ALLIANCE Multi-Operator DAS

Fiber2Antenna™ edgeHUB WDM Version

Product Specifications / Parts List

ALLIANCE provides a flexible system architecture where any ALLIANCE remote unit can be connected to a common iBIU headend to solve any coverage requirement.

The edgeROU is the smallest, highest power, and lowest cost fiber-to-the-edge active DAS remote available.

The edgeROUs require the edgeHUB for power and optical connection to the headend.

The edgeHUB WDM version is required when using C-Band edgeROUs.

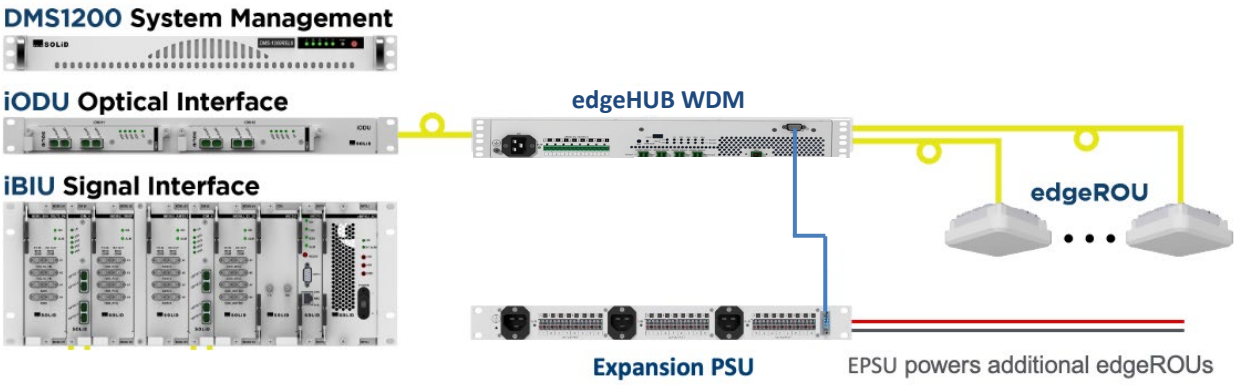
The edgeHUB WDM features:

- Provides optical signaling for up to 32 edgeROU remotes
- Integrated power supply provides power for up to 16 remotes
- Expansion power supply available for powering edgeROUs #'s 17-32
- Wideband 136 – 4000 MHz
- Optional delay module available when deploying C-Band edgeROUs with C-Band high power remotes (HROU_4000) on same sector

System Architecture

Each edgeHUB WDM provides an optical connection for up to 32 edgeROUs and power for up to 16 edgeROUs. The optional Expansion Power Supply Unit (EPSU) powers edgeROUs that cannot be powered from the edgeHUBs.

The edgeHUB WDM version is required when using C-Band edgeROUs. An optional delay module is available for the edgeHUB WDM when deploying C-Band edgeROUs with C-Band high-power remotes (HROU_4000s) on the same sector.



edgeHUB WDM Specifications

RF Characteristics	
Operating Frequency Band	eHUB_SR_WDM_AC or DC: TX / RX: 136 – 4000 MHz

Optical Characteristics	
Optical Wavelength	TX: 1310 nm / 1330 nm (1330 on/off control) RX: 1550 / 1570 nm
Fiber Optic Cable: Headend to edgeHUB	1 SC-APC
Fiber Optic Cable: edgeHUB to edgeROU	1 per edgeROU up to 8 LC-APC
Link Budget: From Headend to edgeHUB	5 dBo for 4-port iOM; 10 dBo for 1-port iOM
Link Budget: From edgeHUB to edgeROU	5 dBo without optical coupler; 1 dBo when using optical coupler
Delay Module Optical Link Delay	2 ~ 12 µs adjustable in 1 µs. Default = 3 µs
NOTES: The iOM_4000 optic modules are required at the headend when using the edgeHUB WDM version. Delay Module is only required when deploying C-Band edgeROUs with the high-power C-Band remotes (HROU_4000s) on the same sector.	

edgeHUB Power Supply	
Input Voltage	90 to 280 VAC
Output Voltage	57 VDC
Power Consumption	70 watts, typical (excluding power for remotes and delay module) 95 watts, typical with delay module (excluding power for remotes) Each remote (up to 16) will require an additional 35W

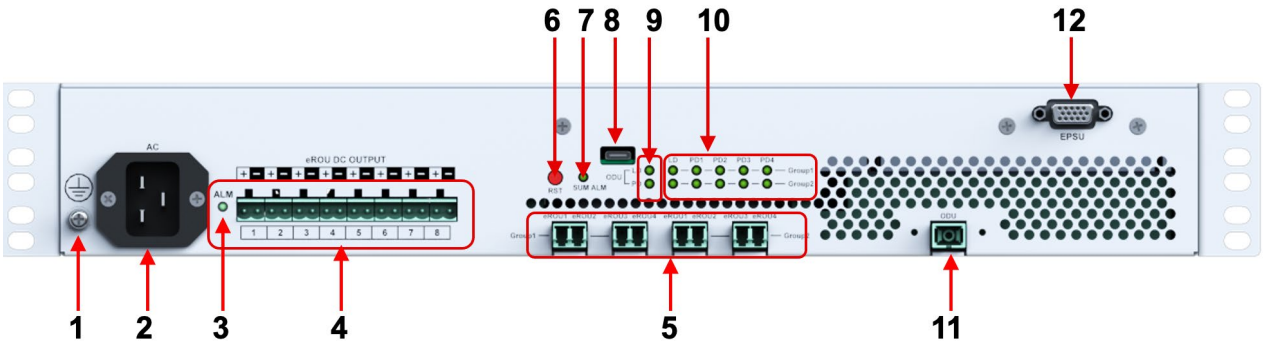
Power Cabling Max Length to each edgeROU (AWG #14~18 copper wire recommended)		
Each power port from the edgeHUB or Expansion Power Supply (EPSU) can provide power for one edgeROU or, by splitting the power lead, two edgeROUs.	1 edgeROU	2 edgeROUs (each)
	AWG 14: 1,000m AWG 16: 600m AWG 18: 400m	AWG 14: 300m AWG 16: 200m AWG 18: 100m

edgeHUB Standards Compliance
• UL 62368-1: 3rd • FCC CFR 47 PART 15 Subpart B Class A
This equipment uses a Class 1 LASER according to FDA/CDRH Rules. This product conforms to all applicable standards of 21 CFR Chapter 1, Subchapter J, Part 1040.

edgeHUB Physical Characteristics	
Physical Size (WxHxD)	482.6 x 66.7 (1.5RU) x 450 mm / 19” x 1.5RU x 17.7”
Weight	8.0 kg / 17.64 lbs.
Sealing Class	IP20
Mounting	Standard 19” rack
Operating Temp / Humidity	-5 to +45 °C (+23 to +113 °F) / Up to 90%, non-condensing
Cooling	Forced air, front to back

edgeHUB Physical Interfaces	
Power Input	IEC C19
Power to Remotes	Terminal block, 14AWG to 18AWG
Optical, to/from Headend	One SC-APC, simplex, single mode
Optical, to/from Remotes	Eight LC-APC, simplex, single mode
Management	USB-C
Expansion PSU	Serial port

edgeHUB Components



Front Panel	Description
1. Ground Lug	Ground connection
2. AC Power Connector	Port for input power, IEC C19 Power Cord
3. Alarm LED	Power alarm
4. DC Output Ports	Connectors for DC output to edgeROUs. 14 to 18AWG. 8 position terminal strip
5. Optical Ports	Optical ports for transmitting optical signals to edgeROUs, LC-APC
6. Reset Button	Resets unit
7. SUM Alarm	edgeHUB summary alarm. Green: normal operation. Red: summary alarm
8. Local Management Port	Port for local management and connection, USB-C
9. LD, PD Alarm for iODU	LD, PD status indicators monitoring connection to iOMs in headend
10. LD, PD Alarm for eROU	LD, PD status indicators monitoring connection to edgeROUs
11. Optical Port	Optical connection to the headend iOM, SC-APC
12. EPSU Communications	Communications port for Expansion Power Supply Unit, Serial port

Rear Panel	Description
1. Fan Unit	Two chassis fans
2. Power Supply Unit	Two fans for power supply unit

Ordering Information

edgeHub WDM Equipment*	
eHUB_SR_WDM_AC	edgeHUB Subrack, PSU included, AC, WDM (for Auction 110/C-Band), Delay module optional
eHUB_SR_WDM_DC	edgeHUB Subrack, PSU included, DC, WDM (for Auction 110/C-Band), Delay module optional
eHUB_DM_4000**	edgeHUB Delay Module for C-Band & Auction 110
EPSU_SUBRACK	Expansion PSU Subrack, supports 3 HOPSU (ordered separately)
HOPSU_AC	PSU module for EPSU (also spare for edgeHUB), AC Input
HOPSU_BLK	EPSU Blank Module
* edgeHUB WDM version is required when using C-Band edgeROUs. ** Delay module is only required when deploying C-Band edgeROUs with the high-power C-Band remotes (HROU_4000s) on the same sector.	

Additional information is available in the following documents, available from SOLiD Support.

SOLiD Data Sheet - ALLIANCE edgeROU version 17192325-67835

SOLiD Data Sheet - ALLIANCE edgeROU version 7191725-682335

SOLiD Data Sheet - ALLIANCE edgeROU version 781719

SOLiD Data Sheet – ALLIANCE edgeROU C-Band

SOLiD Data Sheet - ALLIANCE edgeHUB

SOLiD Data Sheet - ALLIANCE Expansion Power Supply Unit (EPSU)

ALLIANCE DAS - edgeHub-edgeROU Operations & Install Guide

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