# **SOLID ALLIANCE 5G DAS**

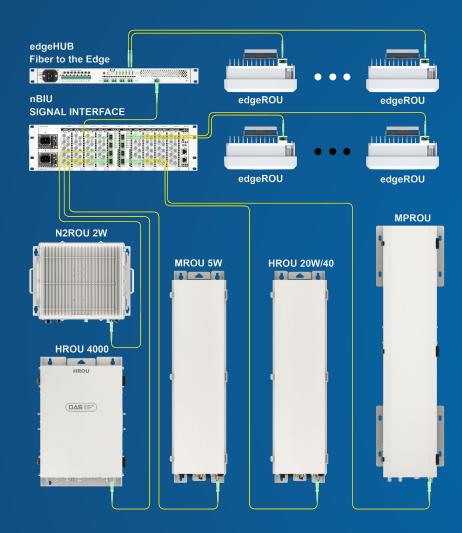


Solve all your in-building wireless coverage, capacity, and reliability problems with the SOLiD ALLIANCE DAS. Our multi-carrier, neutral host solutions are 5G-ready and support all cellular bands below 4 GHz.



# **Topology Overview**

Our modular amplifiers cover every band used for commercial cellular communications, private networks, two-way radio, paging, and public safety from 150 MHz to 4 GHz



The SOLiD ALLIANCE 5G DAS efficiently delivers mobile network signals into commercial buildings, hotels, hospitals, airports, subways, stadiums, and any location where the outdoor network does not deliver the necessary in-building wireless coverage and capacity. SOLiD ALLIANCE remotes reduce the total cost of ownership with low power consumption, modularity to prevent rip-and-replace scenarios, and the highest bandwidth capability in the industry.

The SOLiD ALLIANCE platform consists of headend equipment and remote optical units (ROUs). The headend equipment includes the nBIU signal interface and the DAS management system. The SOLiD ALLIANCE ROUs provide ultimate design flexibility resulting from multiple power classes, modularity, and scalability. There are three subsets of ROUs: traditional Fiber2Coax, new Fiber2Antenna, and Public Safety.



**Faster Speeds** 



**More Capacity** 



**Multi-Operator Support** 

SOLID ALLIANCE 5G DAS

# **Headend Equipment**

The nBIU serves as the DAS headend receiving RF signals from and sending RF signals to the mobile network operators' (MNO) signal sources. The nBIU combines the MNO's RF signals and transmits optical signals over fiber optic cables throughout the building or campus environment to the DAS remotes, including the N2ROU, MROU, HROU, mid-band HROU, and MPROU.



# ALLIANCE DMS DAS MANAGEMENT SYSTEM

#### **Features and Benefits:**

- ioXt Certified
- Real-time alarm monitoring
- Centralized DAS management
- Web-based management
- Configurable SNMP traps
- Supports private MIB files

- Alarm control hysteresis, alert level, troubleshooting, masking
- E-mail notification
- Automatic and manual backup
- Programmable dry contacts



### **ALLIANCE nBIU**

#### **Features and Benefits:**

- Integrates all headend features in a compact 3RU chassis
- Coming soon addon 1RU O-RAN Signal Source
- Fully modular to protect your investment
- Up to thirty-two RF service connections per chassis
- Two optical modules support direct connections to sixteen remotes
- Two sectors SISO or one sector 2x2 MIMO in one chassis

- Uplink and downlink Automatic Level Control (ALC) for each service
- AC, DC, and redundant power supply options
- Duplex and simplex connections supported
- External POIs available for inputs exceeding 1W
- Optical expansion to additional remotes via iODU & iOEU



## **ALLIANCE IODU**

#### **Features and Benefits:**

- Expands the optical port capacity of a DAS sector
- One rack unit chassis supports up to two optical modules
- Supports one and four-port optical modules



## **ALLIANCE IOEU**

#### **Features and Benefits:**

- Conserves fiber optic strands between buildings
- One fiber optic strand connects to the headend
- Supports up to eight DAS remotes
- Two rack unit chassis supports up to two optical modules

#### SOLID ALLIANCE 5G DAS

## FIBER2COAX

ALLIANCE 5G DAS is SOLiD's multi-operator, neutral host platform. Our FIBER2COAX solutions provide traditional hybrid fiber and coaxial DAS remote solutions. All ALLIANCE remotes use the nBIU headend providing maximum design flexibility. The FIBER2COAX remote units receive optical signals from the nBIU, convert the signal to Radio Frequency (RF), amplify it, and then combine the RF for transmission over coaxial cables to antennas located throughout the building or campus. Fiber2Coax remotes are available in 2W, 5W, 20W/40W, multi-power, and high-power mid-band versions.



## **ALLIANCE MID-BAND HROU**

#### **Features and Benefits:**

- Supports all FR1 5G TDD bands
  - BRS 2.5 GHz 20W
  - C-Band 3.45 GHz 16W
  - C-Band 3.7 GHz 32W
- One to four amplifiers
- SISO or MIMO over a single fiber
- Fully occupied bandwidth in every band
- Rugged construction: UL Type 4X certified



## **ALLIANCE MROU**

#### **Features and Benefits:**

- 5W of power per frequency band
- One to seven frequency bands in one remote
- Up to nine frequency bands on one fiber strand
- Available with one or two antenna ports



### **ALLIANCE MPROU**

#### **Features and Benefits:**

- 5W and 20W power per frequency band
- One to seven frequency bands per cabinet on one fiber strand
- Supports all commercial bands from 600 to 2700 MHz
- Multi-band combiner provides one antenna port
- External fan cooled
- Rugged construction: UL Type 4X certified



## **ALLIANCE N2ROU**

#### Features and Benefits:

- 2W of power per frequency band
- Four to seven frequency bands in one remote
- Up to nine frequency bands on one fiber strand



## **ALLIANCE HROU**

#### **Features and Benefits:**

- 20W and 40W options for power per frequency band
- One to four frequency bands per cabinet
- The main cabinet, HROU, is fiberfed from the headend
- Expansion cabinet, HARU, has coaxial connections to HROU
- Up to eight frequency bands on one fiber strand
- Available with one, two, or four antenna ports



## **ALLIANCE PS2ROU**

#### **Features and Benefits:**

- Rugged Construction: UL50E Type 4X enclosure
- 700, 800, 900 MHz at 2W per frequency band
- 150 and 450 MHz at 24 dBm per frequency band
- One to five frequency bands per cabinet
- Supports public safety, paging, and two-way radio
- Six external alarms, programmable as inputs or outputs

# FIBER2ANTENNA Remote Optical Units

The edgeROU is the ALLIANCE 5G DAS platform's fiber-to-the-edge active DAS remote. It uses the same headend equipment (nBIU) as all other ALLIANCE DAS remotes. The edgeHUB receives optical signals from the nBIU and distributes the signals and power to multiple remote edgeROU units on each floor. The ceiling or wall mounted edgeROUs, convert the optical signals into Radio Frequency (RF) and amplify them. Band-specific antennas in the edgeROU transmit the signals over the air to mobile devices. Some models of edgeROU have external antenna ports that combine multiple bands for connection to external antennas.



## **ALLIANCE edgeHUB**

#### **Features and Benefits:**

- Conserves vertical fiber strands one strand from MDF to IDF
- Provides a fiber optic multiplexer to feed eight edgeROUs directly
- Supports optical cascade and add-on to deliver signal to up to 32 edgeROUs
- Provides DC power for up to 16 edgeROUs



## **ALLIANCE edgeHUB WDM**

#### **Features and Benefits:**

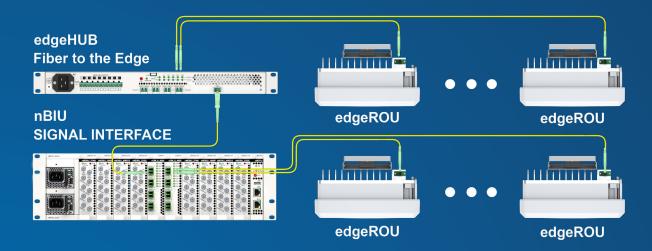
- Supports 2x2 MIMO edgeROUs
- Conserves vertical fiber strands one strand from MDF to IDF
- Provides a fiber optic multiplexer to feed eight edgeROU directly
- Supports optical cascade and add-on to deliver signal to up to 32 edgeROU
- Provides DC power for up to 16 edgeROU (limit of eight edgeROU\_40403434)



## **ALLIANCE EPSU**

#### **Features and Benefits:**

- Powers edgeROUs that can't be powered directly from the edgeHUB.
- Optional device to provide power for edgeROU not powered by an edgeHUB
- Supports three modular power supply units
- Each modular power supply unit provides DC power for up to 16 edgeROU



## **ALLIANCE edgeROU**

#### **Features and Benefits:**

- Smallest, most attractive, highest power, and lowest cost active DAS remote available!
- Easy to install, like Wi-Fi, using the same labor skills available from the low-voltage installers already working in your building
- Available with integrated antennas or external antenna ports
- Aesthetically pleasing --when installed on the ceiling, it has a low profile with only 1.5" exposed
- Provides the entire bandwidth of up to four frequency bands with up to 24 dBm per band before the antennas
- Main and add-on edgeROU configurations support up to eight bands over a single fiber strand.

## Available in five versions depending on band requirements.

Version 1: Main: 700 / PCS / AWS / 2500T - Add-on: 600 / 8085 / WCS / CBRS

Flexible band combination is ideal for most venues. The main edgeROU features four common bands used by the mobile network operators, while the add-on edgeROU provides four additional bands. Available in models featuring both internal and external antennas.

Version 2: Main: PCS / AWS / WCS / 2500T - Main: 600 / 700 / 8085 / CBRS

Band combinations designed to interface with the highly directional antennas typically used at high-capacity venues such as stadiums and arenas. This version is Available in main models with external antenna ports only.

Version 3: Main: 700 / 8085 / PCS / AWS Version

Includes the core four frequency bands used by two mobile network operators. Available in models featuring both internal and external antennas.

Version 4: Main: C-Band MIMO (3.7-3.98 GHz) – Add-on: C-Band MIMO (3.45-3.55 GHz)

Features the main edgeROU supporting 2x2 MIMO for the C-Band 3.7 GHz while the add-on edgeROU provides 2x2 MIMO for C-Band 3.45 GHz. Available in models featuring both internal and external antennas.

Version 5: Main: C-Band MIMO 3.45-3.55 & 3.7-3.98 GHz

This version includes internal and external antenna models.

## **Unmatched Performance, Low Cost and Easy to Install**

The SOLiD ALLIANCE 5G DAS platform efficiently delivers reliable cellular coverage into any building, campus, stadium, or airport. With great aesthetics, edgeROU technology features the smallest, most powerful DAS remotes on the market. The scalable solution is easy to install, includes four cellular frequency bands, and expands to eight with an addon remote.



## **EDGE CONNECTIVITY. SOLID COVERAGE.**

SOLiD enables indoor and outdoor cellular and public safety communications at many of the world's best-known and most challenging venues, including the busiest airports, subways, Fortune 500 corporate buildings, hospitals, hotels, universities, professional and college sports venues, government, industrial, and logistics facilities, as well as small and medium-sized "Middleprise" buildings. SOLiD's Distributed Antenna Systems (DAS) scale to overcome every challenge. SOLiD continuously innovates to deliver best-in-class solutions with ALLIANCE 5G DAS, SOLiD BARS<sup>TM</sup>, and Open RAN (O-RAN) radio solutions.

To learn more about our unmatched cellular coverage solutions, visit solid.com/us/ or call 1-(888) 409-9997.

