

ARPD 1000 Compact Demodulator

High density, modular compact return path demodulator for DCX set-tops



PRODUCT OVERVIEW

The ARPD 1000 is a modular, one Rack Unit (RU) high product that supports the inclusion of up to six removable (hot-swappable) demodulator boards (DM boards). The ARPD 1000 performs the same functions as the RPD-1000/2000 products. When compared to the RPD-1000/2000 products the ARPD 1000 has a larger number of upstream demodulators in a smaller physical package and also allows more upstream demodulators to be placed in each upstream path thus saving rack space.

The increased bandwidth capacity of each return path allows the system to support future set-top applications that require large amounts of data in the upstream direction.

The ARPD 1000 is a burst demodulator. At the input, the ARPD1000 receives up to six different electrical RF inputs. Each RF input contains DQPSK modulated MAC cells, transmitted upstream by set-tops out in the cable plant. A demodulator within a DM board in the ARPD1000 chassis performs de-randomization and error correction (FEC).

The output of the ARPD 1000 is UDP/IP/Ethernet carrying an RPD frame as the UDP payload. The ARPD 1000 sends the RPD frame to the destination IP address configured by the operator using the configured destination UDP port number.



ARPD 1000 Rear View

FEATURES

- High-density compact design— 1 RU chassis holds up to six ADM-4000 Advanced Demodulator Modules* and can be functionally equivalent to three RPD-2000s, saving rack space
- Each ADM-4000 module includes two RF ports (input and output) and supports the ability to demodulate up to three different return channels
- A fully loaded ARPD chassis containing six ADM-4000 modules supports up to six different upstream paths and the ability to demodulate up to 18 different return channels
- The ADM-4000 demodulator modules are front-loading (cables connect in the back) and hot-swappable
- Tuner frequency range is from 5 to 65 MHz, and the dynamic range is 20 dB (0 dBmV \pm 10 dB)
- Receives and demodulates upstream data packets (MAC cells) transmitted by STBs and performs FEC, marking each received cell as perfect, corrected, or uncorrectable
- Performs power level measurement on each demodulated MAC cell to support the STB power levelling system
- Transmits the demodulated MAC cells containing interactive data and/or polling data to the NC-1500 or RADD over UDP/IP/Ethernet
- Provides status and alarms using SNMP traps

GENERAL SPECIFICATIONS

Interfaces

RF Interfaces (data I/O)	6 inputs, F-type connectors (75 Ω) 6 outputs (loop-thru), F-type connectors (75 Ω)
Network Interface #1	1 RJ-45 (10/100Base-T); data output (transmit data to Motorola NC-1500 or RADD; BOOTP and DHCP; diagnostics)
Network Interface #2	1 RJ-45 (10/100Base-T); diagnostics
RS-232 Console Port	1 DB9 (RS-232)

RF Specifications

Demodulation	DQPSK
Input Frequency Range	5 to 65 MHz
Demod Center Frequencies	5.216 to 64.736 MHz in 192 kHz steps
Dynamic Range	20 dB (0 dBmV ±10 dB)
Interference and Noise	C/(N+I) < 16.5 dB
Symbol Rate	128 ksps
Channel Bit Rate	256 kbps
Information Bit Rate	223 kbps
FEC	RS (62,54) T= 4 GF(256)
Return Loss (per RF input)	>16.5 dB of return loss (5 to 65 MHz)

Electrical AC Chassis

Input Voltage	100 to 240 VAC
VAC Frequency	50 to 60 Hz
Current	1.2 A @ 120 VAC
Power Consumption	50 W (typical), 60 W (maximum)

GENERAL SPECIFICATIONS (CONTINUED)

Electrical DC Chassis

Input Voltage	-40 to -60 VDC
Current	1.75 A @ -48 VDC
Power Consumption	50 W (typical), 60 W (maximum)

Environment

Ambient Temperature	32 °F to 122 °F (0 °C to 50 °C)
Ambient Humidity	5% to 90%
Storage Temperature	-40 °F to 158 °F (-40 °C to 70 °C)
Cooling	Convection (2 fans)

Other

Limited Warranty	1 year
Dimensions	1.72 in H x 18.86 in W x 14.85 in L (4.37 cm x 47.90 cm x 37.72 cm) (1 RU)
Weight	8.25 lb (3.74 kg) (fully populated chassis)
Mounting	19 in rack mount

ORDERING INFORMATION

Part Number	Description
535655-001	ARPD Chassis (AC Power)
535655-002	ARPD Chassis (DC Power)
535666-001	ADM-4000 DM Module (up to 6 per ARPD chassis)

Note: The ADM-4000 DM modules are sold separately from the ARPD chassis.

CUSTOMER CARE

Contact Customer Care for product information and sales:

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