

ADX V Fiber Distributed Antenna System



The ADXV Series represents the next evolution of DAS technology and architecture:

- Truly modular architecture means our single ADXV platform is ideal for both single carrier and neutral host applications
- Most flexible platform on the market provides a genuinely future-proofed solution so you only pay for what you need now
- Class-leading output power with 2W, 5W, 20W, and 40W in commercial and public safety bands covers virtually all in-building applications with significant cost savings
- Famed ADRF web-based GUI allows remote network control and alarm monitoring
- Built-in Spectrum Analyzer and Signal Generator at Head End
- Built-in Spectrum Analyzer at the Remote Units
- Up to 5 dB_o of optical link budget over one strand of SMF per remote unit lowers cost and complexity and increases reach into disparate topologies
- Innovative Power Sharing Control enables dynamic power allocation amongst carriers or technologies
- Patented technologies (such as Band Commissioning Routine™ and Noise Detection Routine™) speed commissioning time to reduce cost

HIGHLIGHTS

System

- Control parameters such as gain, output power, and alarm threshold can be changed using Web-GUI interface allowing the user to fine tune the system to the given RF environment
- Incremental Automatic Shutdown/Resume Time: ADXV gradually increases the time span between automatic shutdown and resume period before it permanently shuts itself down
- Supports ALC function to prevent ADXV DAS from input overload or output overpower
- Supports SNMP v1, v2c, v3 (get, set & traps)
- Modular structure
- Operates with up to 5dBo optical loss (via Single Mode Fiber) or 10dBo with the use of the OEU
- Requires only single strand of single mode fiber per Remote Unit
- Supports back-up and selective restore of setting parameters for all connected active modules in ADXV DAS via web-based GUI
- Noise Figure under 5dB @ max gain
- VSWR under 1.3:1 for BTS Interface Port

Head End

- Supports power sharing of multiple carriers' signals via configurable grouped POI/POIL units
- MIMO / Multi-Sector capable with a single Head End
- Daisy-chain and monitor up to 8 Head Ends from a single point of interface
- Web-based GUI and connectivity via DHCP (in host mode); no 3rd party GUI software required
- Supports dry contact alarming
- Both AC and DC power supply options available
- SMB (snap-on) interconnections for quick installation

Medium Power Remote Unit

- 33dBm of downlink composite output power for 700 MHz (Commercial), Cellular + SMR800, and 700 + 800 MHz Public Safety
- 37dBm of downlink composite output power for PCS, AWS, WCS, and BRS (TD-LTE)
- 25dBm of downlink composite output power for VHF + UHF
- IP66 rating without any additional chassis
- 30dB coupling test ports on each individual remote module
- Both AC and DC power supply options available
- 4.3-10 connectors

High Power Remote Unit

- 43dBm of downlink composite output power for 700 MHz (Commercial), and Cellular + SMR800
- 46dBm of downlink composite output power for PCS, AWS, and BRS (TD-LTE)
- 45dBm of downlink composite output power for WCS
- IP66 rating without any additional chassis
- 40dB coupling test ports on each individual remote module
- Both AC and DC power supply options available
- 4.3-10 connectors

ADX V MEDIUM POWER REMOTE UNIT EQUIPMENT



ADXV-R-CHA

CHA (Remote Module Chassis)



- Both wall and 19" rack mount solution for remote modules
- Supports up to 7 ADXV slot-type remote components

ADXV-R-RACK

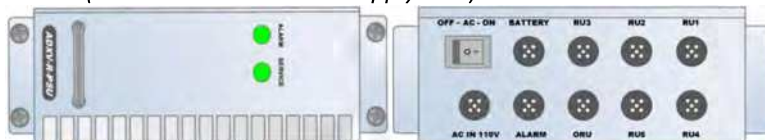
R-RACK (19" Rack for Remote Modules)



- 19" expansion rack for ADXV RU components
- Supports up to 2 ORU, RAM, or PSU

ADXV-R-PSU-AC

PSU-AC (AC Remote Unit Power Supply Unit)



- 100 to 240V AC input
- 500W Power Capacity
- Supports PSU alarming
- Supports ADRF-BBx for a battery backup solution

ADXV-R-PSU-DC

PSU-DC (DC Remote Unit Power Supply Unit)



- -36 to -72V DC input
- 500W Power Capacity
- Supports PSU alarming

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SYSTEM SPECIFICATIONS

Parameters		Specifications
Downlink Input Power Range	POI	0~+48dBm
	POIL	0~+25dBm
Gain	Uplink	0~30dB
	Downlink	POI to RAM (2W): -15~33dB POIL to RAM (2W): 8~33dB
		POI to RAM (5W): -11~37dB POIL to RAM (5W): 12~37dB
		POI to HPR RAM (20W): -5~43dB POIL to HPR RAM (20W): 18~43dB
	POI to HPR RAM (40W): -2~46dB POIL to HPR RAM (40W): 21~46dB	
Maximum Composite Output Power (DL)		VHF/UHF: 25dBm Low Band: 33dBm, 43dBm High Band: 37dBm, 46dBm
Maximum Composite Output Power (UL)		-15dBm (Typical) +5dBm (Max)
Noise Figure		≤ 5dB @ Max Gain (Center Frequency)
VSWR (Medium Power)		< 1.3 : 1 @ BTS Interface Port < 1.5 : 1 @ Internal Interface Port
Optic Loss		0~5 dBo
System Delay		< 2us
Spurious		Meet FCC rules, 3GPP TS 36.104, 3GPP2 C.S0010-C
Optic Connectors		SC/APC (Green)
Optic Wavelength		1310nm for downlink, 1550nm for uplink
Operating Temperature		HE: 14 ~ 122°F (-10 ~ 50°C) RU: -40 ~ 140°F (-40 ~ 60°C)
Operating Humidity		5~95% RH
Power Input	Head End	ADXV-H-NMS-AC: 100 to 240V, 50-60Hz with battery backup function ADXV-H-NMS-DC: -36V to -72V DC
	Remote Unit	ADXV-R-PSU-AC: 100 to 240V, 50-60Hz with battery backup function ADXV-R-PSU-DC: -36V to -72V DC ADXV-HPR-PSU-AC: 100 to 240V, 50-60Hz ADXV-HPR-PSU-DC: -36V to -72V DC
Network Management System		Ethernet (RJ45)
RF Connector	POI	DIN (Female) SMA (Female) SMB (Female)
	POIL	4.3-10 (Female) SMB (Female)
	Remote Modules	4.3-10 (Female) SMA (Female)
Weather Resistance (Remote Modules)		IP66

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WEIGHT, SIZE, AND POWER CONSUMPTION

Product Name	Weight	Size (W x H x D)	Rack Units	Power Consumption	BTU/hrs
Head End					
ADXV-H-NMS-AC	20.9 lbs	19.0 x 7.0 x 19.7 in	4U	8.85W	30.19
ADXV-H-NMS-DC	20.0 lbs	19.0 x 7.0 x 19.7 in	4U	8.64W	29.48
ADXV-H-ODU-4	5.30 lbs	1.3 x 6.85 x 17.0 in	--	7.68W	26.20
ADXV-H-POI-7L	6.17 lbs	1.3 x 6.85 x 17.0 in	--	7.2W	24.56
ADXV-H-POI-7U	6.17 lbs	1.3 x 6.85 x 17.0 in	--	7.2W	24.56
ADXV-H-POI-S8C	6.17 lbs	1.3 x 6.85 x 17.0 in	--	7.2W	24.56
ADXV-H-POI-P	6.17 lbs	1.3 x 6.85 x 17.0 in	--	7.2W	24.56
ADXV-H-POI-A	6.17 lbs	1.3 x 6.85 x 17.0 in	--	7.2W	24.56
ADXV-H-POI-W	6.17 lbs	1.3 x 6.85 x 17.0 in	--	7.2W	24.56
ADXV-H-POI-BT	6.17 lbs	1.3 x 6.85 x 17.0 in	--	7.2W	24.56
ADXV-H-POIL-VU	6.61 lbs	2.6 x 6.85 x 17.0 in	--	7.0W	23.88
ADXV-H-POIL-78P	5.00 lbs	1.3 x 6.85 x 17.0 in	--	6.45W	22.00
ADXV-H-POIL-7L	5.00 lbs	1.3 x 6.85 x 17.0 in	--	6.45W	22.00
ADXV-H-POIL-7U	5.00 lbs	1.3 x 6.85 x 17.0 in	--	6.45W	22.00
ADXV-H-POIL-S8C	5.00 lbs	1.3 x 6.85 x 17.0 in	--	6.45W	22.00
ADXV-H-POIL-P	5.00 lbs	1.3 x 6.85 x 17.0 in	--	6.45W	22.00
ADXV-H-POIL-A	5.00 lbs	1.3 x 6.85 x 17.0 in	--	6.45W	22.00
ADXV-H-POIL-W	5.00 lbs	1.3 x 6.85 x 17.0 in	--	6.45W	22.00
ADXV-H-CHC-88-DL	4.40 lbs	1.3 x 6.85 x 17.0 in	--	0.96W	3.27
ADXV-H-CHC-88-UL	4.40 lbs	1.3 x 6.85 x 17.0 in	--	0.96W	3.27
ADXV-H-CHC-44M-DL	4.40 lbs	1.3 x 6.85 x 17.0 in	--	0.96W	3.27
ADXV-H-CHC-44M-UL	4.40 lbs	1.3 x 6.85 x 17.0 in	--	0.96W	3.27
ADXV-H-CHC-168-DL	7.71 lbs	2.6 x 6.85 x 17.0 in	--	0.96W	3.27
ADXV-H-CHC-168-UL	7.71 lbs	2.6 x 6.85 x 17.0 in	--	0.96W	3.27
ADXV-H-RACK	4.2 lbs	19.0 x 1.73 x 19.0 in	1U	--	--
ADXV-H-AAI	2.95 lbs	1.3 x 6.85 x 17.0 in	--	13.4W	45.72
Mid Power Remote Modules					
ADXV-R-CHA	15.43 lbs	19.0 x 7.0 x 15.0 in	4U	--	--
ADXV-R-CHA-SG	2.20 lbs	19.2 x 7.0 x 2.8 in	--	--	--
ADXV-R-RACK	7.40 lbs	19.0 x 2.6 x 13.8 in	1.5U	--	--
ADXV-R-FAN-DC	3.33 lbs	17.1 x 6.9 x 3.5 in	--	9.0W	30.7
ADXV-R-PSU-AC	8.81 lbs	2.3 x 6.85 x 13.8 in	--	5.36W	18.28
ADXV-R-PSU-DC	8.81 lbs	2.3 x 6.85 x 13.8 in	--	5.1W	17.4
ADXV-R-ORU	8.81 lbs	2.3 x 6.85 x 13.8 in	--	10.94W	37.32
ADXV-R-25VU-N4X	26.5 lbs	9.85 x 15.0 x 6.6 in	--	66.06W	225.40
ADXV-R-3378P-N4X	26.5 lbs	9.85 x 15.0 x 6.6 in	--	60.19W	205.37
ADXV-R-337F	9.92 lbs	2.3 x 6.85 x 13.8 in	--	38.29W	130.65
ADXV-R-33S8C	9.92 lbs	2.3 x 6.85 x 13.8 in	--	43.634W	148.88
ADXV-R-37P	9.92 lbs	2.3 x 6.85 x 13.8 in	--	57.33W	195.61
ADXV-R-37A	9.92 lbs	2.3 x 6.85 x 13.8 in	--	56.06W	191.28
ADXV-R-37W	9.92 lbs	2.3 x 6.85 x 13.8 in	--	53.0W	180.84
ADXV-R-37BT	9.92 lbs	2.3 x 6.85 x 13.8 in	--	56.0W	191.07

- **RU Equipment**

Part Name	Frequency Band	Description
Mid Power Remote Modules		
ADXV-R-CHA		ADX V DAS Remote Unit Chassis (supports 7 RU Modules) (rack or wall mountable)
ADXV-R-CHA-SG		ADX V DAS Remote Unit Chassis Safety Guard
ADXV-R-RACK		ADX V DAS Remote Unit 19" Rack (supports 2 RU Modules)
ADXV-R-FAN-DC		ADX V DAS Remote Unit Fan (required with more than 4 RAM)
ADXV-R-PSU-AC		ADX V DAS Remote Unit AC Power Supply Unit Module
ADXV-R-PSU-DC		ADX V DAS Remote Unit DC Power Supply Unit Module
ADXV-R-ORU		ADX V DAS Remote Unit Optical Remote Unit Module
ADXV-R-25VU-N4X	VHF/UHF	ADX V DAS NEMA-4X Remote Unit Public Safety VHF/UHF 25dBm Amplifier Module
ADXV-R-3378P-N4X	700/800 MHz PS	ADX V DAS NEMA-4X Remote Unit Public Safety 700/800 MHz 33dBm Amplifier Module
ADXV-R-337F	700 MHz	ADX V DAS Remote Unit 700 MHz Lower A/B/C + Upper C 33dBm Amplifier Module
ADXV-R-33S8C	SMR800 + Cell	ADX V DAS Remote Unit SMR800 (Commercial) + Cellular 33dBm Amplifier Module
ADXV-R-37P	PCS	ADX V DAS Remote Unit PCS 37dBm Amplifier Module
ADXV-R-37A	AWS-1 + AWS-3	ADX V DAS Remote Unit AWS-1 + AWS-3 37dBm Amplifier Module
ADXV-R-37W	WCS	ADX V DAS Remote Unit WCS 37dBm Amplifier Module
ADXV-R-37BT	BRS (TD-LTE)	ADX V DAS Remote Unit BRS 37dBm Amplifier Module
High Power Remote (HPR) Modules		
ADXV-HPR-CHA		ADX V DAS High Power Remote Chassis (supports 6 HPR Modules) (rack or wall mountable)
ADXV-HPR-RACK		ADX V DAS High Power Remote 19" Rack (supports 1 HPR Module)
ADXV-HPR-PMK		ADX V DAS High Power Remote Pole Mount Kit (supports 8 HPR Modules)
ADXV-HPR-PSU-AC		ADX V DAS High Power Remote AC Power Supply Unit Module
ADXV-HPR-PSU-DC		ADX V DAS High Power Remote DC Power Supply Unit Module
ADXV-HPR-ORU		ADX V DAS High Power Remote Optical Remote Unit Module
ADXV-HPR-437F	700 MHz	ADX V DAS High Power Remote 700 MHz Lower A/B/C + Upper C 43dBm Amplifier Module
ADXV-HPR-43S8C	SMR800 + Cell	ADX V DAS High Power Remote SMR800 (Commercial) + Cellular 43dBm Amplifier Module
ADXV-HPR-46P	PCS	ADX V DAS High Power Remote PCS 46dBm Amplifier Module
ADXV-HPR-46A	AWS-1 + AWS-3	ADX V DAS High Power Remote AWS-1 + AWS-3 46dBm Amplifier Module
ADXV-HPR-45W	WCS	ADX V DAS High Power Remote WCS 45dBm Amplifier Module
ADXV-HPR-46BT	BRS (TD-LTE)	ADX V DAS High Power Remote BRS (TD-LTE) 46dBm Amplifier Module
Combiners / Splitters		
ADXV-R-CHC-U		ADX V DAS Remote Unit/High Power Remote Universal Channel Combiner (700 MHz, SMR800 + Cellular, PCS, AWS, WCS, BRS)
ADXV-HPR-CHC-U		ADX V DAS Remote Unit/High Power Remote Universal Channel Combiner (700 MHz, SMR800 + Cellular, PCS, AWS, WCS, BRS) for HPR-PMK/HPR-CHA
ADXV-HPR-CHC-LH		ADX V DAS Remote Unit/High Power Remote Low/High Universal Channel Combiner (700 MHz, SMR800 + Cellular / PCS, AWS, WCS, BRS) for HPR-PMK/HPR-CHA
Miscellaneous		
ADXV-R-OEU-8		ADX V DAS Optical Expansion Unit (supports 8 Remote Units)

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