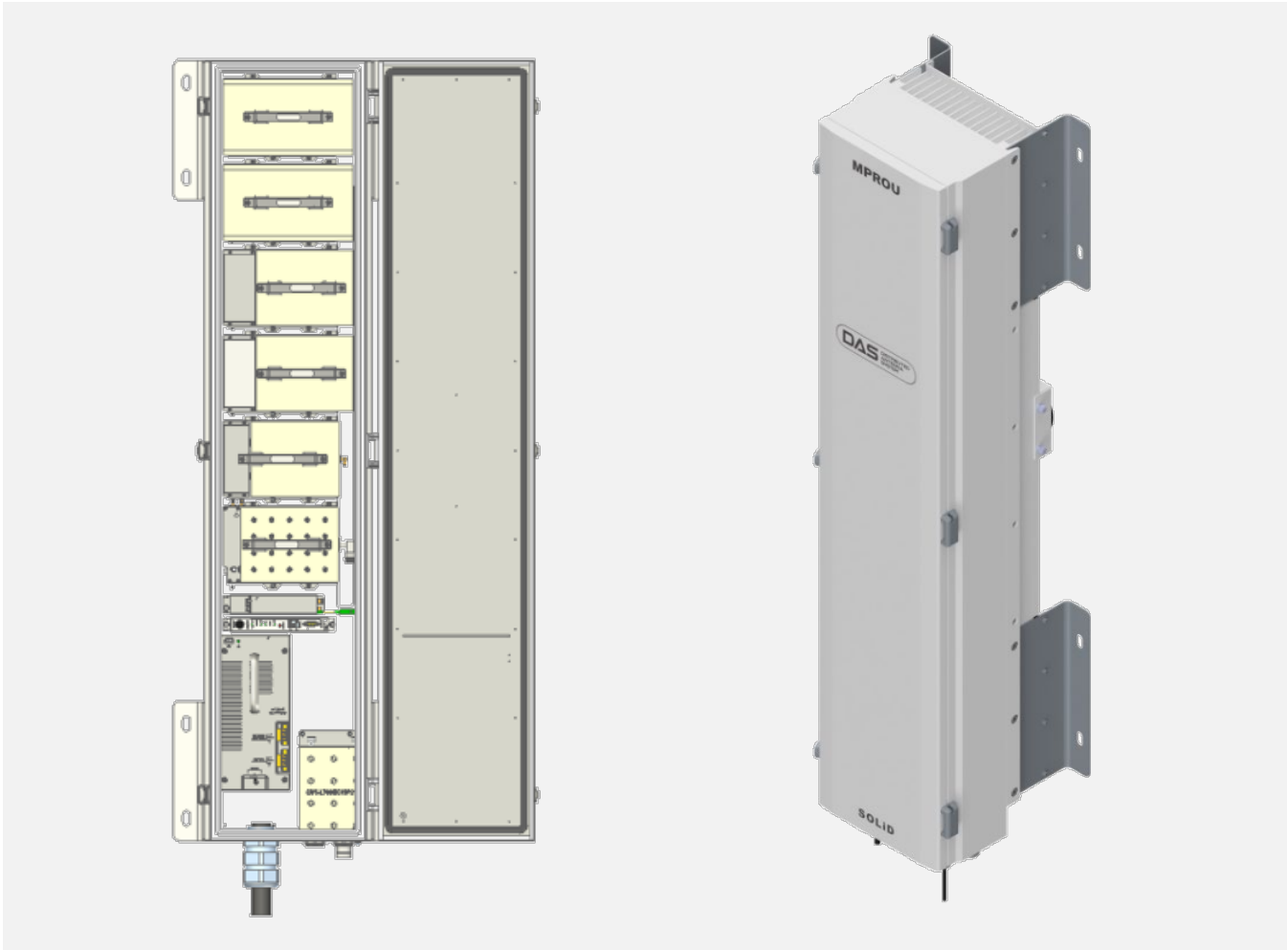


# ALLIANCE Multi-Operator DAS Multi-Power Remote Optic Unit (MPROU) Product Specifications / Parts List



The ALLIANCE Release 6 platform 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.

The Multi-Power Remote Optic Unit (MPROU) can support up to seven commercial bands, each delivering 5W or 20W of output power.

The MPROU features:

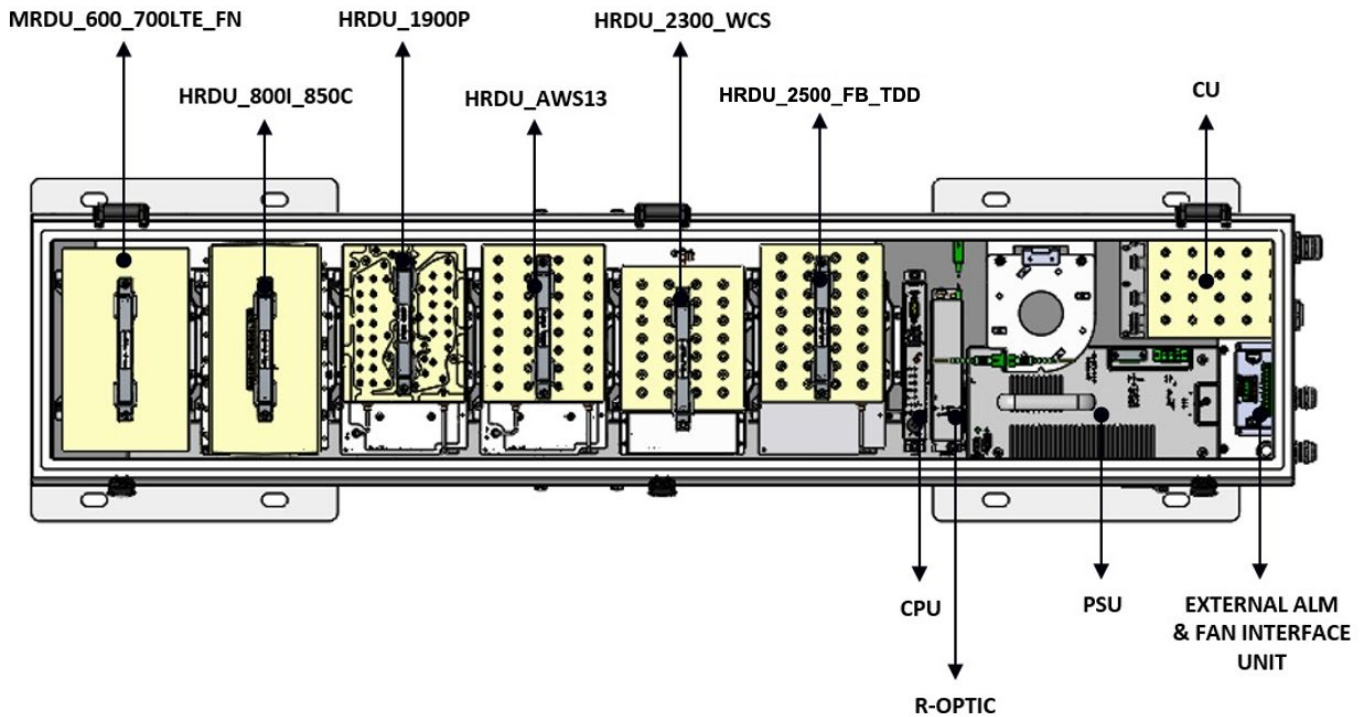
- Multi-band combiner provides one antenna port
- Easy install, commissioning, and management
- External fan cooled
- Rugged construction: UL Type 4X certified
- Up to 7 bands in one cabinet and on one fiber

**Overview**

The SOLiD ALLIANCE Multi-Power Remote Optic Unit (MPROU) provides a single chassis solution that supports all commercial cellular bands from 600 to 2700 MHz with output power levels optimized for bandwidth and frequency. The MPROU shares the same headend as all other ALLIANCE remotes, including edgeROU, N2ROU, MROU, and HROU.

The MPROU enclosure incorporates a rugged, but compact UL Type 4X design. Units can be mounted vertically or horizontally on a wall, pole, or ceiling, indoors or outdoors. An external alarm port on the bottom of the enclosure can accept input alarms from connected equipment like battery backup systems.

A multi-band combiner unit supports single antenna configurations. A dual fan unit is included to dissipate heat.



Unit Name	Unit Description
Multi-Power Remote Optic Unit (MPROU)	Enclosure including R-CPU, R-PSU_AC or DC, Combiner, R-Optic, Dual Fan
Remote Power Supply Unit (PSU)	AC: 90-240 VAC. DC: -40.8 to -57.6 VDC. Output power +29 VDC
Remote Central Processor Unit (CPU)	Controls and monitors signals for each unit
Remote Drive Units (MRDU/HRDU)	Filters and amplifies downlink / uplink signals (up to six)
Remote Optic Module (R-Optic)	Converts downlink optical signals to RF and uplink RF signals to optical
Combiner (CU)	Combines downlink signals and separates uplink signals for each band
External Alarm & Fan Interface Unit	Provides port for connecting external alarms and power port for external fan unit. Fans turn on/off automatically based on operating temperature.

**Specifications**

RF Parameters		All Bands
Input Power	TX	LPOI: -10 to +20 dBm. HPOI: +15 to +43 dBm each port
	RX	MPROU: -50 dBm max
Output Power	TX	See Table Below
	RX	All bands -3 dBm ± 0.5 dB (except 2500TDD -23 dBm ± 1 dB)
System Gain	TX	5W: 57dB max. 20W: 63 dB max.
	RX	All bands 47 dB max (except 27 dB for 2500TDD); 25 dB gain control at remote all bands
Spurious Emissions		Maximum Intermodulation Distortion. TX: ≤ -13 dBm @ 9kHz to 5GHz
Nominal Impedance		50 Ohm
VSWR		1.65:1 typical, 1.8:1 max at each band In / Out ports
<b>NOTES:</b> TX Input power refers to the DAS headend. TX Output power is measured at the antenna port.		

RF Parameter	600 MHz	700LTE+ Band 14	800/850 Cell	1900PCS	2100AWS	2300WCS	2500TDD (Full Band)
Output Power	5W	5W	20W	20W	20W	20W	20W
NF UL (typical)	4.5 dB	3.5 dB	2.9 dB	4.0 dB	3.4 dB	5.0 dB	5.2 dB
NF UL (max)	5.0 dB	4.2 dB	3.4 dB	4.5 dB	3.9 dB	5.4 dB	5.8 dB
IIP <sub>3</sub> UL (typical)	-23.5 dBm	-21.2 dBm	-21.4 dBm	-19.8 dBm	-23.2 dBm	-20.3 dBm	-20.8 dBm
IIP <sub>3</sub> UL (max)	-24.0 dBm	-21.7 dBm	-21.9 dBm	-20.3 dBm	-23.7 dBm	-20.8 dBm	-21.3 dBm
EVM DL (typical)	1.6%	1.8%	1.8%	1.9%	1.8%	1.3%	2.0%
EVM DL (max)	2.0%	2.2%	2.2%	2.3%	2.2%	1.6%	2.5%
Ripple DL (typical)	3.5 dB	1.9 dB	3.2 dB	3.2 dB	2.5 dB	1.5 dB	3.5 dB
Ripple DL (max)	4 dB	4 dB	4 dB	4 dB	4 dB	3 dB	5 dB
Downlink (DL)	617-652	729-768	862-894	1930-1995	2110-2180	2350-2360	2496-2690
Uplink (UL)	663-698	699-716 777-798	817-849	1850-1915	1710-1780	2305-2315	2496-2690

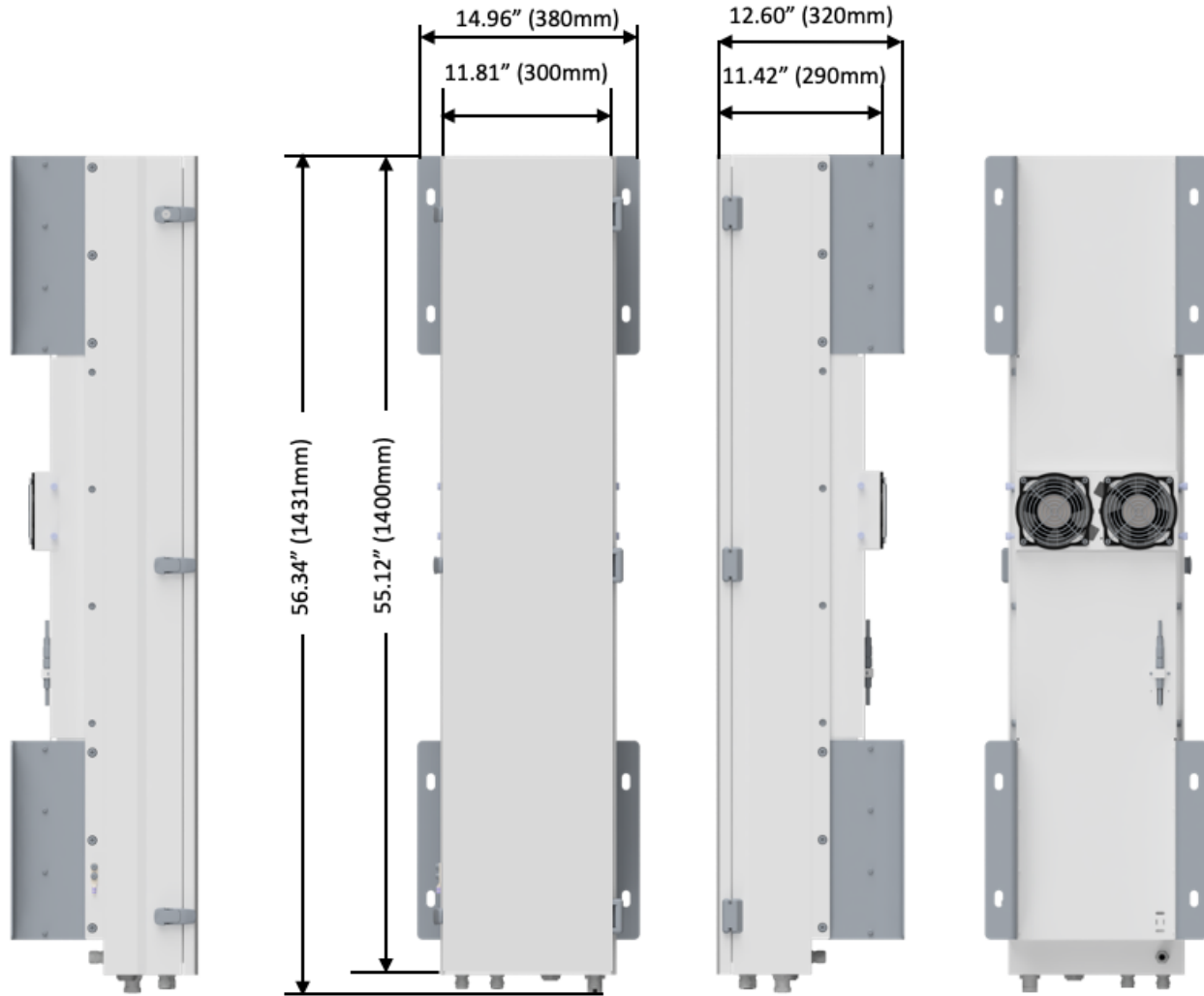
**NOTES:** NF (noise figure) represents system noise tested with one remote connected. Add 2 dB to NF when using Optical Expansion Unit (OEU or iOEU) or 1-port optic module. EVM performance includes 0.7% error from signal source. NF, IIP<sub>3</sub> and EVM specs are measured with 0 dB attenuation.

Module Power Consumption (Max)	600 MHz	700LTE + Band 14	800/850Cell	1900 PCS	2100 AWS	2300WCS	2500TDD (Full Band)
RDU	120W		135W	130W	121W	127W	185W

MPROU Chassis RCPU, RPSU, R-Optic, Fan = 65W

**NOTES:** Power consumption of fully configured remote is 897W

Optical	Specification
Wavelength	Tx: 1550 nm; Rx: 1310 nm
Loss	4-port optic module: 5 dBo max.; 1-port optic module: 10 dBo max.
Regulatory	Specification
Type Approval	FCC, IC, FCC Part 15 Subpart B, Class A
Safety	NRTL Certified
FDA/CDRH	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.



Mechanical	Specification
Mounting Type	Units can be mounted vertically or horizontally on a wall, pole, or ceiling, indoors or outdoors.
Antenna Connectors	7/16 DIN female
External Alarm Interface	Cable gland
Optical Connector	Cable gland
Monitoring Port	SMA female
Craft Port	Serial interface RS-232 9-pin D-sub male
Dimensions	14.96" W x 56.34" H x 12.60" D (380 x 1431 x 320 mm) including wall mount bracket
Weight	187 lbs. (85 kg) maximum
MTBF	8.96 Years (worst case, fully loaded unit)
Ingress Protection	UL Type 4X (NEMA4X). IP66
Operating Environment	Temp: -13 to 131°F / -25 to +55°C. Humidity: 0% to 90% Non-condensing

**Part Numbers**

Part Number	MPROU / RDU / Combiner
MPROU_C_AC	Remote Optical Unit Chassis, 6 Bay, Multi-Power, Includes CU - AC
MPROU_C_DC	Remote Optical Unit Chassis, 6 Bay, Multi-Power, Includes CU - DC
HROU_B	20 WATT Blank Module
MRDU_600_700LTE_FN	5 WATT 600 MHz & 700MHz Amplifier Module (Includes Band 14)
HRDU_800I_850C	20 WATT 800MHz and 850MHz Module
HRDU_1900P	20 WATT 1900MHz Amplifier Module
HRDU_AWS13	20 WATT 2100MHz Amplifier Module (AWS1+3)
HRDU_2300_WCS	20 WATT 2300 MHz WCS Amp Module
HRDU_2500_FB_TDD	20 WATT 2500 MHz TDD Amplifier Module, 194MHz Contiguous, LTE + NR
<b>NOTE:</b> The MPROU does not support the 40W HRDU amplifiers.	

Additional information is available in the following documents, available from [SOLiD Support](#).

*ALLIANCE REL6 – Multi-power Remote Unit MPROU - Operations & Install Guide*

*SOLiD Data Sheet – ALLIANCE MTBF Specification*



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