SOLiD ALLIANCE-TR DAS General Specifications:

ALLIANCE-TR BIU

- Power Supply Range: AC 110/220V ± 10% AC (100V to 240V) DC -48V (DC: -42V to -66V)
- RF Input Range: +29dBm to +43dBm
- VSWR: 1.5:1
- Mounting Type: 19” Rack
- Max Power Consumption:
  - Master BIU: 210W at full load with max 4 ODUs
  - Slave BIU: 90W at full load
- Max Weight: 23kg at full load with 4 MDBUs
- Size: (WxHxD) 482.6 (19”) x 177 (4U) x 345.6mm
- Operating Temperature: 5º to 50º C
- Ethernet ports for connection to laptop on-site or remote NOC.

ALLIANCE-TR ODU

- Input Voltage: DC +12V powered by BIU
- Max Power Consumption: 30W at full load
- Max Weight: 4.9kg at full load
- Size: (WxHxD) 196.6 (1U) x 43.6 x 244.5mm
- Signal Input: Tx/Rx jumpers from BIU
- Fiber Link Budget: 10dBm / 5dBm for single mode
- Supports up to 8 optical connections.

SOLiD ALLIANCE-TR DAS System-level Regulatory Compliance:

- APPROVAL/CERTIFICATION TYPE
  - EMC (CE) EN 60215
  - EN 55032-1
  - EN 60950-2-2
- RF (CE)
  - EN 301 489-01
  - EN 300 609-2
  - 3GPP TS 36.143
  - EN 60950-1
  - EN 301 489-08
  - EN 301 908-1
  - Resolution 554
  - Resolution 554
  - Resolution 454

SOLiD ALLIANCE-TR DAS Topology Overview:

- SOLiD ALLIANCE-TR DAS is an advanced multi-carrier, multi-band DAS solution that delivers exceptional RF performance – fulfilling coverage and capacity demands while minimizing capital and operational expenses.

- FEATURES:
  - MULTI-BAND – FIBER EFFICIENT
  - Up to eight bands of SISO or MIMO over a single fiber.

- ADVANCED AMPLIFIER TECHNOLOGY
  - SOLiD’s patented digital amplifier technology specialized for wide-band and multi-channel services.

- NO NEED FOR POI CONNECTION
  - High power attenuators and duplexers embedded in the head-end.

- IP66 CERTIFIED
  - Rugged design enables outdoor mounting (wall or pole) of remote units.

- WEB-BASED MANAGEMENT
  - Management software allows on site or remote setup, monitoring and reporting.

- BENEFITS:
  - USER CONVENIENCE
    - Software functions like spectrum monitoring, PIM level detection and EasySET reduce time and costs for system setup and optimization.

  - HIGHER POWER EFFICIENCY
    - New amplifier technology supports smaller, lighter remote units that use less power.

  - EASY UPGRADES
    - Modular design supports incremental additions of capacity and services.

  - FLEXIBLE DEPLOYMENT
    - Mix and match remote types (high-power/low-power) in one system.

Connect with SOLiD

SOLID helps people stay connected and safe in a rapidly-changing world through a portfolio of RF Amplifier, RF Radio and Optical Transport solutions. 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 and Fortune 500 corporate buildings and campuses; international airports and metropolitan subways.

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JULY 2017
## ALLIANCE-TR BIU (BASE-STATION INTERFACE UNIT)

The BIU is the central input point (head end) for all signals delivered over the DAS. Each signal input is independently filtered, attenuated, and controlled.

**Features:**
- Guaranteed RF power control for each input
- Modular and hot swappable
- Ethernet port for DAS management
- Discrete RF inputs per carrier per band
- Simplex or duplex input

**Benefits:**
- Add bands without adding equipment
- Modular head end decreases complexity and reduces operational costs
- Rack mountable to decrease expansion costs

## ALLIANCE-TR OEU (OPTICAL EXPANSION UNIT)

The OEU is an optical multiplexing device used to efficiently extend the DAS from one building to many others.

**Features:**
- Each OEU can support up to 8 ROUs
- A single sector (1 BIU) can support up to 4 OEU
- Each OEU requires only 1 ODU port and 1 fiber strand

**Benefits:**
- Much less equipment is required to serve multiple buildings
- Saves space and power requirements in remote buildings

## ALLIANCE-TR DMS 2000 (DAS MANAGEMENT SYSTEM)

The DMS is the control interface for the SOLiD DAS, providing configuration, alarming, and network intelligence for comprehensive DAS management.

**Features:**
- Web-based real-time DAS status
- Allows on-site or remote command and control
- Each DMS can manage 20 sectors

**Benefits:**
- Enables remote control and monitoring
- Improves customer service
- Expedites issue resolution
- Eliminates unnecessary site visits
- Command and control functionality for remote modifications and support

## ALLIANCE-TR ODU (OPTICAL DISTRIBUTION UNIT)

The ODU converts RF to optical to transport signals over long distances with very little loss. The ODU is generally rack-mounted near the BIU from which it receives power and RF communication.

**Features:**
- 1 ODU can drive up to 8 ROUs or 6 ROUs and 2 OEU
- 4-port / 1 port optical modules are hot swappable

**Benefits:**
- Only 1 fiber strand is required to connect to each remote unit
- Modular design simplifies capacity upgrade

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### Efficient, Modular, Powerful

**Guaranteed Power Control**
Discrete inputs enable independent RF power control for each carrier frequency band.

**Highly Efficient**
Delivers maximum efficiency while maintaining spectral compliance with specialized amplifiers for wide-band and multi-channel services.

**Modular Components**
Quickly and easily add new services and capacity.

**Rugged Design**
Secure in wet, dusty, and highly trafficked environments with IP66 compliance and double-locking cabinets.

**System Security**
Web-based DMS management system makes system commissioning, configuration, alarming, and firmware upgrades simple – either on-site or from an off-site NOC.

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### Output Power

<table>
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<tr>
<th>Frequency</th>
<th>High-Power HROU</th>
<th>High-Power LROU</th>
<th>Low-Power HROU</th>
<th>Low-Power LROU</th>
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<td>43.0 dBm</td>
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</table>

SOLiD ALLIANCE-TR supports both analog and digital cellular systems in multiple bands through a single strand of fiber.