

Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)



features and benefits |

Supported Wi-Fi technologies	Wi-Fi 802.11b,g,n, 2.4 GHz band, WPA encryption, manual channel selection
Supported Bluetooth® technologies	Bluetooth 4.0, 4.1, and 4.2
Security	SSID support Authorized level access to LAU Wi-Fi and BLE functions
Customizable services	Separate services can be offered to the DAS owners or building owners to enable E-911 traceability indoors and commercial location-based service
Small footprint	Compact, lightweight (100 g)
Simple installation	Placed on/above lowered ceilings or mounted on fixed ceilings Single interface connection to control module at headend to remote units (e.g., RAU5x and MRU)
Web management	Services are configured, controlled, and managed via Corning's ONE solutions web GUI.

Location access unit (LAU) allow Corning® Optical Network Evolution (ONE™) solutions to support both Wi-Fi and Bluetooth low-energy (BLE) enabled applications. LAU enables support of three main types of Wi-Fi and BLE capabilities across the distributed antenna system (DAS):

- E-911 beacons and dispatchable address support
- Beacon-based location services support
- Wireless system graphical user interface (GUI) access

Note: LAU has the potential to support other Bluetooth Smart and Wi-Fi applications.

LAUs can quickly provide high-precision location information to a phone, even if Bluetooth has been turned off. In emergency situations, the information is supplied to the Public Safety answering point (PSAP) and made available to the dispatcher.

Wireless GUI access enables expediting the commissioning/optimization processes by providing management access from any location covered by the LAU.

The units are pluggable at the remote-end RAU5x and MRU or at the headend control modules. Management, control, and monitoring is implemented via the Corning ONE web GUI.



LAU | Figure 1

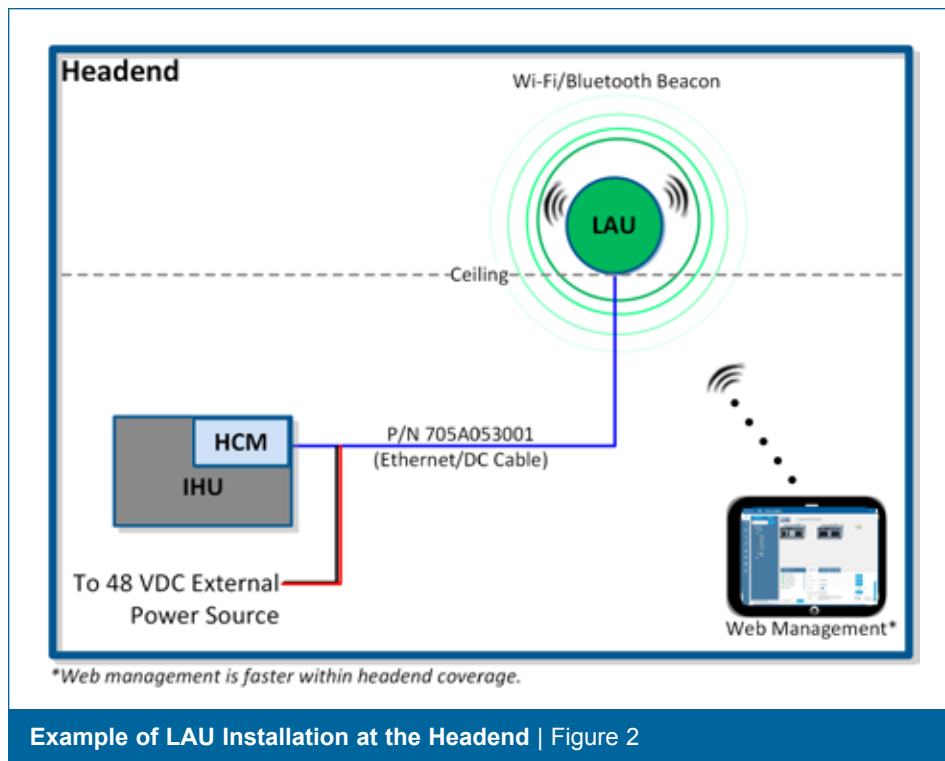
Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)



Solution Description

The LAU is an external device integrated into the Corning® Optical Network Evolution (ONE™) solutions headend or remote-end elements which provides Wi-Fi and Bluetooth® capabilities within the LAU coverage area. When installed at the headend, it is connected to a headend element-control module (HCM or ACM) that provides the LAU access to management/control capabilities. In this type of configuration, an external power supply such as PSU6 is required for power input.

When installed at the remote end, the LAU is connected to a remote unit (e.g., RAU5x and MRU). When connected to an RAU5x, the LAU is provided with both power in addition to management/control functionality.

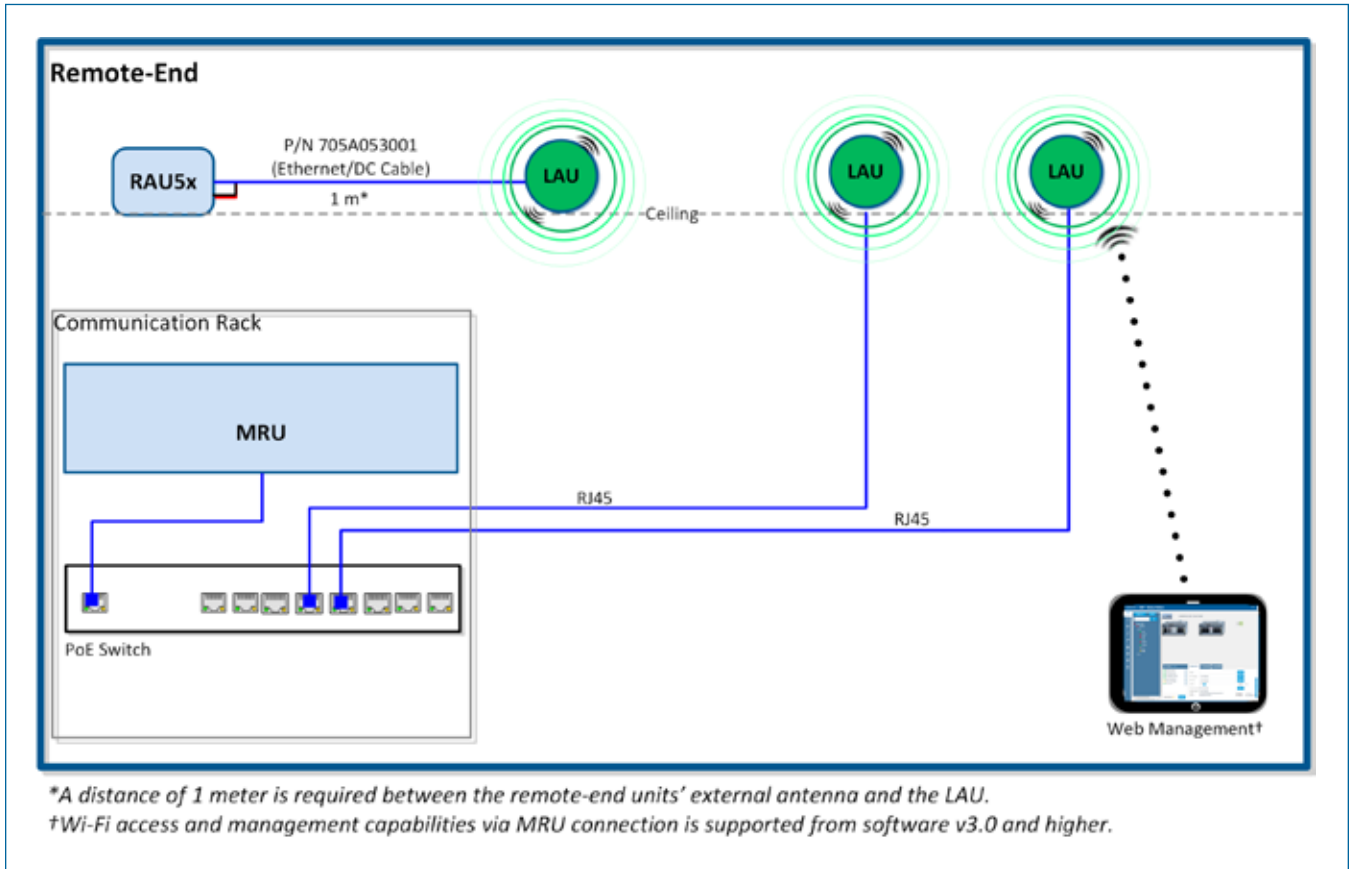


When installed at the remote end, the LAU is connected to a remote unit (e.g., RAU5x and MRU). When connected to an RAU5x, in addition to management/control functionality, the LAU is provided with power (no need for external power source). Connections to an MRU are performed via PoE switch, where up to eight LAU are supported.

Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)



Solution Description (continued)



Example of LAU Installation at Remote-End | Figure 3

Acronyms
LAU = Location access unit
MRU = Mid-power remote unit
PoE = Power-over-Ethernet
RAU5x = Five-band remote access unit

Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)

CORNING

specifications |

Wi-Fi	<ul style="list-style-type: none">• Standards 802.11b,g,n• 2.4 GHz band• Channel selection: 1-11• Network SSID support• Advertising interval in msec (50-20000,100 default)• Module sensitivity ≤ -91 dBm• ERIP power: 20 dBm• Frequency range: 2412-2484 MHz• Maximum usable input: -20 dBm• Return loss: -10 dB
Bluetooth®	<ul style="list-style-type: none">• 4.0, 4.1, and 4.2• Frequency range: 2402-2480 MHz• Channel selection: auto, 37, 38, 39• Advertising interval in msec (100-20000,100 default)• Module sensitivity: ≤ -92 dBm (at 10 Kbit sec)• ERIP power: 10 dBm• IPv6 and 6LoWPAN support
Ethernet	<ul style="list-style-type: none">• Ethernet IEEE 802.3u• Ethernet 10/100 Mbps• PoE IEEE 802.3af, class 0 support• Up to 20 m support over CAT 5
Management	<ul style="list-style-type: none">• Managed via web session to the headend control module (HCM); software v2.2 and higher
Location	Locations may be configured by three options: <ul style="list-style-type: none">• Imported from iBwave• Defined for each unit via management GUI• Manually positioned on imported location map in management GUI
Interfaces	One RJ45 PoE
Power Input	<ul style="list-style-type: none">• Input Range: 42-57 VDC• Maximum power consumption: 1.4 W• Hot-swap
Mounting Options	<ul style="list-style-type: none">• Above ceiling – placed on adjacent tile• Below ceiling – bracket provided
Dimensions (diameter x height)	<ul style="list-style-type: none">• With bracket: 3.94 in (100 mm) x 1.77 in (45 mm)• Without bracket: 3.94 in (100 mm) x 1.54 in (39 mm)
Weight	<ul style="list-style-type: none">• 0.22 lb (0.1 kg)
Temperature	<ul style="list-style-type: none">• Operating Temperature 32°F to 122°F (0°C to 50°C)• Storage Temperature -4°F to 185°F (-20°C to 85°C)• Humidity < 15% to 85% RH

Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)



specifications | (continued)

Standards and Approvals

- RF: FCC Part 15.247 subpart C
- EMC: FCC Part 15 subpart B
- Safety: UL 60950-1, Fire Safety: UL 2043

Cellular Coexistence

U.S. bands: 2496-2690 LTE 5 MHz, 728-757 LTE 5 MHz, 763-775 CW, 851-869 CW, 869-894 GSM, 1930-1995 GSM, 2110-2170 CDMA, 2350-2360 LTE 5 MHz, 758-803 LTE 5 MHz, 617-652 LTE 5 MHz

European bands: 1805-1880 GSM, 2496-2690 LTE 5 MHz, 728-757 LTE 5 MHz, 925-960 GSM, 2110-2170 CDMA, 2350-2360 LTE 5 MHz, 759-803 LTE 5 MHz, 617-652 LTE 5 MHz

Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)



notes |

Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)



notes |

Corning® Optical Network Evolution (ONE™) Solutions Location Access Unit (LAU)

The Corning logo consists of a solid blue square with the word "CORNING" written in white, uppercase, sans-serif font in the center.

notes |

**Corning Optical Communications LLC • PO Box 489 • Hickory, NC 28603-0489 USA
800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm**

Corning Optical Communications reserves the right to improve, enhance, and modify the features and specifications of Corning Optical Communications products without prior notification. A complete listing of the trademarks of Corning Optical Communications is available at www.corning.com/opcomm/trademarks. All other trademarks are the properties of their respective owners. Corning Optical Communications is ISO 9001 certified. © 2017, 2018 Corning Optical Communications. All rights reserved. CMA-543-AEN / April 2018

P/N CE0010201 Rev A00