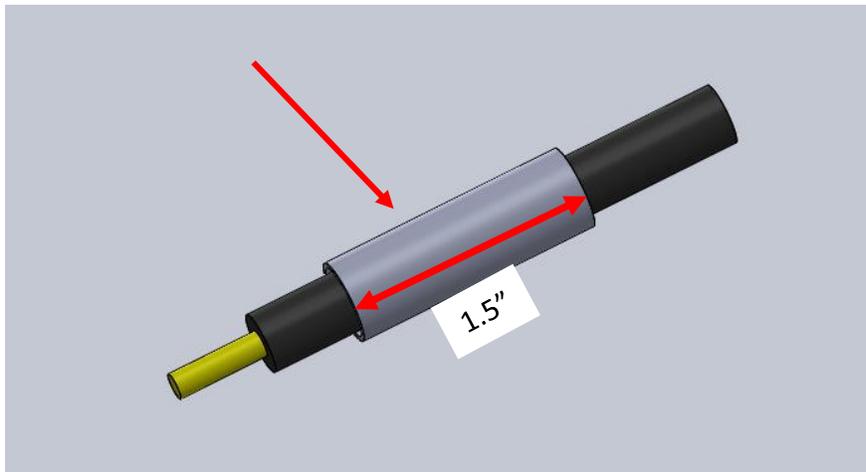
- Tape Measurer or Calipers
- Wire strippers (for 6-gauge stranded wire)
- Wire cutters
- Alpha Wire 6 AWG Wire P/N PV0630 BK005 or equivalent, length as required.
- Alpha Wire Heat Shrink P/N F7501/2 BK105 or equivalent, 1.5 inches.
- Pivotal Commware ground lug P/N 125-0288-01 supplied with each unit.
- Wire Crimper Tool Panduit P/N CT-1700
- Heat Gun
- Electrical multimeter

Process

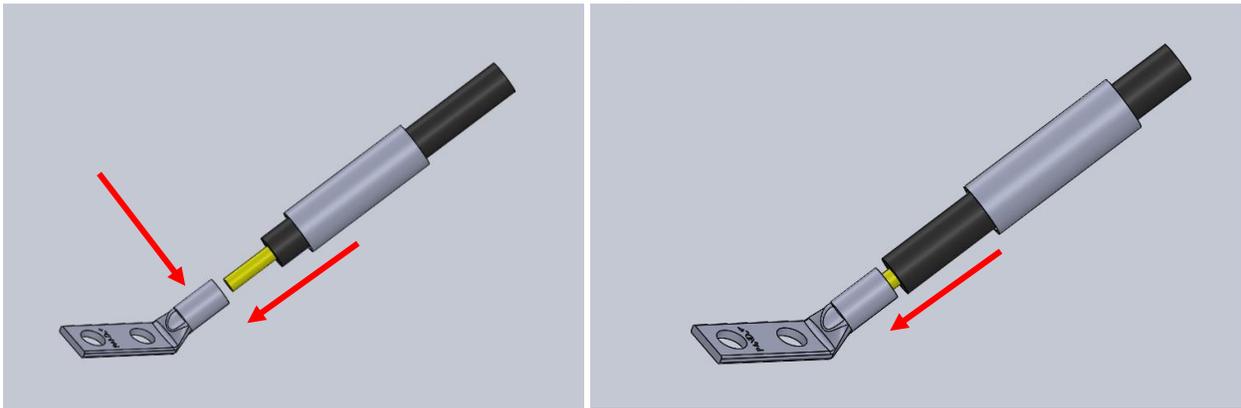
- [1] Use 6 gauge wire. Strip one end with wire strippers so that 9/16-inches of inner conductor is exposed.



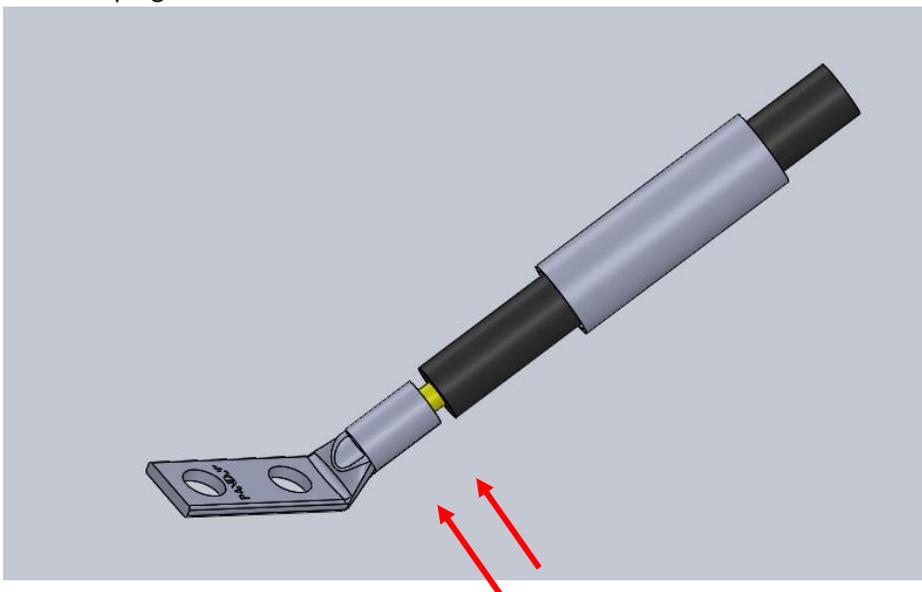
- [2] Cut heat shrink to 1.5-inches. Slide heat shrink over wire.



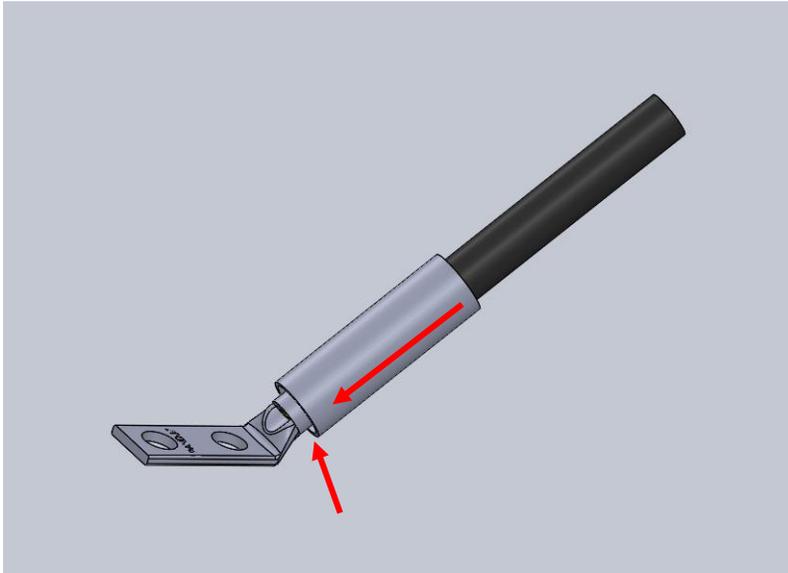
- [3] Insert exposed conductor of wire into wire barrel of ground lug connector until it stops.



- [4] Using wire crimper, place one crimp on wire barrel near its end and one near its opening. Tug on wire to make sure crimping secured conductor.



- [5] Slide heat shrink down and over wire barrel of ground lug connector. Use heat gun to shrink it in place. Heat shrink must not move afterwards.



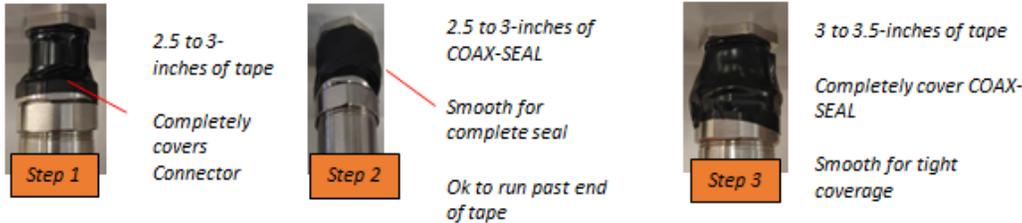
- [6] Using multimeter set to resistance measurement. Place one probe on ground lug and other on opposite end of ground wire. Ensure there is continuity between the two points. Resistance should be minimal.
- [7] Nuts for ground lug should be tightened to 6.2 ft-lbs of torque.

Cable Weatherproofing

The power and ground cables do not need to be weatherproofed.

Step 5 Weatherproofing

5a – Ethernet Cable



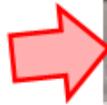
Make sure fittings are clean, dry, and connected to the proper torque.

1. Use 2.5 to 3-inches of ½-inch wide electrical tape to cover the connector. Smooth tape for a tight seal over each side of the connector.
2. Use 2.5 to 3-inches of COAX-SEAL to create an airtight seal over the tape and connector. It is okay to run over the tape. Smooth the COAX-SEAL to ensure complete, airtight coverage.
3. Use 3 to 3.5-inches of tape to completely cover the COAX-SEAL. Smooth the coverage area to ensure an airtight seal.

5b – RF Cable



Slide RF cable hood up over connector to weatherproof.



For the last Service Unit in the daisy chain the RF connector cap that comes with the unit should remain on to protect the connector.

Setup & Commissioning

The commissioning process is how the Pivot (n257 or n260) are set up for use. For commissioning instructions, visit [Pivot 5G Installation Help](#).

Changing from a Single Service to Dual Service Deployment

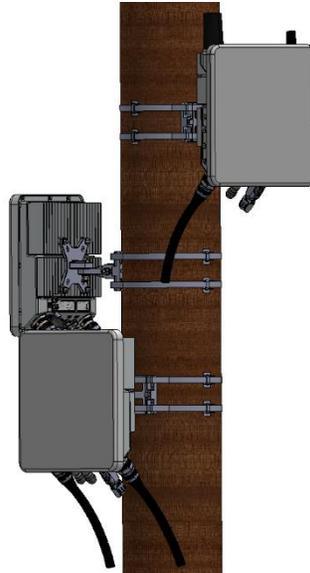
Overview

There are additional considerations when changing a single Donor Unit, single Service Unit deployment to a multiple Service Unit deployment that do not need to be considered when deploying two (or more) Service Units from the start.

Mounting

It is not critical to mount the second Service Unit on the same plane as the first Service Unit. We recommend mounting additional Service Units just below the first Service Unit vertically. The carrier will help determine the angle from the other Units at which to place additional Service Units.

DO NOT mount the second Service Unit on top of the banding from the first Service Unit.



Second Service Unit added below initial Service Unit

Management and Troubleshooting

Getting Technical Assistance

Pivotal Commware is dedicated to the success of your Pivot 5G installation and operation. Feel free to contact us with any questions or concerns.

Before calling, gather the following details about your Pivot 5G:

- Serial Number (located on the bottom of each unit and on the packaging box)

Pivotal Commware Pivot 5G Technical Support:

- Phone – 1-855-956-2016
- Email – support@pivotalcommware.com
- File a Ticket – <https://pivotalcommware.freshdesk.com/support/home>
- Pivotal Support Resources: <https://pivotalcommware.com/pivot-5g-installation-help/>



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Appendix A – Full Warranty Information

Your Pivotal Commware, Inc. ("Pivotal") Pivot 5G has been designed to provide reliable, worry-free service. If for any reason you have a problem with your equipment, please refer to the manufacturer's warranty in your purchase agreement.

What are the Limits on Pivotal's Warranty/Liability?

EXCEPT AS SET FORTH IN THE LIMITED WARRANTY CONTAINED WITHIN YOUR PURCHASE AGREEMENT, PURCHASER TAKES THE PRODUCT "AS IS," AND PIVOTAL MAKES NO WARRANTY OR REPRESENTATION AND THERE ARE NO CONDITIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, OF ANY KIND WHATSOEVER WITH RESPECT TO THE PRODUCT, INCLUDING BUT NOT LIMITED TO:

THE MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR ANY PARTICULAR PURPOSE OR USE;

WARRANTIES OF TITLE OR NON-INFRINGEMENT;

DESIGN, CONDITION, QUALITY, OR PERFORMANCE OF THE PRODUCT;

THE WORKMANSHIP OF THE PRODUCT OR THE COMPONENTS CONTAINED THEREIN; OR

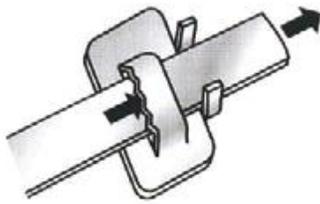
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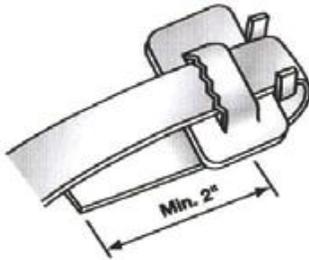
This Limited Warranty allocates risk of Product failure between Purchaser and Pivotal, and Pivotal's Product pricing reflects this allocation of risk and the limitations of liability contained in this Limited Warranty. The agents, employees, distributors, and dealers of Pivotal are not authorized to make modifications to this Limited Warranty, or make additional warranties binding on Pivotal. Accordingly, additional statements such as dealer advertising or presentation, whether oral or written, do not constitute warranties by Pivotal and should not be relied upon.

Appendix B – Full Band-It® Instructions

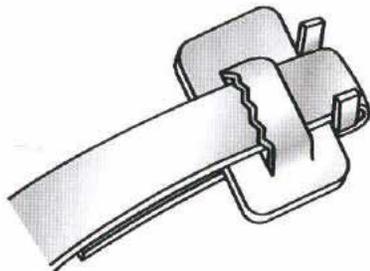
Forming a Band Clamp and Operating a C00169 Tool



- [1] Pull appropriate length of band from BAND-IT tote (approx. 4-1/2 times the diameter of the pole or mastarm for a single-wrapped clamp and seven times the diameter for a double-wrapped clamp. Add 6-8 inches for both single-wrapped and double-wrapped clamps to accommodate the tail and bracket design.) Cut the band using one of the BAND-IT tools with built-in cutter.



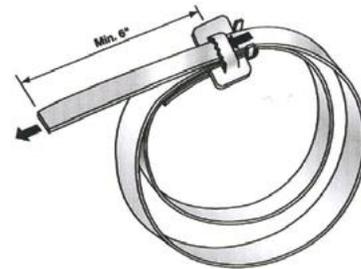
- [2] Holding the buckle in one hand, with ears pointing upward and to the right as shown, insert the band through the buckle "bridge", past the ears and bend so that at least 2 inches are underneath the buckle.



- [3] Squeeze this "buckle wrap" to flatten the bend preventing "pull-out" during tensioning



- [4] Wrap band through hardware as needed and around the pole, mastarm or hose and thread through bridge as shown.



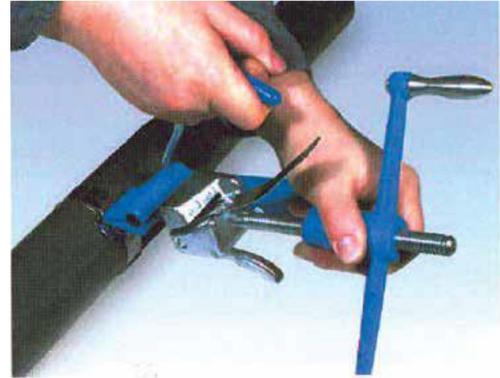
- [5] Repeat a second wrap of band through the bracket and buckle for a continuous double-wrap application. Double-wrapping develops greater clamp tightness than single-wrapping clamps and more than doubles the holding strength for heavy objects and high wind loads.



- [6] Place band in open slot of tool nose and gripper block. Move into slot as far as possible to prevent buckle from sliding into tool nose. With thumb on band gripper lever, apply tension by turning handle of tool. After tension is created, it is no longer necessary to hold the band gripper lever as it locks itself under tension. When band stops moving through buckle, maximum tension has been applied. Stop turning the handle.



- [7] To set the lock and cut off band, roll tool nose over buckle, relieving a slight amount of tension by backing off tension handle **during** this fold over operation. Failure to back off tension handle throughout the entire course of roll over may result in breaking band. On the other hand, releasing too much tension may result in a loose clamp. We suggest 1/2 to 1 full turn of the spin handle during release.



- [8] Pull cutting handle to cut the band.



- [9] Remove tool, holding stub of band down with thumb.
 [10] Hold clamp tail down between ears while hammering the buckle ears down to hold band stub in place. This completes the secure BAND-IT clamp.



Top View

Fluted Pole Applications

When tensioning a conventional clamp over a fluted pole, it is necessary to extend the length of the “buckle wrap” several inches to assure contact with 2 or 3 flute ridges. Also, buckle placement over a ridge is important to provide support for the lock and prevent the “lip wrap” from shifting.

Appendix C - Glossary

Term	Definition
3GPP LTE	LTE protocol per “3rd Generation Partnership Project,” a mobile telephone standards org.
5G-NR	The 5G radio system
5G NSA	Non-Stand-Alone flavor of 3GPP 5G-NR ... requiring concurrent 4G capability to function (currently typical)
5G SA	Stand-Alone flavor of 3GPP 5G-NR ... able to work without 4G capability (eventually, future)
AGC	Automatic Gain Control
Az, AZ, Azimuth	The “left-to-right” angle direction relative to nearby gNB location
BW	Bandwidth
CAPEX	Capital Expenditure, the money an organization uses to maintain fixed assets such as infrastructure.
Commissioning	(Pivot 5G) Installation and initial setup, which tunes the system to optimal functionality
CPE, Customer Premises Equip.	Typically: End-user obtained transceiver that distributes FWA broadband internet to devices within the home via WLAN (Wi-Fi). Effectively replaces cable/DSL internet
dB, decibel	A relative unit of power, used to express change in value as in “increase of 3 dB” -- presented on a logarithmic scale
dBm	A unit of level, indicating a power ratio expressed in decibels (dB) with reference to one milliwatt (mW)
DL, Downlink	Data/information transmitted in the direction from gNB to CPE/UE
DU, Donor Unit	The Pivot unit that receives service from the gNb
KPI	Key performance indicators: set of useful parameters that are tracked through IBMS.
EIRP	Equivalent Isotropic Radiated Power, a measure of Transmit power
EI, EL, Elevation	The “up-to-down” angle direction relative to distant gNB location
EVM	Error Vector Magnitude, a measure of quality of received signal
FWA	Fixed Wireless Access.
Gigabit speed	A term of user-perceived throughput, as in Gigabits/second
gNodeB, gNB	5G NR base station
HBF	Pivotal Commware’s Holographic Beam Forming technology that enables Gigabit speeds beyond the reach of cable and DSL
IBMS	Intelligent Beam Management System, software to help operators maximize efficiency, capacity, and coverage.
LTE	Long-term Evolution, generally referring to technology path toward 4G speeds
LTE Cat M1	A flavor of IoT (internet of things) technology under 3GPP LTE umbrella
MAC Address	Media Access Control address, a unique identifier assigned to a network interface controller
Millimeter wave frequencies	Wavelength spectrum that correlates to ~24 GHz frequencies and higher
OAM, OA&M	Operations, Administration & Management/Maintenance – the necessary processes for setting up and running a system
OPEX	Operating Expenditure, the cost for a business to run an ongoing service or system.
OSD	Oscillation Self-Detection
RF	Radio Frequency

Term	Definition
RSRP	Reference Signal Reserve Power, the received power level in a network.
SU, Service Unit	The Pivot unit that distributes the signal to users.
SSID	Service Set Identifier, the technical term for a network name
UE	User Equipment – typically CPE or a mobile device/smartphone
UL, Uplink	Data/information transmitted in the direction from CPE/UE towards gNB