



MDU Solutions®

UCrypt® Q2A

Patent Pending



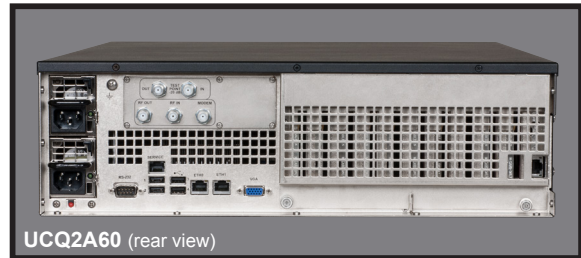
### UCrypt® QAM to Analog: \*

#### Features:

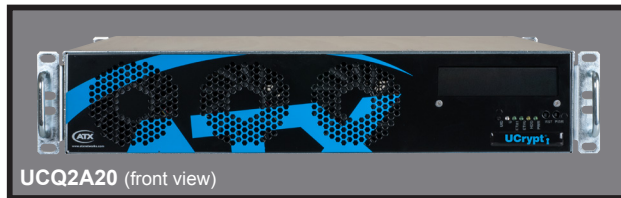
- ▶ The UCrypt® QAM to Analog product offering allows MSOs to decrypt select programs from their digital tier, and retransmit them in NTSC or PAL analog formats
- ▶ Future proof and field-upgradeable to digital QAM output
- ▶ Ideal for converting content into analog format to service bulk MDU, hospitality or commercial accounts where legacy TVs are deployed
- ▶ Allows for delivery of up to 72 individually agile analog channels in the 50-750 MHz frequency range
- ▶ Supports ingestion of up to 72 MPEG-2 or H.264, HD or SD streams
- ▶ Support for SDV channels
- ▶ Includes configurable scrolling program guide channel



UCQ2A60 (front view)

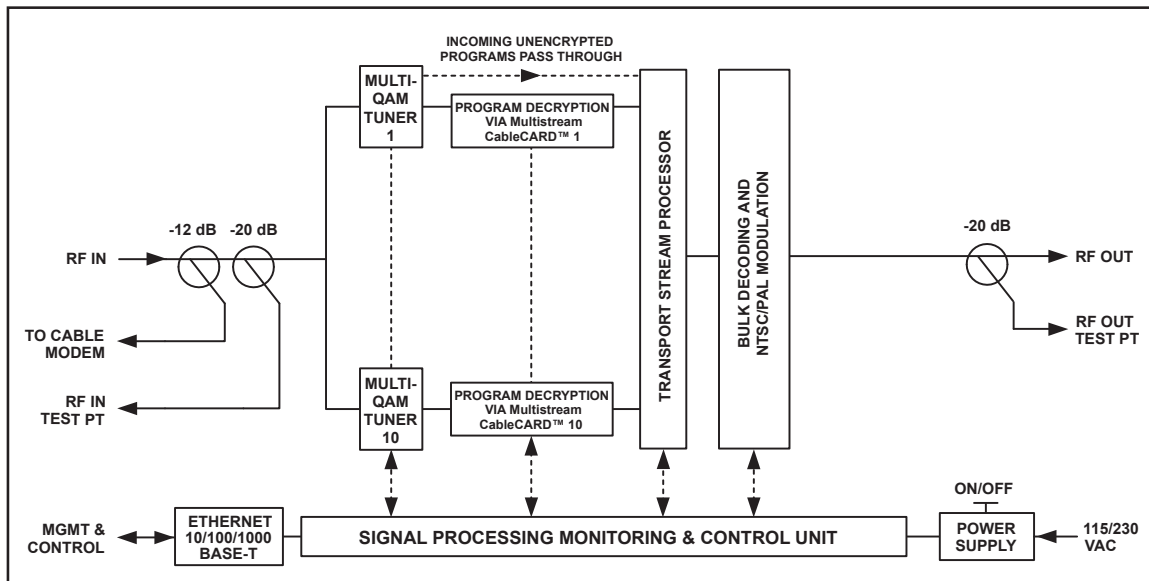


UCQ2A60 (rear view)



UCQ2A20 (front view)

### Functional Schematic



## UCrypt® QAM to Analog:

### UCrypt® QAM to Analog Specifications

SPECIFICATIONS		UCQ2A60 / UCQ2A72	UCQ2A20
<b>INPUT</b>			
RF QAM		Up to 72 64 QAM & 256 QAM Tuners <sup>(1)</sup>	Up to 20 64 QAM & 256 QAM Tuners <sup>(1)</sup>
RF QPSK		Complies with ANSI/SCTE 55-1&2 2.048 Mbps & 1.544/3.088 Mbps, ANSI/SCTE 40	
CONNECTOR		F Connector; Chassis Rear	
FREQUENCY RANGE		54 MHz - 1 GHz in 1 kHz Steps, Supporting STD, IRC, HRC	
ADJACENT QAM CHANNEL REQUIREMENT		None; All Tuners Individually Agile	
RF INPUT		+5 to +10 dBmV per Digital Carrier	
RF INPUT TEST		-20 dB Relative to Input; F Connector, Chassis Rear	
<b>TS PROCESSING</b>			
PASSED CONTENT		Decrypt up to 72 Programs <sup>(1)</sup> Using up to 12 Multistream CableCARD™ Devices Remaining Unencrypted Content can be Transferred to the Device Output	Decrypt up to 20 Programs <sup>(1)</sup> Using up to 4 Multistream CableCARD Devices Remaining Unencrypted Content can be Transferred to the Device Output
CABLECARD DECRYPTION		Supports Motorola, Scientific Atlanta/Cisco, & NDS	
SUPPORTED VIDEO FORMATS		MPEG-2 MP@HL, MPEG-4 pt10 AVC/H.264 HP@L4	
SUPPORTED VIDEO RESOLUTIONS		Up to 720p & 1080i	
SUPPORTED AUDIO FORMATS		Dolby® Digital (AC-3), MPEG-1 L1/2	
DECODING		Supports Decoding of up to 72 Streams per Chassis	Supports Decoding of up to 20 Streams per Chassis
ADDITIONAL PROCESSING CAPABILITIES		Closed Captioning, VBI Insertion, Teletext, DVB* Subtitles	
SUPPORTED ASPECT RATIOS		4:3, 16:9	
<b>OUTPUT</b>			
RF		Up to 72 Modulated Channels	Up to 20 Modulated Channels
SUPPORTED MODES		NTSC, PAL B/G, PAL D/K	
FREQUENCY RANGE		54-750 MHz (EIA ch2-116) <sup>(2)</sup>	
FREQUENCY PLANS		STD, HRC, IRC & Custom Offsets	
OUTPUT LEVEL & FLATNESS		35 dBmV +/- 2 dB per Analog Carrier	
SIGNAL-TO-NOISE RATIO (SNR)		54 dB (min)	
CARRIER-TO-NOISE RATIO (CNR)		54 dB (min)	
COMP. TR. BT. (CTB)		-65 dBc	
COMP. 2nd ORD. (CSO)		-65 dBc	
OUTPUT RETURN LOSS		18 dB (min)	
DEMODULATED VIDEO	DIFFERENTIAL GAIN	≤ 5%	
	GROUP DELAY VARIATIONS	≤ 100nS	
	2TK FACTOR	≤ 2%	
OUTPUT VIDEO ASPECT RATIOS		4:3, 16:9	
ANALOG AUDIO OUTPUT FORMAT		Mono	
CONNECTOR		F Connector; Chassis Rear	
RF OUTPUT TEST		-20 dB Relative to Output; F Connector, Chassis Rear	
<b>DEVICE MANAGEMENT</b>			
MANAGEMENT INTERFACE		Local or Remote Management via Integrated Secure Web Server	
MANAGEMENT INTERFACE PORT		10/100/1000BASE-T, Static IP or DHCP, RJ45, Chassis Rear	
SECONDARY CRAFT PORT		10/100/1000BASE-T, Static IP, RJ45, Chassis Rear	
MANAGEMENT SECURITY		3 Password Protected Tiered User Accounts	
MASS DEPLOYMENT & BACKUP		Importable/Exportable Device Configuration Files	
REMOTE MONITORING		Integrated SNMP Agent & MIB	
REMOTE MANAGEMENT SUPPORT		F Connector Provided for Optional MSO Supplied Cable Modem Installation for Remote Management	
ALARMS		Email Notification, SNMP Traps	
<b>EAS</b>			
MODES		Support for ANSI/SCTE 18 Compliant & Non-compliant Devices	
<b>PHYSICAL &amp; ENVIRONMENTAL</b>			
FORM FACTOR		3RU, 19" Rack Mount	2RU, 19" Rack Mount
DIMENSIONS		5.25"H x 19.0"W x 23.96"D (13.34H x 48.26W x 60.85D cm)	3.5"H x 19.0"W x 17.8"D (8.89H x 48.26W x 45.11D cm)
WEIGHT		45.0 lbs (20.4 kg)	26.9 lbs (12.2 kg)
INPUT POWER		5.0 Amps @ 115 VAC, 2.5 Amps @ 230 VAC	2.0 Amps @ 115 VAC, 1.0 Amps @ 230 VAC
POWER REDUNDANCY		Fully Redundant 520W Power Supply Modules, Hot-swappable	Single, Non-redundant 700W Power Supply
ELECTRICAL APPROVAL		Approved to UL 60950-1, 2nd Edition (File E325862)	
POWER CONTROL		Software Power Control	
OPERATING TEMPERATURE		0°C to +40°C <sup>(3)</sup> (+32°F to +104°F)	
HUMIDITY		0-95% Non-condensing	
<b>NOTES:</b>			
(1) Depends upon ordered hardware options.			
(2) Supports output frequencies up to 750 MHz, however specs above may only apply up to 650 MHz.			
(3) For details on exceeding +30°C, please refer to the UCrypt Environment & Temperature Considerations Info Sheet (#ANW1066).			
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## UCrypt<sup>®</sup> QAM to Analog:

### Ordering Information

Part Number	Description
<b>QAM to ANALOG</b>	
UCQ2A20	UC Q2A 20 Tuner/Decrypt & Analog Output (AC power)
UCQ2A60	UC Q2A 60 Tuner/Decrypt & Analog Output (AC power)
UCQ2A72	UC Q2A 72 Tuner/Decrypt & Analog Output (AC power)
<b>Power Supply Modules</b>	
UCTPSMOD-AC3	UCrypt AC Power Supply Module 3
UCTPSMOD-DC1	UCrypt DC Power Supply Module 1

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