




SOLiD

Simple | Easy | Flexible | SOLiD

SOLiD SURF™ O-RU/FHM

SOLiD SURF™ O-RU and FHM meet the specifications of the O-RAN interface covering 4G to 5G. The FHM provides a signal source to the O-RU, while the O-RU delivers signals directly to the user equipment.

SOLiD SURF™ O-RU and FHM provides abundant solutions of coverage extension under various environment with any vendor's O-DU. To meet any customer's need, SOLiD SURF™ O-RU and FHM supports frequency bands from single-band to dual-band, which also supports 2 or 4 layers.



SOLiD SURF™ O-RU and FHM

O-RAN is an evolved Radio Access Networks specification based on the principles of intelligence and openness. It is driving the mobile industry toward an ecosystem of innovative, multi-vendor, inter-operable, and autonomous RAN, with reduced cost, improved performance, and greater agility.

SOLiD SURF™ O-RAN solutions include O-RU (O-RAN Radio Unit), and FHM (Fronthaul Multiplexer). The O-RU and FHM provide Mobile Network Operators (MNOs) and enterprises with a cost-effective and capable O-RAN solution for public and private networks.

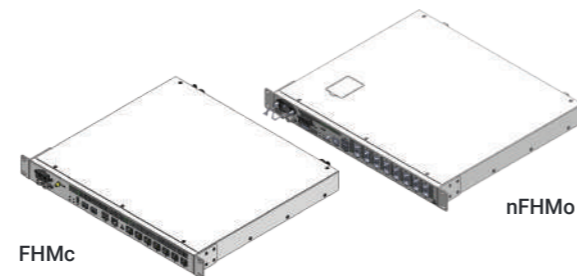
O-RU O-RAN Radio Unit



Functions & Features

- O-RAN.WG4.CUS /MP.Specification.v6.0, CAT-A
- 4G LTE, 5G NR Sub-6GHz
- Single band 4T4R
- Dual band 2T2R
- Internal antenna

FHM Fronthaul Multiplexer



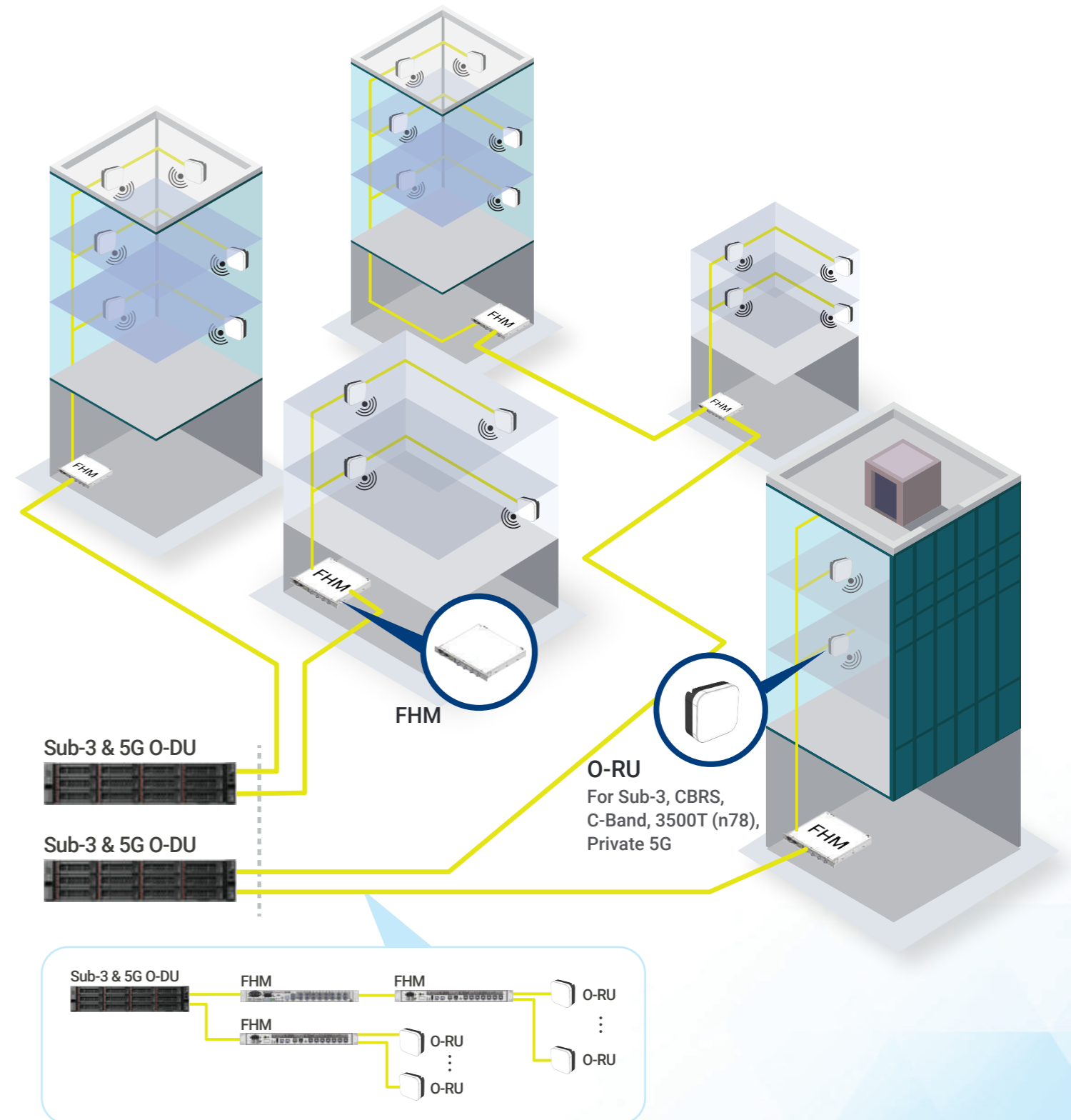
Functions & Features

- O-RAN.WG4.CUS/MP.Specification.v10, Fronthaul Multiplexer
- Copy and Combine: Shared cell features
- 4G LTE, 5G NR Sub-6GHz
- Supports daisy chain units
- 7-16 O-RU connections
 - 7x10G Cat 6A with PoE in FHMc
 - 14x25G (or 10G) Optic in nFHMo
 - 16x25G (or 10G) Optic in FHM
- 19" rack mount, 1U

Easier Coverage Extension With O-RU, Keep It SOLiD.

SOLiD SURF™ FHM fully enables the shared cell feature defined by the O-RAN Alliance. The shared cell feature reduces the aggregation burden on O-DU/cell resources while supporting multiple RUs and eliminates the need of expensive L2 switches.

SOLiD SURF™ FHM uses the copy/combine feature to provide coverage expansion without inter-cell interference. FHM mitigates inter-cell interference without the complex multiple cell planning, which is effective for rapidly changing in-building area.



SOLiD SURF™ O-RU/FHM TOPOLOGY OVERVIEW

SURF™ O-RU/FHM Specifications

FHM General Specifications

| Item | Specification | | | Remarks |
|-----------------------------------|--|--|---------------------------------|------------------------------|
| | FHM _c | FHM _o | nFHM _o | |
| Fronthaul Specification | O-RAN.WG4.CUS/MP.Specification.v10, Fronthaul Multiplexer | | | |
| Synchronization Plane | PTP (Full Timing Support, ITU-T G.8275.1) with T-BC SyncE Receiver and Transmitter | | | |
| Clock Topology | LLS-C1/C2/C3 | | | |
| Operating Temperature | -5–50°C without solar load | | | |
| Size (W x H x D) | 19" x 1U x 385mm, 19" Rack Mount | | | |
| Optical Ports (Northbound) | L0: SFP+, 10GbE | L0: SFP+, 10GbE | L0: SFP+, 10GbE | |
| Optical Ports (Southbound) | L1: SFP+, 10GbE | L1: SFP+/SFP28, 10GbE/25GbE R0–R15 (TBD): SFP+/SFP28, 10GbE/25GbE | R0–R13: SFP+/SFP28, 10GbE/25GbE | All support daisy chain mode |
| Copper Ports (Southbound) | Dedicated to connection with O-RU Support PoE (802.3bt) R0–R6: RJ-45, 2.5/5/10GBase-T | None | None | |

O-RU General Specifications

| Item | Specification | | Remarks |
|-----------------------------------|--|--|---------|
| | 3500T (n78) O-RU | Private 5G O-RU | |
| Fronthaul Specification | O-RAN.WG4.CUS/MP.Spec.v6.0, CAT-A | | |
| Synchronization Plane | PTP (Full Timing Support, ITU-T G.8275.1 with T-BC and/or SyncE) | | |
| Operating Frequency Range | 3410–3800 MHz for DL, UL | 4700–4900 MHz for DL, UL | |
| Air Technology | 5G NR | 5G NR | |
| Carrier Bandwidth | 20/40/60/80/100 MHz | 20/40/60/80/100 MHz | |
| Subcarrier-spacing | 30 KHz | 30 KHz | |
| Modulation | 1024 QAM | 1024 QAM | |
| Maximum Carrier (Channel) | 2 | 1 | |
| MIMO | 4T4R | 4T4R | |
| EIRP | 29.5 dBm @ dBi per port | 26 dBm @ dBi per port | |
| Optical Ports (Northbound) | L0: RJ-45, 2.5/5/10GBase-T L1: SFP+/SFP28, 10GbE/25GbE L2: SFP+, 10GbE | L0: SFP+/SFP28, 10GbE/25GbE L1: SFP+, 10GbE | |
| Operating Temperature | -20–50°C without solar load (Wall/Pole Mount) -20–40°C without solar load (Ceiling Mount) | | |
| Size (W x H x D) | 248 x 248 x 80 mm | 243 x 243 x 90 mm | |

Connect with SOLiD

SOLiD helps people stay connected and safe in a rapidly changing world through a portfolio of digital DAS and O-RAN products for various venues. SOLiD enables indoor and outdoor cellular and public-safety communications at some of the world's best-known and most challenging venues including leading hospitals; professional and college sports venues; government, university, Fortune corporate buildings, and campuses; international airports and metropolitan subways.

For more information or complete technical specifications, please visit our website or contact us via email or phone.
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