

## GENERAL INFORMATION



- OIMe — optical module only; fiber jumper is not included — compatible MTP®-LC APC harness cable is ordered separately (see Section 2 of this document)
- OIU chassis is supplied empty and only includes the factory-assembled fan module (FAM). All other modules (i.e., power supplies, controller, OIMe, OIXs, and FMMs) are ordered separately and must be installed.

This document describes the installation and connection procedures for the Corning® optical network evolution (ONE™) solutions optical interface unit (OIU) and relevant modules.

*Note: The instructions for installing and connecting fiber main modules (FMMs) in the OIU chassis are not in the scope of this document. For details, refer to the quick installation sheet provided with the module.*

## 1. REQUIRED KITS

The following kits are required for installing the OIU. If any of the listed items are missing, contact your Corning representative.




OIU Kit	Qty	Item
OIU Chassis (with blank panels) — with factory-assembled FAM and rack brackets	1	
Fan Module (FAM) — one unit hosting four fans (factory installed in chassis rear)	2	
RJ45 100 Base-T Ethernet Communication Cable, L = 2-2.15 m (P/N: 705900003) — ACM management connection	1	

Table 1. Kits Required for OIU Installation

## 1. REQUIRED KITS (CONTINUED)


OIM Kit (1-12 according to order)	Qty	Item
Optical Interface Module	1	
PSM Kit (AC or DC modules — 1 or 2 kits according to order)	Qty	Item
PSM-AC: 100-240 VAC Power Supply Module including standard IEC 60320-1 C13 cable	1	
PSM-DC: 48 V DC Power Supply Module; 9 A maximum.; Includes six-pin terminal block connector		
OIX Kit (1 or 2 according to order)	Qty	Item
Optical Interface Expander Module — provides RF interface to headend unit (HEU)	1	
ETM Kit	Qty	Item
Expander Termination Module — provides termination for unused expander slot	1	
ACM Kit	Qty	Item
Auxiliary Control Module — provides interface to headend control module (HCM) for remote management and enables local management of unit	1	

Table 1. Kits Required for OIU Installation (continued)

## 2. ADDITIONAL REQUIRED ITEMS (NOT PROVIDED)

1. MTP®-LC APC harness cable (P/N: 37HP900162-006F) — consists of connector for splitting fibers (six) leading from OIM to fiber management unit (FMU) EDGE™ module
2. Four rack-mount nuts and screws for securing unit in rack
3. Grounding tools and components:

- Grounding wire — grounding wire should be sized according to local and national installation requirements. The provided grounding lug supports 14 AWG to 10 AWG stranded copper (or 12 AWG to 10 AWG solid) wire conductors.

*Note: The length of the grounding wire depends on the proximity of the switch to proper grounding facilities.*

- Phillips-head screwdriver
- Crimping tool — for crimping grounding wire to the grounding lug.
- Wire-stripping tool — for removal of insulation from wire



## 3. INSTALL UNIT IN 19-IN RACK

**Notes:** Up to four OIU chassis can be connected to a single HEU

OIU chassis requires 4U rack height availability

**Step 1:** Determine the location of the OIU in the rack while considering additional HEUs and OIUs and the lengths of the ERFCs (described in HEU quick installation sheet).

Figure 1 and Figure 2 describe the optimal rack installations for 4x4 HEU-OIU configurations in shared and dedicated equipment scenarios.

**Step 2:** Referring to Figure 3, secure the units' rack ears to the rack frame as follows:

- Insert two screws halfway into the rack frame.
- Position the chassis on to the screws using the handles and the top and bottom half slots of the rack ears.
- Secure the unit in the rack via all applicable bracket holes using the appropriate rack nuts and screws.

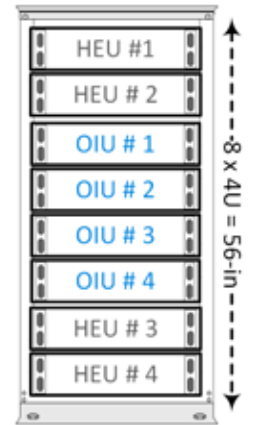


Figure 1. 4x4 Rack Installation Diagram – Dedicated

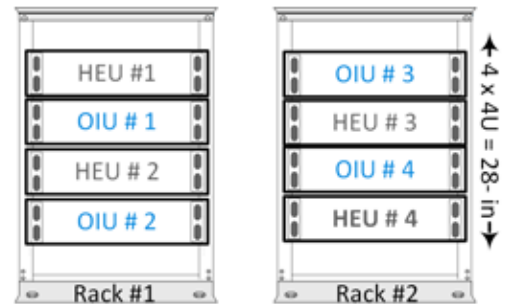


Figure 2. 4x4 Rack Installation Diagram – Shared

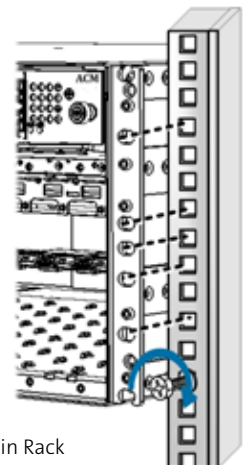


Figure 3. Positioning Chassis in Rack

## 4. INSTALL ALL MODULES

**Note:** For modules with ejectors (i.e., OIM, OIX, and ACM) – verify that the ejectors are completely open when inserting in dedicated slot and then push in until the module clicks in to the backplane. Figure 4 shows example of module type captive screws and ejectors.

**Step 1:** Refer to Figure 5 for module locations. Remove blank panel and slide in the relevant module (chassis slots are 100 percent mistake proof):

- (One) ACM
- (One to two) PSM – for single-power supply installations, install the PSM in either (PSM) slot.
- (One to two) OIX – for single OIX installations, the second OIX slot must be occupied with an expander termination module (ETM).
- (One to 12) OIM – no need to terminate unoccupied OIM slot.

**Step 2:** Secure modules into the OIU backplane by:

- Closing ejectors firmly (for relevant modules)
- Tightening the captive screws

## 5. GROUND CHASSIS

The grounding connection is performed via a two-hole, standard barrel grounding lug located on the chassis rear panel (see Figure 6).

Prise de terre du châssis OIU:

La mise à la terre est réalisée en utilisant une cosse deux trous a œillet standard, située à l'arrière du châssis OIU (voir Figure 6).



Figure 4. Module Ejectors

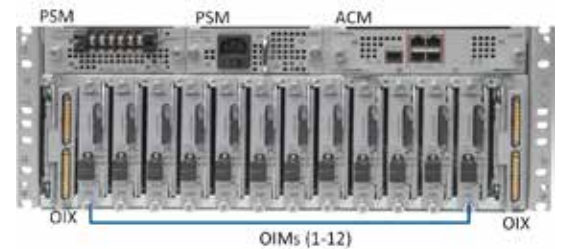


Figure 5. Location of OIU Chassis Modules



Figure 6. Location of Chassis Grounding Lug

## 5. GROUND CHASSIS (CONTINUED)

- Step 1:** Use a wire-stripping tool to remove approximately 0.4- in (10.9 mm) of the covering from the end of the grounding wire.
- Step 2:** Insert the stripped end of the grounding wire into the open end of the grounding lug.
- Step 3:** Crimp the grounding wire in the barrel of the grounding lug. Verify that the ground wire is securely attached to the ground lug by holding the ground lug and gently pulling on the ground wire.
- Step 4:** Prepare the other end of the grounding wire and connect it to an appropriate grounding point at the site to ensure adequate earth ground.

## 6. FIBER CONNECTIONS

Using an MTP®-LC APC harness cable:

- Connect the harness cables' MTP® connector to the OIM MTP connector
- Remove the protective plastic covers and connect the (3) LC APC connection fibers to the FMU EDGE™ module LC APC connections. See Figure 7.

**ATTENTION!** Take note of the fiber numbering (i.e., 1/2/3).



Figure 7. OIMs Fiber Connections

## 7. EXPANDER CONNECTIONS TO HEU

RF expander connections between the OIU and HEU are performed using the ERFC cable (included in HEU order) and are described in the HEU quick installation sheet (CMA-267-AEN) provided with the unit. See Figure 8 for general view of connections.

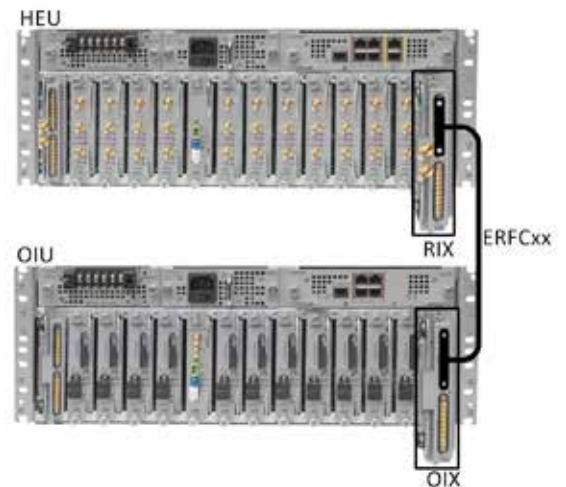


Figure 8. OIX-to-RIX Expander Connection

## 8. POWER UP

Note: Only AC power connections are described in this document. Refer to PSM-DC quick installation sheet (CMA-365-AEN) provided with PSM-DC for wiring pinout.

Figure 9. PSM-AC Interfaces



### ATTENTION!

- Approved power cable – the entire length of the power cable (or flexible cord) and the insulation must be intact. The cable must be firmly connected to both the electrical plug and the unit itself.
- Standard plug – the use of a standard plug is mandatory. The use of a non-standard power plug can cause electrocution! Also, plugging a non-standard plug into a standard socket that does not correspond to the plugs' shape, can damage the socket making it a safety hazard.
- Always disconnect all AC power sources from the unit before servicing (i.e., maintenance).

### ATTENTION!

- Câble d'alimentation qui est approuvé – la totalité de la longueur du câble d'alimentation (ou cordon souple) et de l'isolation doit être intact. Le câble doit être bien connecté à la fois à la prise électrique et l'appareil.
- Prise électrique standard – l'utilisation d'une fiche standard est obligatoire. L'utilisation d'un cordon d'alimentation non standard peut entraîner l'électrocution! De même, brancher une fiche non-standard sur une prise standard ne correspondant pas à la forme de la fiche, peut endommager la prise, ce qui en fait un danger de sécurité.
- Débrancher toujours toutes les sources d'alimentation CA de l'unité avant l'entretien.

To power up the unit:

Connect the PSM-AC power connector to the AC power source using the provided AC power cable and turn power switch on. See Figure 9 for AC connector location.

- Power input: 100-240 VAC
- Power consumption (fully loaded chassis): 300 W (maximum);

Pour mettre l'unité sous tension:

Branchez la prise d'alimentation du PSM-AC à la source d'alimentation secteur à l'aide du câble d'alimentation secteur fourni et allumez l'interrupteur. Voir Figure 9 pour l'emplacement du connecteur AC.

- Alimentation: 100-240 VAC
- Consommation maximale électrique (pour les châssis entièrement chargés): 300 W ; 18 W par OIM

## 9. MANAGEMENT CONNECTIONS

Using the provided RJ45/RJ45 communication cable connect the OIU ACM control module as follows:

- Referring to Figure 10 — for configurations with one HCM and up to four ACMs (e.g., one HEU and four OIUs), directly connect as follows:

From any ....	To any ....
ACM "INTERNAL (TO HCM)" port	HCM "INTERNAL (TO ACM)" port

- For configurations with one HCM and more than four ACMs (e.g., 4x4 HEU-OIU configurations) where there are only four available HCM "INTERNAL" ports:

From any ....	To any ....
ACM "INTERNAL (TO ACM)" port	Other available ACM module "INTERNAL (TO ACM)" port

Refer to Figure 11 for schematic example of management connections.

*Note: Main HEU refers to HEU with HCM.*

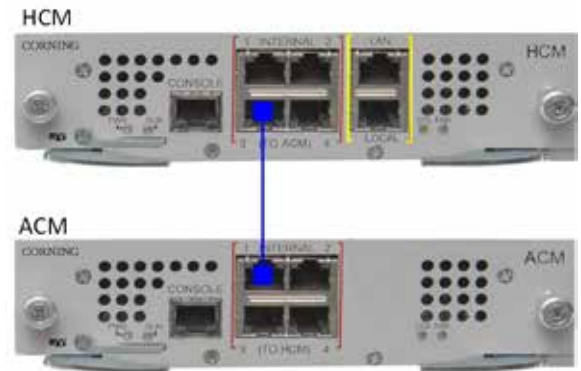


Figure 10. Direct OIU Management Connection

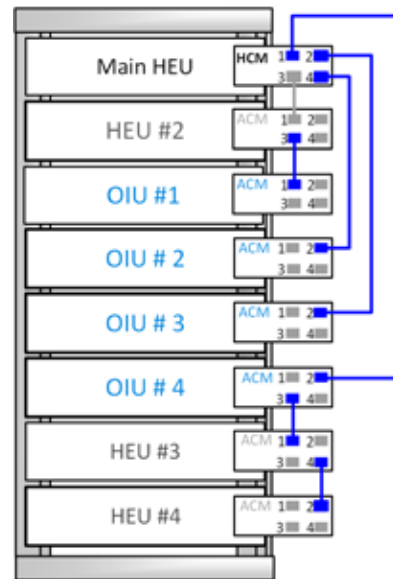


Figure 11. Schematic Example of 4x4 Management Connections



## 10. VERIFY NORMAL OPERATION

If OIU chassis is powered on, verify that the OIM and ACM (see Figure 12) module LEDs indicate normal operation:

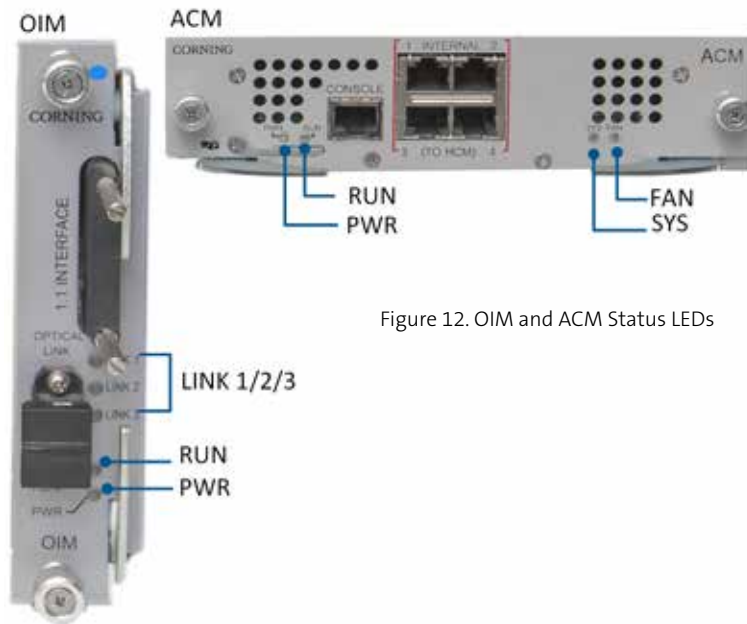


Figure 12. OIM and ACM Status LEDs

Module	LED	Description
PSM	PWR Status	Green steady — power input detected Off — no power
OIM	LINK 1/2/3	Steady green — optical link power to/from the connected remote is normal Off — no optical power from remote detected
	RUN	Blinking green — OIM software has initialized and is up and running Off — power off
	PWR	Steady green — power input detected in OIMe
ACM	PWR	Steady green — power input detected by ACM
	RUN	Blinking green — ACM software up and running
	SYS	Steady green — overall status of the managed system OK
	FAN	Steady green — normal operation status for all fans

Table 2. OIMe and ACM Status LED Descriptions