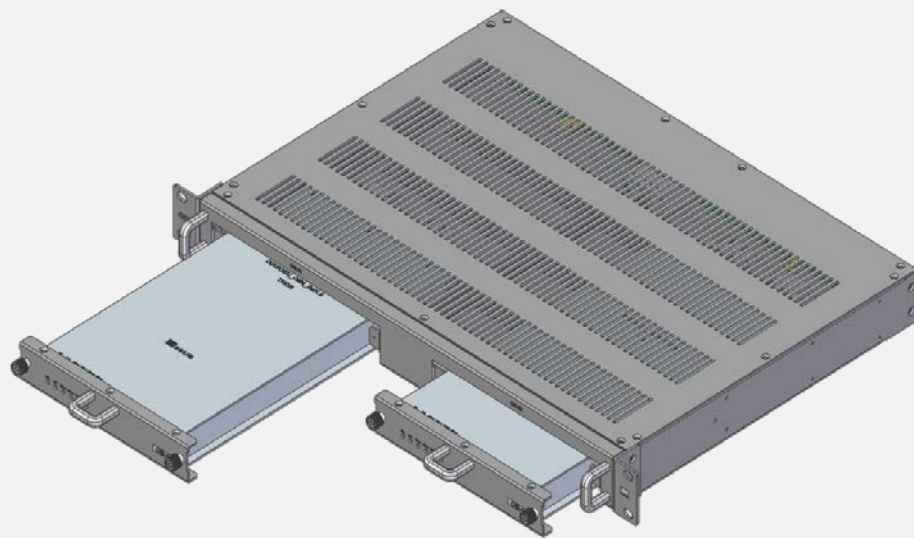


SOLiD

ALLIANCE-TR Multi-Operator DAS Optical Distribution Unit (ODU) Product Specifications / Parts List

SOLiD ALLIANCE™ TR



ALLIANCE-TR is SOLiD's multi-operator, neutral host Distributed Antenna System (DAS) that efficiently delivers wireless RF signals into any indoor or outdoor location difficult to cover with traditional macro networks.

In ALLIANCE-TR, the ODU converts RF to optical signals for the downlink path and optical to RF signals for the uplink path.

- RF to Optical / Optical to RF conversion
- Modular design – up to 8 optical ports
- 5 or 10dB_o link budget to ROU or OEU
- Single strand per ROU or OEU
- Single Mode, SC-APC connection
- Compact form factor (1U) - rack mountable

Description

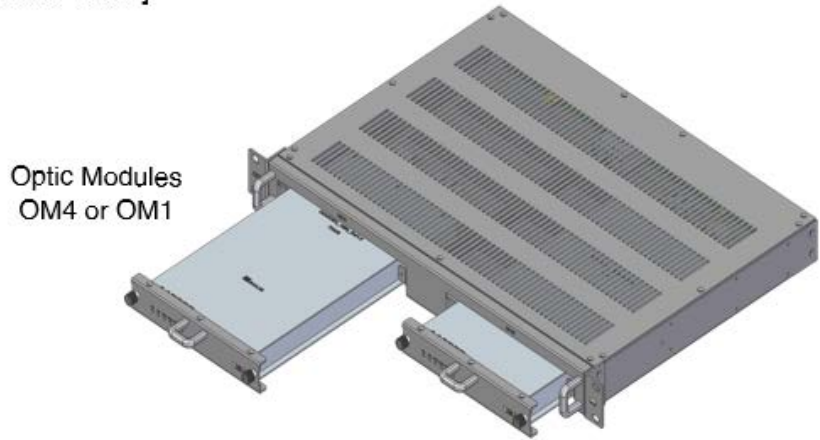
The Optical Distribution Unit (ODU) contains optic modules that perform RF-to-optical conversion for downlink signals and optical-to-RF conversion for uplink signals. The ODU can support a maximum of two optic modules, which are available in 4-port or 1-port versions. The 19-inch rack-mountable ODU is co-located with the DAS Base Station Interface Unit (BIU) from which it receives power and RF communication.



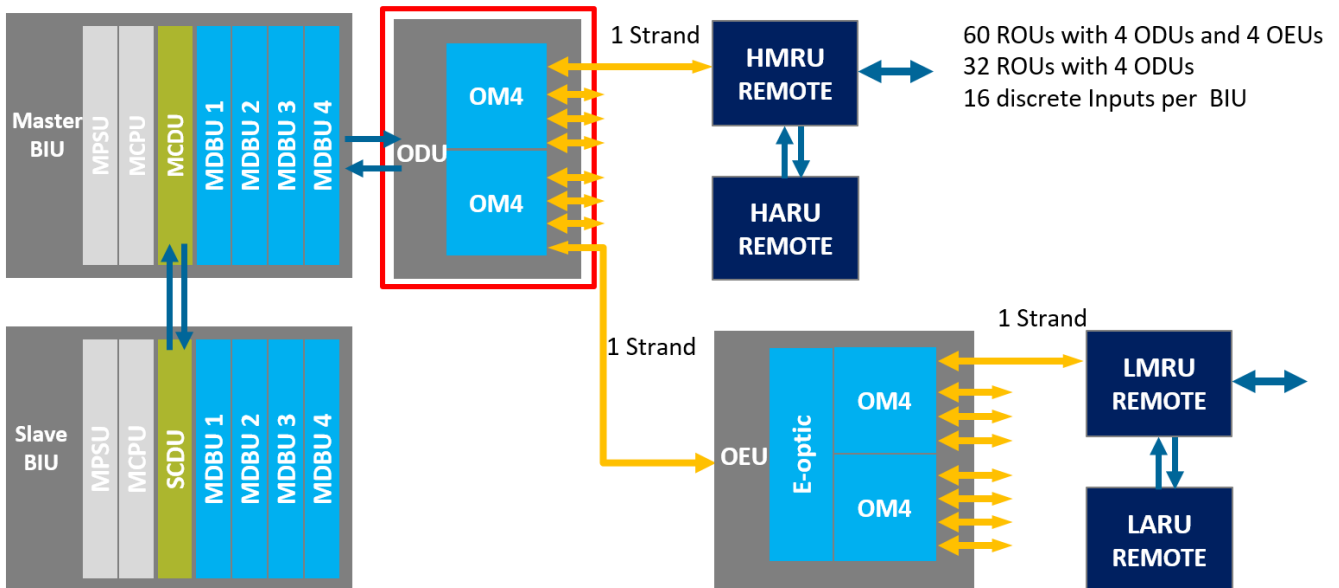
[Front View]



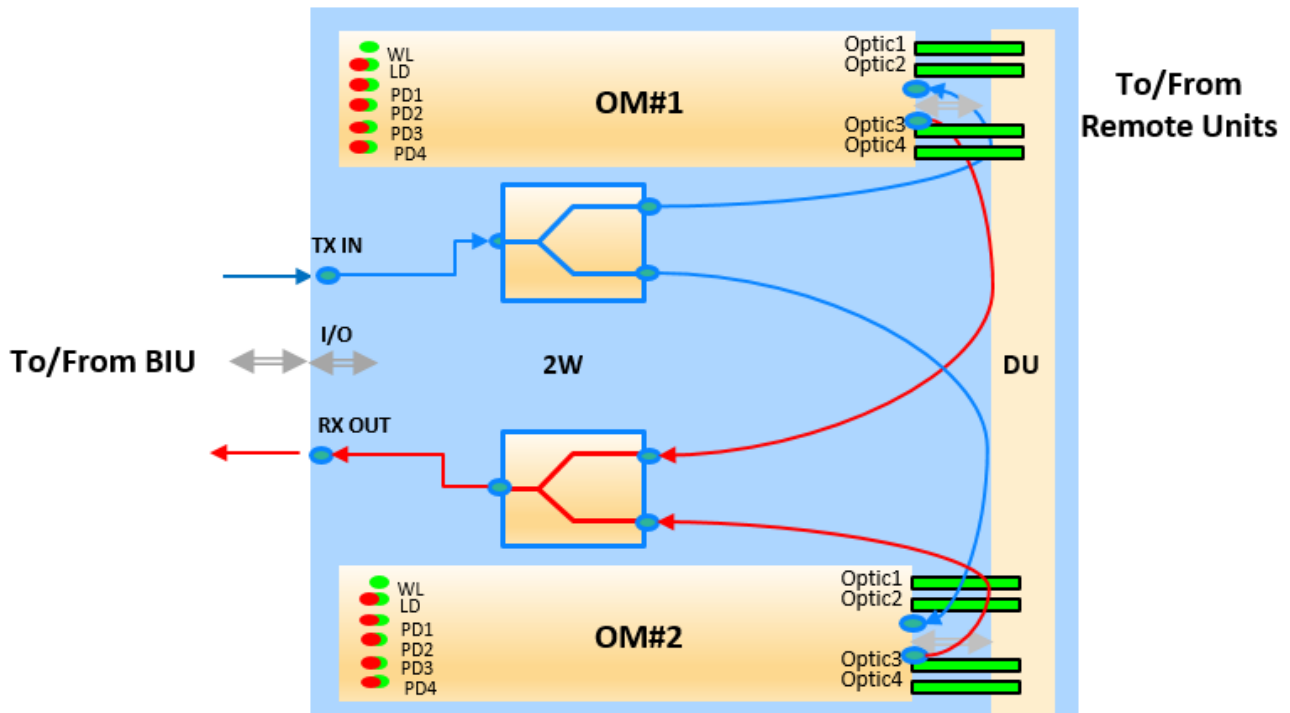
[Rear View]



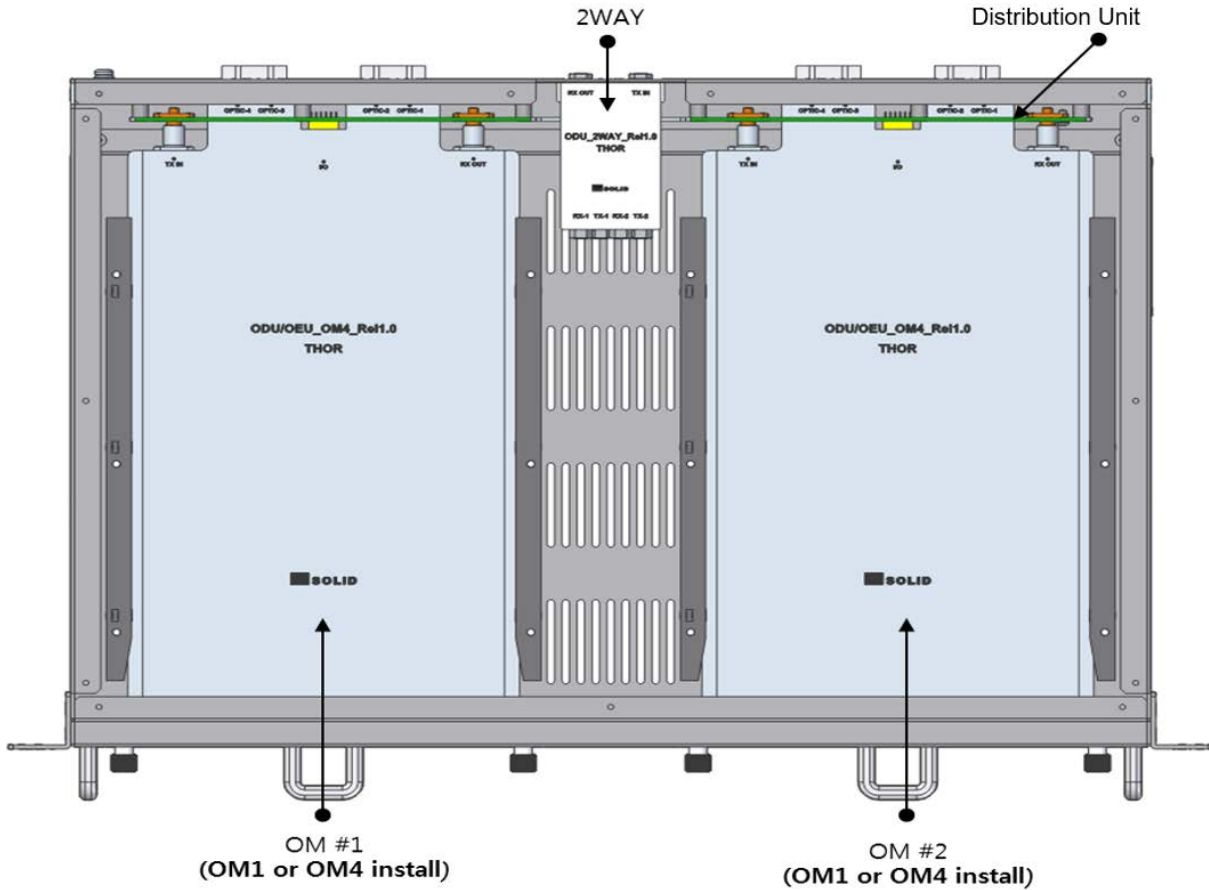
System Configuration



Functional Block Diagram



Parts Assemblies



Parts Description

ODU Common Part

Part	Sub-unit	Description	Remarks
ODU_C	2W	2-Way Divider Divides TX RF signals into two. Combines two RX RF signals into one.	
	DU	Distribution Unit Distributes power and signals to Optic Modules	
	Shelf	19" rack, 1U	

Optic Modules

Part	Description	Remarks
ODU/OEU_OM4	4 Port Optic Module Unit Converts TX RF signals into optical signals Converts RX optical signals into RF signals Provides 4 optical ports	The same optic modules are used in ODU and OEU. Max 2 per chassis
ODU/OEU_OM1	1 Port Optic Module Unit Converts TX RF signals into optical signals Converts RX optical signals into RF signals Provides 1 optical port	
OM_BLK	Blank card for port termination	

Accessories

The following items ship with the unit.

Item	Description	Remarks
ODU RF Cable	BIU to ODU T/Rx RF Cable, 0.7meter (SMBL Male to SMBL Male)	Qty 2
ODU Signal Interface Cable	BIU to ODU Signal Interface Cable, 0.7meter D-SUB 3 Row 26 PIN to D-SUB 3 Row 26 PIN	Qty 1
Ground Connection	M4 Screw. SOLiD recommends using a ground cable AWG #10 ~ 12 with lugged end. Ground cable does not ship with unit.	Qty 1

Specifications

General Data

Category		Specification
Frequency Range		135MHz ~ 2700MHz
Downlink Input Power		Max. odBm
Nominal Impedance		50 ohm
Input Voltage		DC +12V
VSWR		1.8:1 at all input / output ports
Mounting Type		19" Rack Mounting
In / Output Port Type		SMBL Female
Front Panel LED Indicator	LD	Normal: Green, Alarm: Red
	PD1 ~ PD4	Normal: Green, Alarm: Red
	WL	Green LED flickering: Communication Status
Maximum Power Consumption		30W at full load (Including 2 Optic Modules)
Total Max Weight		4.5kg at full load (Including 2 Optic Modules)

Environmental Data

Category	Specification
Environmental Condition	In-building use (ODU is designed to be installed in the equipment room.)
Operating Temperature (°C)	+5°C ~ +50°C
Operating Humidity	5~ 90% non-condensing

Regulatory Conformity at System Level

Category	Specification
Type Approval & Certification	EN 60950-1
EMC	EN 301 489-01, EN 301-489-8, EN 301-489-23

Optical Data

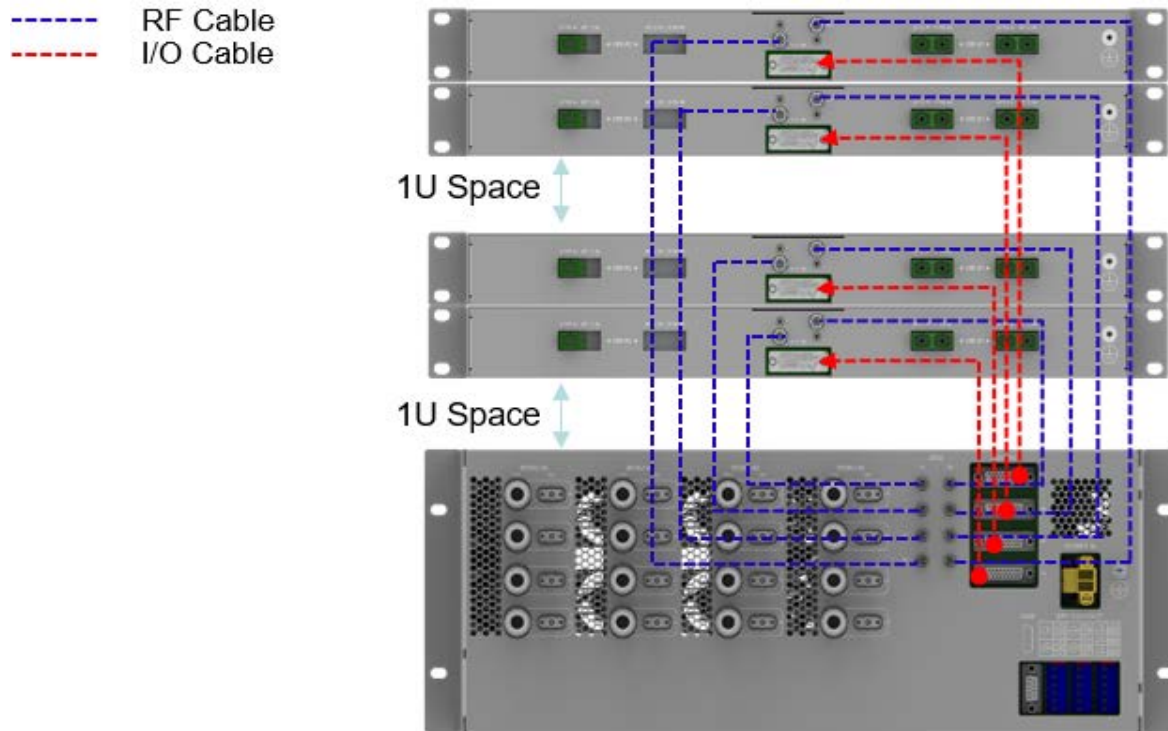
Item	Specification	Remarks
Connector Type	RF	PLUG-IN FEMALE / 50ohm
	Optic	SC / APC, Single mode (STEP FERRULE)
	Signal/power	D-SUB 3 Row 26 PIN MALE
Laser Diode	1310nm, 10mW DFB Laser	
Photo Diode	1550nm, 10mW non-destructive	
Optic Loss	1dB0~ 5dB0 for 4-port Optic Module 1dB0 ~ 10dB0 for 1-port Optic Module	

Power Consumption, Weight, Volume, MTBF

Part Name	Power Consumption (W)	Weight (kg)	Dimension W x H x D (mm)	MTBF [Year]
ODU_C	-	1.54	482.6 (19") x 43.6 x 345	-
ODU/OEU_OM4	15	1.34	175 x 30.1 x 348.7	43
ODU/OEU_OM1	15	1.34	175 x 30.1 x 348.7	43
OM_BLK	-	0.24	175 x 30.1 x 320.2	-

ODU Connection to BIU

ODUs are typically installed above the BIU and are powered by the BIU through 26 pin D-Sub connector cabling (I/O cabling shown by red lines). I/O cabling and RF cabling (blue lines) used to connect the ODUs and BIU are provided by SOLiD.



Ordering Information

Optical Distribution Unit (ODU) and Optic Modules

Part Name	Order Description
TR_ODU_C	ALLIANCE-TR Optical Distribution Chassis
TR_ODU/OEU_OM4	ALLIANCE-TR 4 port Optic Module (5dB0)
TR_ODU/OEU_OM1	ALLIANCE-TR 1 port Optic Module (10dB0)
TR_OM_BLK	ALLIANCE-TR OM blank card for port termination

Accessories

Part Name	Order Description
TR_ODU_RF_CA	ALLIANCE-TR BIU to ODU: T/Rx RF Cable (SMBL Male to SMLB Male,70cm)
TR_ODU_SI_CA	ALLIANCE-TR BIU to ODU: Signal & power interface cable (3Row(26P_F) to 3Row(26P_M),70cm)



Brazil: Av. Paulista, 2300, Andar Pilotis, CEP 01310-300, São Paulo – SP, Brazil
Mexico: Av. Juan Vázquez de Mella 481, Edificio CAD, Segundo Piso, Oficina 42 Col. Los Morales, Del. Miguel Hidalgo, Polanco, C.P 11510, Ciudad de México