



## GENERAL INFORMATION

1. The RAU5x must always be mounted parallel to the ceiling (horizontal) or wall (vertical) with a 1-in clearance from the surface on the back and front to allow for proper cooling airflow and for heat dissipation.

Le RAU5x doit toujours être montée parallèlement au plafond (horizontal) ou au mur (verticale). Assurez-vous qu'il y a un espace de un pouce à l'avant et à l'arrière afin de permettre un flux d'air de refroidissement et dissipation de chaleur adéquat.

2. Required ambient temperature:
  - Wall-mountable installations (vertical): 45°C [113°F]
  - Ceiling-mountable installations (horizontal): 50°C [122°F]
3. The RAU5x unit is provided with a mounting bracket used for mounting on the wall or concrete ceilings (including above acoustic ceiling mounts). Additional mounting accessory kits are available (ordered separately):
  - BR-RAU5US-TOP: RAU5x bracket for floating ceilings tile, mid-mount installation
  - BR-RAU5US-Wall: RAU5x remote bracket for wall-mountable installation; Supports up to two RAU5x units back-to-back
4. Add-on modules (i.e., RxU2325/GEM) are ordered separately and should be plugged into the RAU5x before mounting the unit
5. A broadband antenna is required for RAU5x models ordered without a preassembled connected antenna.
6. External cavity filters are required for installations in which RAU5x modules supporting the corresponding CELL and LTE bands are deployed alongside units supporting the Public Safety service. Installation instructions are provided with each separately ordered filter (AK-CVT700; AK-CVT800).

This document provides instructions on how to mount the Corning® optical network evolution (ONE™) solutions RAU5x unit and perform the required connections. The scope of this document includes connections to the RF expansion unit (RxU2325) and Gigabit Ethernet module (GEM) (for installations including the plug-in add-on modules).

## 1. PACKAGE CONTENTS

Check your package contents to verify that the items in the packing list are included. If any of the listed items are missing, contact your Corning representative.



Item Description	Quantity	Image
Five-Band Remote Access Unit (RAU5x): <ul style="list-style-type: none"><li>• RAU5XUS</li><li>• RAU5XUS-A*</li></ul> <i>*RAU5x model including assembled external broadband antenna</i>	1	 The image shows a white RAU5x unit with various ports and a metal mounting bracket with four L-shaped feet.
Mounting Bracket (preassembled on RAU5x underside) <i>Note: Mounting bracket includes holes in various sizes and locations for flexible installation options. Mounting screws not provided.</i>	1	 The image shows a square, white external antenna with a textured surface.
Safety Cable – preconnected to the RAU5x	1	

Table 1. RAU5x Package Items

## 2. LOCATE THE REQUIRED CONNECTION CABLES

- Step 1:** Locate the following connection cables leading from the cable infrastructure:
- DC wiring:
    - One pair for MAIN POWER connection
    - One pair for SECONDARY POWER connection (for installations with GEM add-on)
  - Fiber pairs (Corning® SMF-28® fiber or compatible):
    - One fiber pair for RAU5x module
    - One fiber pair for GEM (for installations with GEM add-on)
  - Grounding wire
  - For RAU5x models not including external antenna – RF jumper cables from installed external antenna

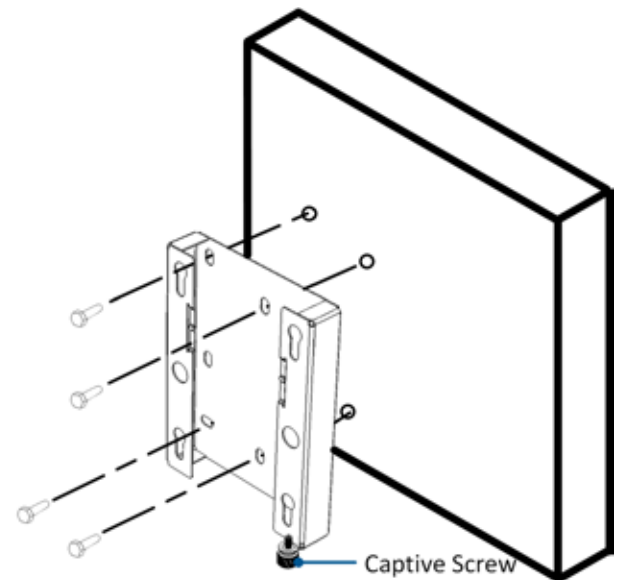


Figure 1. Example of Mounting Bracket Installation and Captive Screw Location (Bottom Right)

### 3. INSTALL ADD-ON MODULES

For installations with RxU2325/GEM — plug-in the add-on modules (ordered separately). Refer to quick installation sheet provided with each module for instructions.

### 4. INSTALL THE MOUNTING BRACKET (WALL/CONCRETE CEILING)

- Notes:**
- When mounting the bracket on a wall, the captive screw (indicated in Figure 1) should always be positioned in the same direction as the RAU5x connectors.
  - In wall-mountable installations, the connectors should face downwards.
  - If installing above acoustic ceiling, allow for at least 1-in above the acoustic ceiling for airflow cooling.

**Step 1:** Remove the mounting bracket from the RAU5x underside and use to mark and drill appropriate holes for mounting the bracket on the wall or concrete ceiling. Refer to Appendix for bracket dimensions.

Any of the applicable screw holes can be used.

**Step 2:** Drill the appropriate screws (not provided) through the bracket installation holes and secure to surface. See Figure 2.

Consider the weight of the RAU5x when determining mounting surface and appropriate mounting screws:

RAU5x only (no external antenna or plug-in modules): 10 lbs (4.5 kg)

RAU5x and GEM: 11.1 lbs (5.03 kg)

External Antenna: 3.7 lbs (1.7 kg)

RxU2325: 3.08 lbs (1.4 kg)

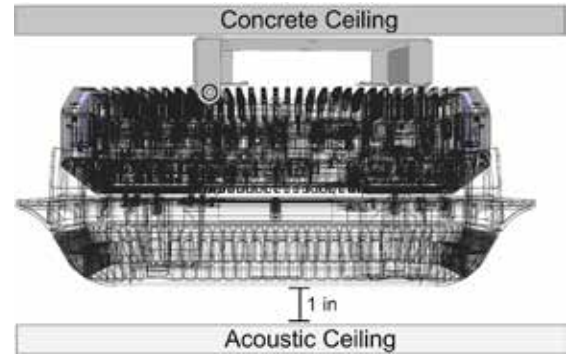


Figure 2. Example of (Concrete) Ceiling Installation of Mounting Bracket (RAU5x with External Antenna)

## 5. MOUNTING RAU5X ONTO BRACKET

*Note:* The RAU5x connectors should face the bracket captive screw.

Referring to Figure 3, perform the following steps:

- Step 1:** Insert the four RAU5x pins into the wide ends of the bracket keyholes.
- Step 2:** Make sure that the bracket captive screw fits into the designated half-slot on the RAU5x.
- Step 3:** Lock RAU5x pins into the narrow ends of the bracket keyholes.
- Step 4:** Close captive screw to secure RAU5x and bracket assembly.

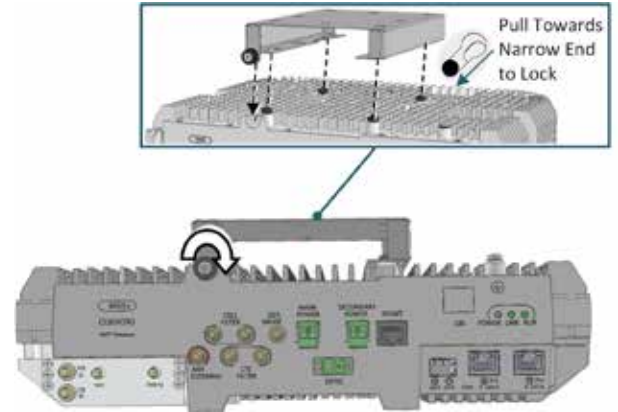


Figure 3. Mounting RAU5x Onto Bracket

## 6. SECURE SAFETY CABLE TO GRID OR CEILING

### IMPORTANT!

Using the supplied security cable, attach the RAU5x to a permanent structure within the ceiling (e.g., acoustic ceiling grid or concrete ceiling above).

## FIXEZ LE CÂBLE DE SÉCURITÉ À LA GRILLE OU AU PLAFOND

### IMPORTANT!

À l'aide du câble de sécurité fourni, fixez la RAU5x à une structure permanente avec le plafond (par exemple plafond acoustique gris ou plafond en béton).

## 7. GROUND, F/O, AND RF CABLE CONNECTIONS

- Step 1:** Route the cables located in Section 2.
- Step 2:** Connect the earth ground to the RAU5x 8-32 x 3/8 grounding screw (one-hole grounding lug required). See Figure 4 for example of RAU5x ground connection.
- Step 3:** Connect fiber optic pair to RAU5x module LC APC optic connector. See Figure 4.

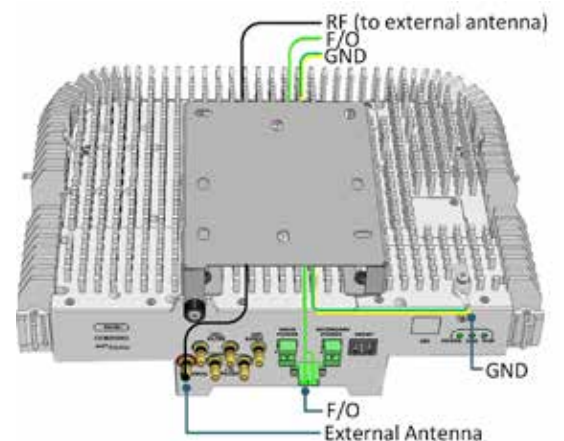


Figure 4. RAU5x Only —GND, F/O, and RF Cable Connections

## 7. GROUND, F/O, AND RF CABLE CONNECTIONS (CONTINUED)

### Step 4: RF connections:

\*RAU5x only (without preassembled Corning external antenna) — connect the RAU5x QMA “Ext. Ant.” connector to an external antenna via routed RF cable, as shown in Figure 4 .

\*RAU5x+RxU2325 (without preassembled Corning external antenna)— connect RxU2325 “ANT.” QMA connector to the external antenna via routed RF cable, as shown in Figure 5.

*Note: Supported external antenna types: vertical, directional, or omni-directional antennas*

\*CELL and/or LTE external filters (if required by site planner) — connect RAU5x UL/DL filter ports to corresponding cavity filters.

*Note: Refer to quick installation sheet (CMA-366-AEN) provided with 700/800 cavity filter or download from Corning Resource Center (Product resources) site.*

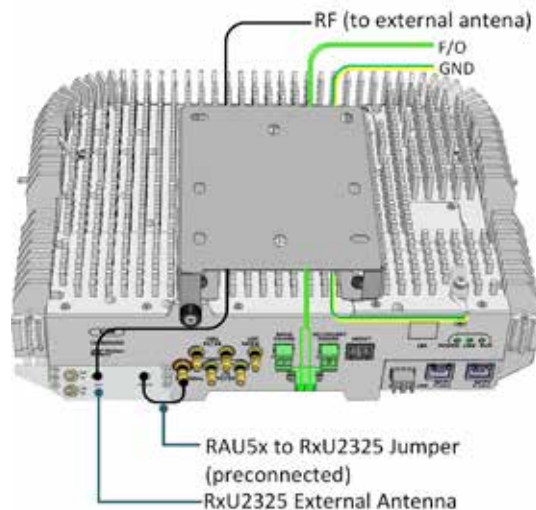


Figure 5. RAU5x+RxU2325 — GND, F/O, and RF Cable Connections

## 8. MAIN POWER CONNECTIONS

RAU5x **MAIN POWER** (for RAU5x/RAU5x+RxU2325) DC input power connections (see Figure 6) – connect DC wire pair to the terminal block connector:

- Power input range: 37 to 57 VDC
- Wire size: 12-30 AWG
- Maximum consumption::
  - RAU5x: 44.5 V; 50 W
  - RAU5x + RxU2325: 44.5 V; 76 W

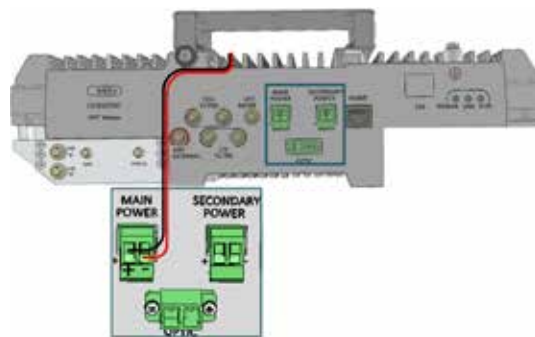


Figure 6. RAU5x Main Power DC Connections

### CONNEXIONS “MAIN POWER”

Connexions d’alimentation d’entrée DC pour RAU5x “Main Power” (pour RAU5x/RAU5x+RxU2325) — connecter la paire de fils DC au bornier de connexion:

- Plage d’entrée de puissance : 37 à 57 VDC
- Taille de fil: 12-30 AWG
- Consommation électrique maximale:
  - RAU5x: 44.5 V; 50 W
  - RAU5x + RxU2325: 44.5 V; 76 W

## 9. FOR CONFIGURATIONS WITH GEM - CONNECTIONS

- Step 1:** Connect DC wire pair to the RAU5x SECONDARY POWER DC input connector (see Figure 7):
- Wire size: 12-30 AWG
  - Maximum consumption:
    - GEM: 4 W
    - For 2 PoE ports of 802.3af: 46 V; 31 W (Input range: 43-57 VDC)
    - For 2 PoE ports of 802.3at: 52.5 V; 62 W (Input range: 52-57 VDC)

Connectez la paire de fils DC au RAU5x connecteur SECONDARY POWER (voir Figure 7):

- Taille de fil: 12-30 AWG
- Consommation électrique maximale:
  - GEM: 4 W
  - Pour deux PoE ports of 802.3af: 46 V; 31 W (plage d'entrée: 43-57 VDC)
  - Pour deux PoE ports of 802.3at: 52.5 V; 62 W (plage d'entrée: 52-57 VDC)

- Step 2:** Fiber connections - connect fiber to SFP module ports as follows:
- If using fiber terminated with LC APC (green) – connect to pre-inserted APC to UPC adapters
  - If using fiber terminated with LC UPC connector (blue) – remove pre-inserted APC to UPC adapters and connect directly to SFP module ports
- Step 3:** Connect the A and B Ethernet ports to the PoE clients using Ethernet cables.

**Note:** *A and B Ethernet ports – 10/100/1000BASE-T with 802.3 at compliant Power-over-Ethernet (PoE+) PSE port.*

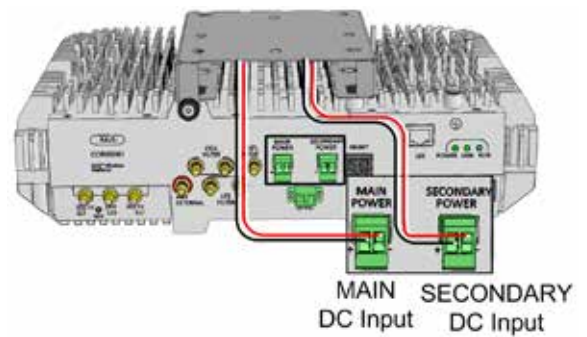


Figure 7. RAU5x MAIN and SECONDARY DC Input Connections

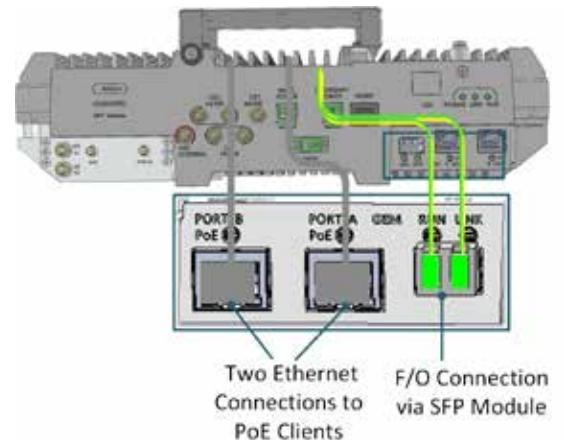


Figure 8. GEM Interface Connections

## 10. VERIFY NORMAL OPERATION

Referring to Figure 9 and Table 2, verify normal operation of RAU5x and GEM (if installed) modules.

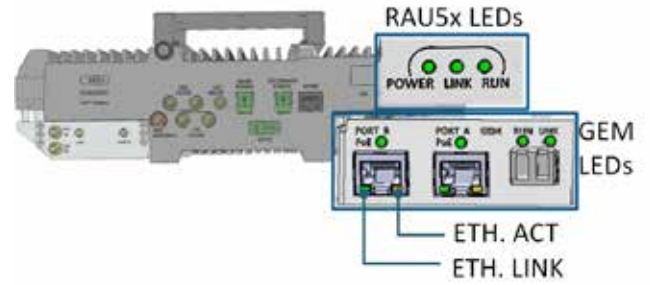


Figure 9. RAU5x and GEM Status LEDs

Module	LED	Description
RAU5x	LINK	Steady Green – Optical link power to/from the RAU5x is normal Blinking Green – Optical power from remote is lower than required Off – No optical link detected
	POWER	Steady Green – Input power detected by RAU5x Off – No power supplied to RAU5x
	RUN	Blinking Green – RAU5x boot-up sequence complete and module SW up and running Off – No power supplied to the unit
GEM	(GEM) RUN/STATUS	Steady Green (with short blink every ~ 10 sec) – GEM On/Normal Steady Yellow – GEM Fault
	Ethernet LINK	Steady Green – Link Off – No link
	Ethernet ACT	Blinking Yellow – Activity Off – No activity
	(SFP) LINK	Steady Green – Link Blinking Green – Activity Steady Yellow – Fault Off – No link
	(PortA/B) PoE	Steady Green – PoE enabled Steady Yellow – PoE fault Off – PoE off

Table 2. Normal Operation LED Status Descriptions

## APPENDIX: RAU5X MOUNTING BRACKET DIMENSIONS

