

# ADXV Series DAS

Simply Incredible, Incredibly Simple™



With the increasing user demand for better coverage and additional capacity, Distributed Antenna Systems (DAS) have become a key element of carrier networks.

ADRF's ADXV Series DAS is the leading optical distribution system that covers the full range of power levels, amplifying signals for both indoor and outdoor applications.

ADXV Series meets all distribution needs from the simplest to the most complex venues. It is capable of transporting frequencies from VHF to 4 GHz regardless of protocol or modulation.

ADXV has two main components: the Head End (HE) and the Remote Unit (RU). The Head End is collocated with the base station or bi-directional amplifier and connected via an RF interface. The RF signals are transported to the Remote Units via single mode fiber.



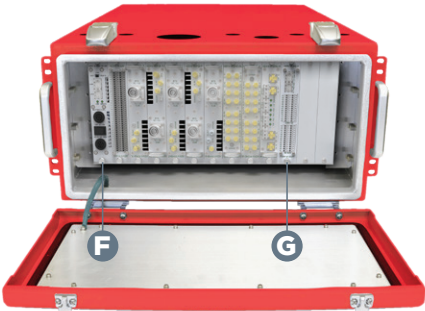
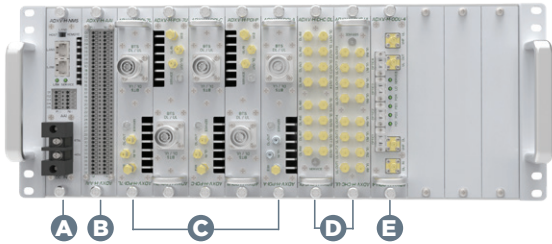
## Product Features

- **Innovation:** Leverages patented Auto Commissioning Routine™ and built-in Spectrum Analyzer and Signal Generator to expedite commissioning and optimization
- **Reliability:** Carrier-grade, NEBS Level 3 compliant platform ensures lowest OpEx as well as CapEx
- **Cost Efficiency:** Best-in-class modularity and flexibility enables pay as you grow to add other carriers or overlay new bands without dreaded rip and replace
- **Ease:** Famed ADRF web-based GUI simplifies turn-up as well as remote troubleshooting
- **Availability:** ADRF's vertically integrated supply chain allows our commitment to the industry's shortest lead times

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## 1 HE (Head End)



### Head End (HE) Features:

- Supports up to 12 modules (for ADXV-H-NMS-AC/DC) and up to 10 modules (for ADXV-H-NMS-AC-N4) in the 19" rack
- Supports daisy-chaining of up to 15 HE units with an Ethernet switch
- Built-in CW Generator, Spectrum Analyzer, Programmable Power Sharing, and Noise/Channel Power Level Detection
- Supports direct BTS interface, max 48dBm input per Point of Interface (POI) card
- Automatic Level Control (ALC) of input RF power to user set value
- System-wide firmware update from the HE
- Remote monitoring and control capability using our famed Web-based GUI
- Supports Dry Contact Alarming and SNMP v1, v2c, v3 protocols

### Head End (HE) Components:

- A** Head End Network Management System (ADXV-H-NMS-AC / ADXV-H-NMS-DC)
- B** Head End Auxiliary Alarm Interface Module (ADXV-H-AAI)
- C** Head End Point of Interface Module (ADXV-H-POI-xx)
- D** Head End Channel Combiner Unit (ADXV-H-CHC-xx-X)
- E** Head End Optical Donor Unit Module (ADXV-H-ODU-4-X)
- F** Head End Network Management System (ADXV-H-NMS-AC-N4)
- G** Head End Auxiliary Alarm Interface Module (ADXV-H-AAI-U)

## 2 LPR (Low-Power Remote Unit)



A



B



C

### Low-Power Remote Unit (LPR) Features:

#### Optical Hub

- Supports up to 8 Primary LPR with optical couplers
- Provides DC power to LPR

#### Remotes

- Fiber-to-the-edge
- Automatic Level Control (ALC) of output RF power to user set value
- Band Specific Remote Modules available in 17/20/23dBm
- PIM Rated 4.3-10 RF Output Connectors

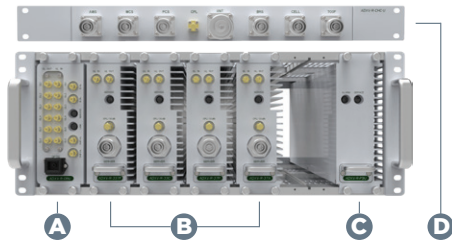
#### Optical Coupler

- Splits a single optical signal stream to feed 2 Primary Units
- Mounts to LPR primary

### Low-Power Remote Unit (LPR) Components:

- A** Optical Hub (ADXV-L-HUB-4-AC)
- B** Remotes
  - High-Band (N77H): MIMO, 23dBm per band, primary (ADXV-L-23N77HM-P)
  - High-Band (N77L): MIMO, 23dBm per band, secondary (ADXV-L-23N77LM-S)
  - Mid-Band (PCS, AWS-1/3, WCS, BRS): SISO, 20dBm per band, primary (ADXV-L-20PAWBT-P)
  - Low-Band (600, 7FN, S8C): SISO, 17dBm per band, secondary (ADXV-L-1767S8C-S)
- C** ADXV Optical Coupler (ADXV-L-OPT-CPL-S)

## 3 MPR (Mid-Power Remote Unit)



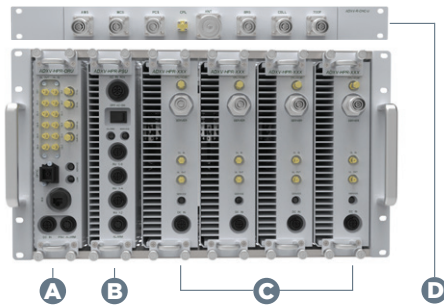
### Mid-Power Remote Unit (MPR) Features:

- Supports up to 7 Remote Modules in the 19" rack (4U)
- Built-in Spectrum Analyzer
- System-Wide Commissioning of all remotes to user set value
- Local Ethernet interface to the MPR
- Optional expansion rack (1.5U) to support additional 2 MPR modules
- Automatic Level Control (ALC) of output RF power to user set value
- Noise/Channel Power Level detection
- Band Specific Remote Modules available in 2W/5W
- 30dB test ports at each Remote Module
- PIM Rated 4.3-10 RF Output Connectors

### Mid-Power Remote Unit (MPR) Components:

- A** Mid-Power Remote Optical Remote Unit Module (ADXV-R-ORU-X)
- B** Mid-Power Remote Amplifier Module (ADXV-R-33xx / ADXV-R-37xx)
- C** Mid-Power Remote Power Supply Unit Module (ADXV-R-PSU-AC, ADXV-R-PSU-DC)
- D** Mid-Power/High-Power Remote Universal Channel Combiner (ADXV-R-CHC-X2)

## 4 HPR (High-Power Remote Unit)



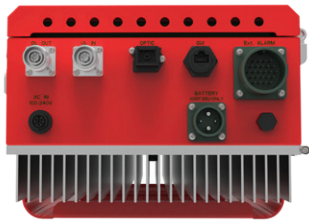
### High-Power Remote Unit (HPR) Features:

- Supports up to 6 Remote Modules in 19" rack (6U)
- Built-in Spectrum Analyzer
- System-Wide Commissioning of all remotes to user set value
- Local Ethernet interface to the HPR
- Optional expansion rack (2U) to support one additional HPR module
- Automatic Level Control (ALC) of output RF power to user set value
- Noise/Channel Power Level detection
- Band Specific Modules available in 20W/40W
- 40dB test ports at each HPR module
- PIM Rated 4.3-10 RF Output Connectors
- Optional Pole Mount Kit

### High-Power Remote Unit (HPR) Components:

- A** High-Power Remote Optical Remote Unit Module (ADXV-HPR-ORU-X)
- B** High-Power Remote Power Supply Unit Module (ADXV-HPR-PSU-AC)
- C** High-Power Remote Amplifier Module (ADXV-HPR-43xx / ADXV-HPR-46xx)
- D** Mid-Power/High-Power Remote Universal Channel Combiner (ADXV-R-CHC-X2)

## 5 PS-MPR (Public Safety Mid-Power Remote Unit)



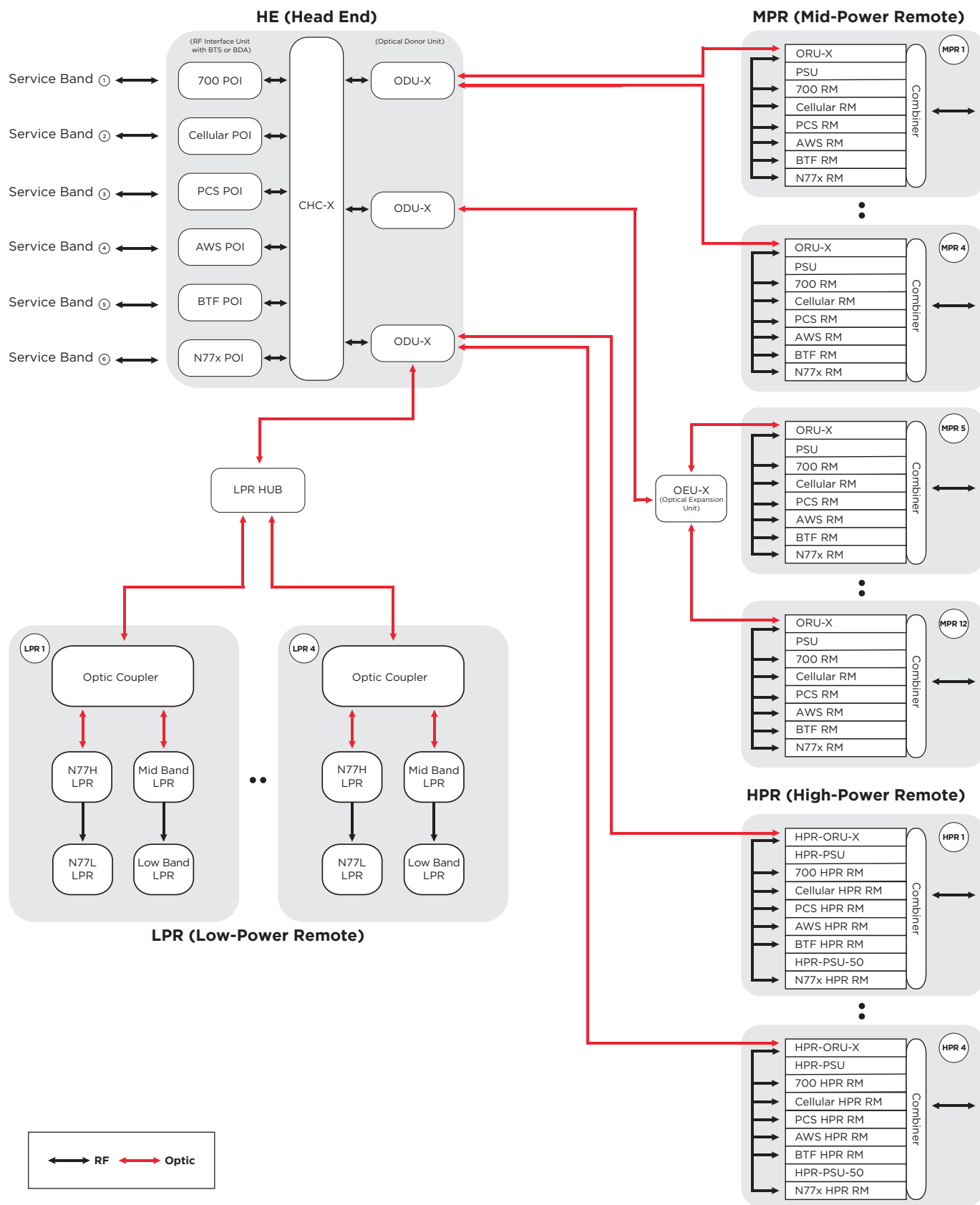
### Public Safety Remote Unit Features:

- Built-in Spectrum Analyzer
- NEMA4 Certified
- Dry Contact Alarming
- Optional Battery Backup Support
- PIM Rated 4.3-10 RF Output Connectors
- Local Ethernet interface to the Remote Unit
- Automatic Level Control (ALC) of output RF power to user set value
- Noise/Channel Power Level detection

### PS-MPR Models:

- ADXV-R-3378P-N4X: Public Safety 700/800 MHz; 33dBm Composite Output Power
- ADXV-R-3378P-U: Public Safety 700/800 MHz; 33dBm Composite Output Power; UL 2524 2nd Edition Certified
- ADXV-R-25VU-N4X: Public Safety VHF/UHF; 25dBm Composite Output Power

# ADXV Diagram



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