D5® Universal Edge QAM
Release 3.0.1 Technical Specifications

Specifications

Environmental

Operating Temperature °F (°C)	32 to122 (0 to 50) Ambient
Storage Temperature °F (°C)	–40 to 158 (–40 to 70)
Relative Humidity	up to 95% (Non-condensing)

Electrical/Mechanical

Input Voltage AC	90-256 VAC, 50-60 HZ
Input Voltage AC	–40 to –56 VDC
Maximum Power Consumption (fully loaded)	< 540 Watts
Dimensions (W x H x D) in (cm)	19 x 3.5 x 24 (48 x 8.9 x 61)
Fully Loaded Weight lbs (kg)	50 (27.7)

WAN Module

Wan Modules	Single or Dual
Standard Gigabit Ethernet SFP interfaces per WAN Module	4 All Gigabit Ethernet interfaces can be active simultaneously
Total Ingress (IEEE802.3z or IEEE802.3ab)	8 Gb/sec Optical SFP or 1000BaseT options
Gigabit Ethernet Redundancy	2X (1 + 1), 2 + 1, 3 + 1
IP Unicast and Mulicast (IGMPv2/3) UDP encapsulated packets	1 to 7 IGMPv2/3 with Source Specific Multicast

QAM Module

QAM Module type 8DX4 External "F" type connectors, 75 ohm (ISO-169-24), 6 block-converted adjacent channels per RF output port, 4 RF output ports per module)	up to 6 Modules per Chassis
Frequency Range	54-1002 MHz
Minimum Frequency Step	62.5 KHz
Modulation Type	64 and 256 QAM
Single Carrier Power per RF	51 to 60 dBmV
Dual Carrier Power per RF	47 to 56 dBmV
Quad Carrier Power per RF	43 to 55 dBmV
Hex Carrier Power per RF	41 to 53 dBmV
Octal Carrier Power per RF	40 to 52 dBmV
Power Level Step Size	0.1 dB
Output Return Loss	>15 dB
BER	1 x 10-12
MER (equalized)	>46 dB
MER (un-equalized)	>42 dB
Channel Bonding	Single (1), Dual (2), Quad (8), carriers per RF output port
RF block muting	>60 dB

Technical Specification

Specifications Continued…

MPEG Processing

Receive up to 2,976 MPEG2 SPTS input streams (RFC768)
Generate up to 192 MPTS output streams
MPTS and SPTS pass-thru
PID filtering/remapping when required (automatic handling)
Stream Replication of multicast streams
Support for up to 63 SPTS per QAM channel

input jitter	±250 msec

Re-multiplexing/routing of any input stream to any output
PCR de-jittering and re-stamping of input streams
PSI extraction, automatic generation and insertion as required
Program and Elementary Stream-level Encryption
DVB-SI table handling from external SI generators

Control Interfaces

Two independent 10/100BaseTX — for CAS and NMS
RS-232 Serial Port Debug console connection

Protocols	SNMP, XML, HTTP, CLI (telnet/ssh, RS232), TFTP

In-band or out-of-band management (Radius, TACACS+)
Ethernet test/loop port for external analysis of any MPTS
HTML-based Nodal Management System

General

Open-standards Switched Digital Video support (SDV)

DOCSIS 3.0 M-CMTS Edge QAM support (DTI, DRFI, DEPI)
VOD Privacy Mode Encryption support
DVB Simulcrypt and OpenCase support
Field-upgradeable software download support (compact flash)
Hot-swappable, field-upgradeable 8 slot modular design

Redundancy	Power, QAM, Gigabit Ethernet, IGMPv3, Fans

Field Upgradable

Ordering Information

Part #	Description
780276	**D5 UEQ Base Enclosure High Capacity (AC) -** Includes: 1 Chassis (8-slots), 1 Monitor Card, 1 Fan Tray, 1 Universal AC Power Supply (110/220V AC 50/60 Hz), and Power Converter Module. **Does not include a Power Cord; Power Cord must be ordered separately.**
780277	**D5 UEQ Base Enclosure High Capacity (DC) -** Includes: 1 Chassis (8-slots), 1 Monitor Card, 1 Fan Tray, 1 DC Power Supply (-48 VDC), Power Converter Module (5V to 9V). **Power Cord is included.**
780274	D5 UEQ DRFI Quad QAM Module (QPM 8DX4) – Annexes A, B, C **Requires Release 3.0 or higher – Quad Channel Bonding license included**
722080	D5 UEQ 6DX2 Dual Port QAM Module - Annexes A, B, C
728906	D5 UEQ DTI WAN Module (Dual DTI) - **Requires Release 2.5 or higher, and Dual DTI Adapter. SFP not included, must be ordered separately.**
716635	D5 UEQ SFP NIC 1000Base-LX 1310nm Singlemode, LC
716636	D5 UEQ SFP NIC 1000Base-SX 850nm Multimode, LC
716637	D5 UEQ SFP NIC 1000Base, 1550nm Singlemode, LC (90km)
716639	D5 UEQ SFP NIC 1000Base-TX, RJ45
710631	Power Supply Cable: North American
710629	Power Supply Cable: Europe
710630	Power Supply Cable: Japan
710628	Power Supply Cable: Australian
710632	Power Supply Cable: UK
780195	D5 UEQ Release 2.6 System Software for Chassis (1 Per D5 Chassis)
780297	D5 UEQ Release 3.0 System Software for Chassis (1 Per D5 Chassis)
790530	D5 UEQ Release 3.0.1 System Software for Chassis (1 Per D5 Chassis)
780293	D5 UEQ License for QPM 8DX4 QAM Module – Hex Bonding (24 channels per Module – 1 license per QAM Module)
780294	D5 UEQ License for QPM 8DX4 QAM Module – Octal Bonding (32 channels per Module – 1 license per QAM Module)
780295	D5 UEQ License for QPM 8DX4 QAM Module – Hex to Octal Bonding Upgrade (from existing 24 channels to 32 channels per Module – 1 license per QAM Module)
716607	D5 UEQ License for Quad channel bonding for 6DX2 Dual Port QAM Modules (8 Downstreams per Module, 1 Per QAM Module)
785224K	Application Manager System Release 2.2 with Server **(Privacy Mode included, for U.S. only)**
785223K	Application Manager Release 2.2 Software Only **(Privacy Mode included, for U.S. only)**
785226K	Application Manager System Release 2.2 with Server **(Privacy Mode not included)**
785225K	Application Manager Release 2.2 Software Only **(Privacy Mode not included)**
722090	D5 UEQ Spares Kit for all Annexes (AC). Includes: Mon Card, Front Facia, 2 QAM Modules, 2 Fan Trays, WAN Module, Power Supply Unit.
722091	D5 UEQ Spares Kit for all Annexes (DC). Includes: Mon Card, Front Facia, 2 QAM Modules, 2 Fan Trays, WAN Module, Power Supply Unit.
716626	D5 UEQ Monitor Card for 8 Slot Chassis
721931	D5 UEQ Fan Tray for 8 Slot Chassis, High-Speed (For Use with all chassis)
716628	D5 UEQ Front Panel Display (PCB + Fascia)
721112	D5 UEQ Power Converter Module for 8 Slot Chassis (5V to 9V)
722058	D5 UEQ AC Power Supply Module (Power-One) (For Use with all AC chassis, but cannot mix with previous AC Power Supply 716630 for redundancy)
716630	D5 UEQ AC Power Supply Module (Telkoor) (For Use with 716625 Only)
716631	D5 UEQ DC Power Supply Module: -48 VDC (Includes Power Supply Cable)
728888	D5 UEQ DC Power Adapter
780280	D5 UEQ High Capacity AC Power Supply Module (For use with 780276 Only)
780281	D5 UEQ High Capacity DC Power Supply Module (For use with 780277 Only)

Specifications are subject to change without notice.

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