MODEL
DVISm™

MPEG-2 / H.264 SD /HD
MINI DIGITAL VIDEO INSERTION SYSTEM (DVISm)

Patent Pending

DVISm
(front view)

Features

- Dynamic PID monitoring engine prevents outages of pass through and inserted programs due to PSI changes introduced by DAC/DNCS or EdgeQAMs

- "One-click" configuration download and upload for fast and easy bulk configuration management

- Enhanced graphical interface includes step-by-step feedback during QAM tuning process

- RF bypass switch bypasses deletion filter and restores original QAM in case of power failure or unit reboot

- Cost-effectively insert locally generated MDU content (e.g. security camera or localized advertising) in digital format (MPEG-2/H.264, SD/HD, QAM/IP)

- Ideal for spectrum reclamation or MDUs provisioned with digital-only set-top boxes (DTAs)

- Scalable wall mount solution: up to 6 SD (or 3 HD) programs can be multiplexed onto a QAM channel

- Satisfy any digital insertion methodology: blank QAM from headend, locally deleted QAM at MDU, and underutilized QAM (add/drop) from headend - see functional application diagram

- Integrated QAM channel deletion filter (filter is optional)

- Fully integrated audio/video encoders, demodulator, multiplexer and QAM modulator/RF upconverter

- Hot-swappable 1 and 2-channel encoder cards, QAM demodulator card and IP output card

- Possibility of mixing HD and SD encoder cards within the same chassis

- Allows users to deliver up to 6 SD (or 3 HD) baseband A/V inputs (e.g. security camera or local content) via multiplexed MPEG-2/H.264/QAM to the MDU in a cost-effective and efficient manner; field-scalable with plug-in 1 or 2-channel encoder cards

- HTTP-based GUI allows for easy set-up and control without the need for proprietary software installation

- Remote access and SNMP monitoring available via integrated RJ45 Ethernet interface

- MDU hardened wall mount enclosure with lockable front door

- Very flexible and easy expandable - all features are in one box with front access to all modules and connections

- Includes the following operational modes (set through GUI): IP output only, IP+QAM output simultaneously, and QAM output only (please see appropriate data sheet for IP/QAM specs)

DVISm (open view)

DVISm (closed view)

Ordering Information

Part Number	Description
DVISM*CE	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3, 4, 5 or 6), NTSC/AC-3 Dolby®.
DVISM*CEM	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3, 4, 5 or 6), PAL/MPEG-1 Layer II.
DVISM*CECD[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3, 4, 5 or 6), NTSC/AC-3 Dolby and Channel Deletion Filter.
DVISM*CECDM[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3, 4, 5 or 6), PAL/MPEG-1 Layer II and Channel Deletion Filter.
DVISM*CEQMB	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), NTSC/AC-3 Dolby and QAM-B Demodulator Card.
DVISM*CEQMA	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), NTSC/AC-3 Dolby and QAM-A/C Demodulator Card.
DVISM*CEQMBM	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), PAL/MPEG-1 Layer II and QAM-B Demodulator Card.
DVISM*CEQMAM	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), PAL/MPEG-1 Layer II and QAM-A/C Demodulator Card.
DVISM*CEQMBCD[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), NTSC/AC-3 Dolby, QAM-B Demodulator Card and Channel Deletion Filter.
DVISM*CEQMACD[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), NTSC/AC-3 Dolby, QAM-A/C Demodulator Card and Channel Deletion Filter.
DVISM*CEQMBCDM[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), PAL/MPEG-1 Layer II, QAM-B Demodulator Card and Channel Deletion Filter.
DVISM*CEQMACDM[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), PAL/MPEG-1 Layer II, QAM-A/C Demodulator Card and Channel Deletion Filter.
DVISM*CEH	Digital Audio/video Insertion Unit QAM Out with * MPEG-2/H.264 SD/HD DV1HDA Cards Installed (* = Number of Cards, ie. 1, 2 or 3).
DVISM*CECDH[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2/H.264 SD/HD DV1HDA Cards Installed (* = Number of Cards, ie. 1, 2 or 3) and Channel Deletion Filter.
DVISM*CEQMBH	Digital Audio/video Insertion Unit QAM Out with * MPEG-2/H.264 SD/HD DV1HDA Cards Installed (* = Number of Cards, ie. 1 or 2) and QAM-B Demodulator Card.
DVISM*CEQMAH	Digital Audio/video Insertion Unit QAM Out with * MPEG-2/H.264 SD/HD DV1HDA Cards Installed (* = Number of Cards, ie. 1 or 2) and QAM-A/C Demodulator Card.
DVISM*CEQMBCDH[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2/H.264 SD/HD DV1HDA Cards Installed (* = Number of Cards, ie. 1 or 2), QAM-B Demodulator Card and Channel Deletion Filter.
DVISM*CEQMACDH[1]	Digital Audio/video Insertion Unit QAM Out with * MPEG-2/H.264 SD/HD DV1HDA Cards Installed (* = Number of Cards, ie. 1 or 2), QAM-A/C Demodulator Card and Channel Deletion Filter.
DVISMCD[1]	Separate Channel Deletion Filter.
DVISMBASE	DVISm QAM Out Base Unit/chassis (no plug-in cards or Channel Deletion Filter installed).
DV1CE	Separate 1-channel MPEG-2 SD Encoder Plug-in Card (1 Video + 2 Audio Inputs), NTSC/AC-3 Dolby.
DV1CEM	Separate 1-channel MPEG-2 SD Encoder Plug-in Card (1 Video + 2 Audio Inputs), PAL/MPEG-1 Layer II.
DV2CE	Separate 2-channel MPEG-2 SD Encoder Plug-in Card (2 Video + 4 Audio Inputs), NTSC/AC-3 Dolby.
DV2CEM	Separate 2-channel MPEG-2 SD Encoder Plug-in Card (2 Video + 4 Audio Inputs), PAL/MPEG-1 Layer II.
DV1HDA	Separate 1-channel MPEG-2/H.264 SD/HD Encoder Plug-in Card (Component/VGA).
DV1HDMI	Separate 1-channel HDMI® Encoder Plug-in Card.
DV2DA	Separate Baseband Audio/video Distribution Amplifier (2-way split).
DVDMQMB	Separate QAM-B Demodulator Plug-in Card (Add/drop functionality).
DVDMQMAC	Separate QAM-A/C Demodulator Plug-in Card (Add/drop functionality).
DVGIGE	Separate Gigabit Ethernet Output Plug-in Card SFP/RJ45.
DVFAN	Replacement/spare Fan for DVISm.
DVISMRBR	Mounting Brackets for Mounting DVISm to 19" Rack.
DVMPWRSUP	Replacement/spare Power Supply for DVISm.

NOTES:
(1) See Filter Ordering Information on page 9.
Dolby is a registered trademark of Dolby Laboratories. Manufactured under license from Dolby Laboratories.

Specifications

DVISm

<table>
<tr><td colspan="2">BASE PLATFORM</td></tr>
<tr><td colspan="2">CHASSIS OVERVIEW</td></tr>
<tr><td>DIMENSIONS</td><td>13.5"H x 14.5"W x 8.75"D (34.29H x 36.83W x 22.23D cm), Wall Mount, Lockable Front Door</td></tr>
<tr><td>WEIGHT (Max)</td><td>23.5 lbs (10.7 kg)</td></tr>
<tr><td>EXPANSION CARD SLOTS</td><td>Three</td></tr>
<tr><td rowspan="4">ENCODED PROGRAMS</td><td>Up to 6 SD (or 3 HD) into One QAM Channel</td></tr>
<tr><td>Up to 4 SD (or 2 HD) with Gigabit Ethernet Output Card Module</td></tr>
<tr><td>Up to 4 SD (or 2 HD) with Demodulator Card Module</td></tr>
<tr><td>Scalable (plug-in cards with one or two encoders per card)</td></tr>
<tr><td>POWER SUPPLY</td><td>IEC Connector/ 90-264 VAC, 50/60 Hz</td></tr>
<tr><td>POWER CONSUMPTION</td><td>46W</td></tr>
<tr><td>DEVICE MANAGEMENT</td><td>HTTP/SNMP Network Interface (RJ45)</td></tr>
<tr><td>OPERATING TEMPERATURE</td><td>0°C to +50°C (+32°F to +122°F)</td></tr>
<tr><td>HUMIDITY</td><td>0-95% (without condensation)</td></tr>
<tr><td colspan="2">TS MULTIPLEXER</td></tr>
<tr><td>PACKET SIZE</td><td>188 Bytes</td></tr>
<tr><td>TS SUPPORT</td><td>QBA, AF</td></tr>
<tr><td>PROGRAM NUMBER & TS NUMBER</td><td>User Settable (Program #: 1-65535; TS ID: 1-65535)</td></tr>
<tr><td>PSI / SI / PSIP INFORMATION TABLE</td><td>PAT, PMT, SDT, NIT, MGT, CVCT</td></tr>
<tr><td>SETTABLE PIDs</td><td>PMT, PCR (0x0015-0x1FFE; dec. 21-8190)</td></tr>
<tr><td colspan="2">QAM MODULATOR / RF UPCONVERTER</td></tr>
<tr><td>QAM MODULATION</td><td>ITU-T J.83 Annex A/Annex B/Annex C</td></tr>
<tr><td>MODULATION FORMAT</td><td>16, 32, 64, 128, 256 QAM</td></tr>
<tr><td>RF QAM OUTPUT POWER AT MODULATOR OUTPUT (Max)</td><td>57.5 +/- 1.5 dBmV</td></tr>
<tr><td>RF QAM OUTPUT POWER AT RF OUT (Max)</td><td>37.5 +/- 1.5 dBmV</td></tr>
<tr><td>ATTENUATOR</td><td>0-26 dB</td></tr>
<tr><td>ATTENUATOR STEP</td><td>1.0 dB</td></tr>
<tr><td>RF QAM FREQUENCY OUTPUT RANGE[1]</td><td>45-870 MHz[1]</td></tr>
<tr><td>SUPPORTED CHANNEL PLANS</td><td>STANDARD, HRC, IRC</td></tr>
<tr><td>FREQUENCY STEP</td><td>250 kHz</td></tr>
<tr><td rowspan="2">RF QAM CHANNEL BANDWIDTH</td><td>6 MHz (Annex B)</td></tr>
<tr><td>Max. 8 MHz (Annex A/C)</td></tr>
</table>

<table>
<tr><td>EXCESS BANDWIDTH</td><td>Annex B: 12% (256 QAM), 18% (64 QAM)</td></tr>
<tr><td></td><td>Annex A: 15%</td></tr>
<tr><td></td><td>Annex C: 13%</td></tr>
<tr><td colspan="2">BASE PLATFORM (cont'd)</td></tr>
<tr><td colspan="2">QAM MODULATOR / RF UPCONVERTER (cont'd)</td></tr>
<tr><td rowspan="4">SYMBOL RATE</td><td>Annex B: Automatically Set with Selected Modulation Format</td></tr>
<tr><td>5.360537 MSymb/s - 256 QAM</td></tr>
<tr><td>5.056941 MSymb/s - 64 QAM</td></tr>
<tr><td>Annex A/C: Max. 7 MSymb/s</td></tr>
<tr><td>MER EQUALIZED[2]</td><td>> 40 dB[2]</td></tr>
<tr><td>FREQUENCY OFFSET</td><td>< 2ppm</td></tr>
<tr><td>SYMBOL RATE OFFSET</td><td>< +/- 50 Hz</td></tr>
<tr><td>CARRIER SUPPRESSION</td><td>> 55 dB</td></tr>
<tr><td>SIGNAL/NOISE</td><td>> 45 dB</td></tr>
<tr><td>SPURIOUS</td><td>-60 dB</td></tr>
<tr><td>TS PROCESSING</td><td>Null Packet Insertion and PCR Correction</td></tr>
<tr><td>FEC</td><td>ITU-T J.83 Annex B; DVB-C EN300429 and ITU-T J.83 Annex A/C</td></tr>
<tr><td colspan="2">BASE PLATFORM</td></tr>
<tr><td colspan="2">RF INTERFACES</td></tr>
<tr><td>RF IN</td><td>F, 75 Ω</td></tr>
<tr><td>RF IN TEST</td><td>F, 75 Ω (-20 dB)</td></tr>
<tr><td>RF OUT</td><td>F, 75 Ω</td></tr>
<tr><td>RF OUT TEST</td><td>F, 75 Ω (-20 dB)</td></tr>
<tr><td rowspan="2">RF IN / RF OUT PASSBAND INSERTION LOSS - TYPICAL (Max)</td><td>WITHOUT QAM CHANNEL DELETION FILTER — 8.5 dB @ 1000 MHz</td></tr>
<tr><td>WITH QAM CHANNEL DELETION FILTER — 9.5 dB @ 1000 MHz</td></tr>
<tr><td>RF IN / RF OUT RETURN LOSS</td><td>> 15 dB</td></tr>
<tr><td>TO DEMODULATOR</td><td>F, 75 Ω (-10 dB)</td></tr>
<tr><td>TO CABLE MODEM</td><td>F, 75 Ω (-20 dB)</td></tr>
<tr><td>MODULATOR OUTPUT</td><td>F, 75 Ω</td></tr>
<tr><td>TO COMBINING</td><td>F, 75 Ω</td></tr>
</table>

NOTES:
(1) Extended tune range 15-975 MHz. Contact ATX for details.
(2) Measured with Rohde & Schwarz EFA (FW Ver 05.33).

Specifications

HD Encoder Cards

HD Encoder Cards	DV1HDA	DV1HDMI
VIDEO INPUTS		
COMPONENT/HDMI		
CONNECTOR	3x RCA Female	1x HDMI Female (Type A)
CHROMA FORMAT	YPbPr 4:2:2	
RESOLUTIONS	480p_60 (59.94)	
	576p_50	
	720p_60 (59.94)	
	720p_50	
	1080i_60 (59.94)	
	1080i_50	
PC - VGA		
CONNECTOR	DE-15 Female, 15-Pin, 3 Rows	n/a
CHROMA FORMAT	RGB 4:4:4	n/a
RESOLUTIONS	640 x 480, 60 Hz	n/a
	800 x 600, 60 Hz	n/a
	1280 x 720, 60 Hz	n/a
	1024 x 768, 60 Hz	n/a
	1280 x 1024, 60 Hz	n/a
	1366 x 768, 60 Hz	n/a
	1400 x 1050, 60 Hz	n/a
	1920 x 1080, 60 Hz	n/a
AUDIO INPUTS		
ANALOG L/R		
CONNECTOR	TRS 3.5 mm Female, 2x RCA Adapter Female	
DIGITAL SPDI/F		
CONNECTOR	1x RCA (Coaxial) Female	n/a
AUDIO STANDARD	IEC 61937:AC-3 (Pass Through)	n/a
MAX CHANNELS	6 (5.1) Pass Through	n/a
HDMI		
AUDIO STANDARD	n/a	PCM

VIDEO PROCESSING				
ENCODING	MPEG-2	H.264	MPEG-2	H.264
ENCODE LEVEL	MPEG-2 HD MP @ HL	High Profile Level 5	MPEG-2 HD MP @ HL	High Profile Level 5
CHROMA	4:2:0			
BIT RATE	1-25 Mbps			
COMPONENT/HDMI VIDEO RESOLUTIONS	480p_60 (59.94)			
	576p_50			
	720p_60 (59.94)			
	720p_50			
	1080i_60 (59.94)			
	1080i_50			

HD Encoder Cards

VIDEO PROCESSING (cont'd)				
ENCODING	MPEG-2	H.264	MPEG-2	H.264
VGA RESOLUTIONS	640 x 480, 60 Hz		n/a	
	800 x 600, 60 Hz		n/a	
	1280 x 720, 60 Hz		n/a	
	1024 x 768, 60 Hz		n/a	
	1280 x 1024, 60 Hz		n/a	
	1366 x 768, 60 Hz		n/a	
	1400 x 1050, 60 Hz		n/a	
	1920 x 1080, 60 Hz		n/a	
VIDEO PID SETTING	Yes (0x0015-0x1FFE; dec. 21-8190)			
VBI PROCESSING	Closed Captions (Line 21/EIA-608 captions) via Separate CVBS Connected Source			

AUDIO PROCESSING		
AUDIO ENCODER		
ENCODE STANDARD	Dolby® Digital AC-3 ATSC A/52 (2.0)	
SAMPLE RATE	48 kHz	
BIT RATE	192, 256, 384 kbps	
AUDIO PID SETTING	Yes (0x0015-0x1FFE; dec. 21-8190)	
DIGITAL AUDIO PASS THROUGH		
AC-3 (2.0/5.1) PASS THROUGH	Yes (S/PDIF)	n/a
PHYSICAL & ENVIRONMENTAL		
DIMENSIONS	6.5"H x 0.75"W x 3.0"D (16.5H x 1.9W x 7.6D cm)	6.5"H x 0.75"W x 3.0"D (16.5H x 1.9W x 7.6D cm)
WEIGHT	0.33 lbs (0.15 kg)	0.35 lbs (0.16 kg)

NOTE:
Dolby is a registered trademark of Dolby Laboratories. Manufactured under license from Dolby Laboratories.

DV1HDA   DV1HDMI

Specifications

SD Encoder Cards

	DV1CE / DV1CEM	DV2CE / DV2CEM
VIDEO		
INPUT	CVBS, NTSC / PAL[1]	
INPUT INTERFACE	1x BNC, 75 Ω	2x BNC, 75 Ω
ENCODING FORMAT	MPEG-2, 4:2:0, MP@ML	
ENCODING BIT RATE TYPE	CBR	
VIDEO ADJUSTMENTS	Brightness, Contrast, Saturation	
VIDEO PROCESSING	TBC	
RESOLUTION — HORIZONTAL	720, 704, 544, 528, 480, 352	
RESOLUTION — VERTICAL	480, 576	
FRAME RATE	29.97fps, 25fps[1]	
VIDEO ENCODING BIT RATE	1-8 Mbps	
GOP STRUCTURE	IBBP - Length 15	
VIDEO PID SETTING	Yes (0x0015-0x1FFE; dec. 21-8190)	
VBI PROCESSING	Closed Captions	
AUDIO		
INPUT	Analog, Unbalanced	
INPUT INTERFACE	2x RCA (pair L/R)	4x RCA (2x pair L/R)
ENCODING FORMAT	Dolby Digital AC-3, MPEG-1 Layer II[1]	
MODES	Stereo, Mono	
SAMPLING RATE	48 kHz	
ENCODING BIT RATES	192, 256, 384 kbps	
AUDIO PID SETTING	Yes (0x0015-0x1FFE; dec. 21-8190)	
PHYSICAL		
DIMENSIONS	6.5"H x 0.75"W x 3.0"D (16.5H x 1.9W x 7.6D cm)	
WEIGHT	0.33 lbs (0.15 kg)	

DV1CE / DV1CEM

DV2CE / DV2CEM

NOTES:

(1) DV1CE and DV2CE provide NTSC/Dolby Digital AC-3 encoding (29.97fps); DV1CEM and DV2CEM provide PAL/MPEG-1 Layer II encoding (25fps).

Dolby is a registered trademark of Dolby Laboratories. Manufactured under license from Dolby Laboratories.

Specifications

Demodulator Plug-in Cards

	DVDMQMB	DVDMQMAC
QAM MODULATION	QAM-B (ITU-T J.83 Annex B)	QAM-A/C (ITU-T J.83 Annex A/C)
MODULATION FORMAT	64, 256 QAM	16, 32, 64, 128, 256 QAM
INPUT INTERFACE	F, 75 Ω	
RF QAM FREQUENCY INPUT RANGE	54-864 MHz	47-862 MHz
FREQUENCY STEP	250 kHz	
CHANNEL BANDWIDTH	6 MHz	8 MHz
RF QAM INPUT POWER INTO DVISm RF IN PORT	20 dBmV ± 2 dBmV	
INTERMEDIATE CENTER FREQUENCY	44 MHz	36.15 MHz
OSCILLATOR PHASE NOISE (@10 kHz)	-88 dBc (min)	
RF AGC RANGE (Typ)	45 dB	
OSCILLATOR VOLTAGE AT DEMODULATOR CARD RF INPUT (Max)	< -45 dBmV (40 MHz < f < 900 MHz)	
PHYSICAL		
DIMENSIONS	6.5"H x 0.75"W x 3.0"D (16.5H x 1.9W x 7.6D cm)	
WEIGHT	0.33 lbs (0.15 kg)	

DVDMQMB / DVDMQMAC
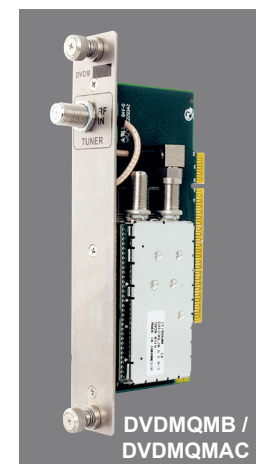
Specifications

Gigabit Ethernet Card

	DVGIGE
PHYSICAL	
COPPER PORTS	2x RJ45
SFP PORTS	2x SFP Cage
POWER CONSUMPTION (with 4 Active Ports)	~ 4W
DIMENSIONS	6.5"H x 0.75"W x 3.0"D (16.5H x 1.9W x 7.6D cm)
WEIGHT	0.33 lbs (0.15 kg)
BIT RATES & STANDARDS	
RJ45 PORTS	10/100/1000BASE-T & 10/100/1000BASE-TX
SFP PORTS	1000BASE-LX
IP OUTPUT CHARACTERISTICS	
TRANSPORT LAYER	UDP, RTP
STREAMING PROTOCOL	Multicast, Unicast
NETWORK	DHCP, VLAN Tagging (IEEE 802.1Q)
ENCAPSULATION	1-7 TS Packets per Ethernet Frame
TRANSMISSION	SPTS, MPTS
NULL STUFFING	OFF, ON (User Settable Limit)

DVGIGE

Specifications

A/V DA (2-way Split) Card

	DV2DA
VIDEO	
INPUT/OUTPUT	CVBS (PAL/NTSC)
INPUT/OUTPUT INTERFACES	1x BNC (75 Ω) / 2x BNC (75 Ω)
INPUT IMPEDANCE	75 Ω
OUTPUT IMPEDANCE	75 Ω
VIDEO INSERTION LOSS (0.3-12.0 MHz)	< 0.4 dB
INPUT/OUTPUT RETURN LOSS	> 30 dB
OUTPUT TO OUTPUT ISOLATION	> 60 dB
OUTPUT TO INPUT ISOLATION	> 60 dB
VIDEO BANDWIDTH	> 10 MHz
AUDIO	
INPUT/OUTPUT	Analog Unbalanced
INPUT/OUTPUT INTERFACES	1 Pair L/R / 2 Pairs L/R (Terminal Block x6)
GAIN (1-20 kHz)	0 dB
INPUT IMPEDANCE	22 Ω
OUTPUT IMPEDANCE	200 Ω
AUDIO BANDWIDTH	50 Hz to > 20 kHz
PHYSICAL	
DIMENSIONS	6.5"H x 0.75"W x 3.0"D (16.5H x 1.9W x 7.6D cm)
WEIGHT	0.33 lbs (0.15 kg)

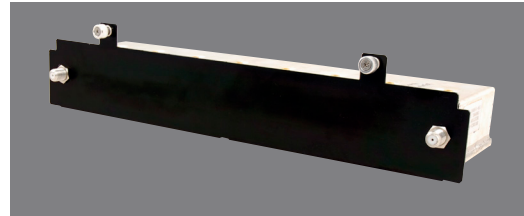DV2DA
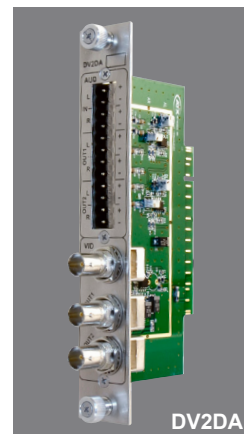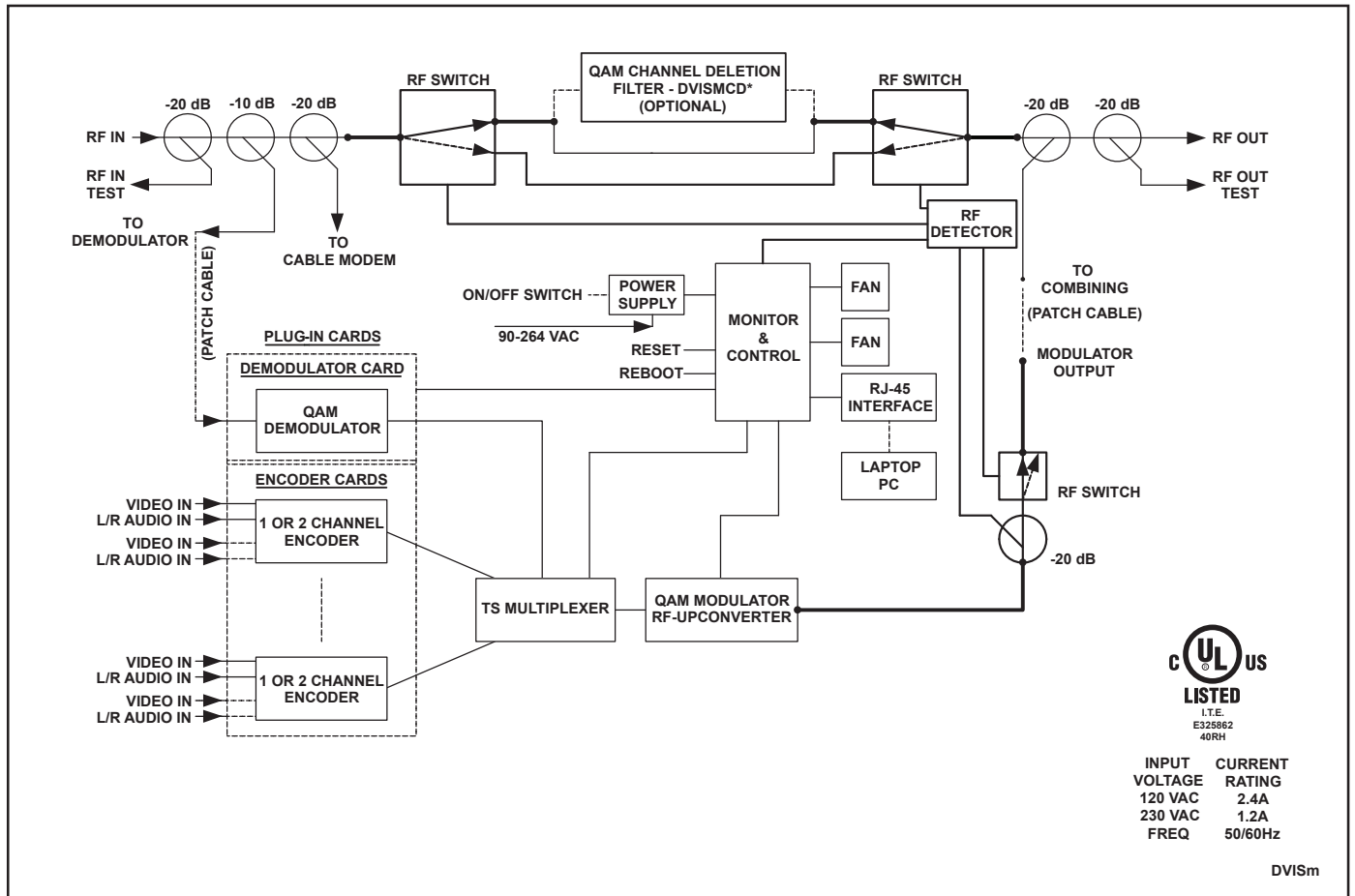
Functional Schematic
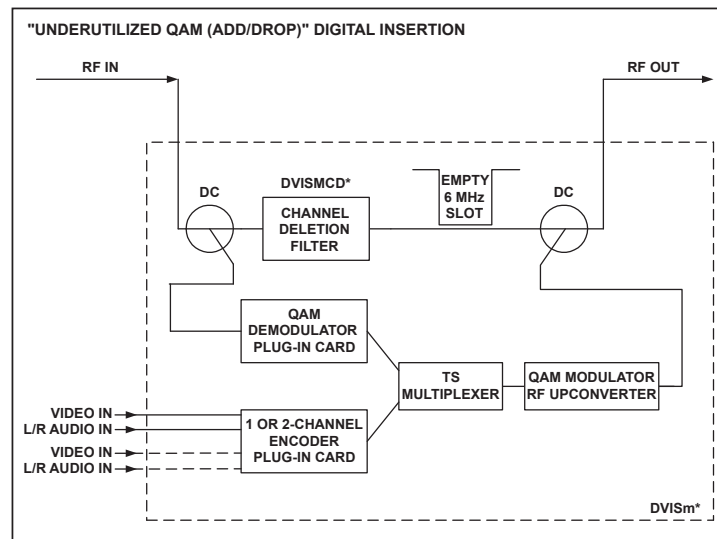
Application Diagram

* Please see Ordering Information

DVISMCD* - QAM Channel Deletion Filter

- Deletes a digital QAM channel and allows a new channel to be reinserted
- Wide operating bandwidth
- Temperature stable
- Low frequency vibration stable
- Exceptionally low insertion loss 8 element design

Specifications

QAM Channel Deletion Filter

		DVISMCD*
BANDWIDTH[1]		5-1000 MHz
CHANNEL REJECTION	**BELOW 500 MHz**	> 55 dB
	500 MHz to 650 MHz	> 50 dB
	ABOVE 650 MHz	> 45 dB
RETURN LOSS		> 16 dB[2]
IMPEDANCE		75 Ω
TEMPERATURE RANGE		+5°C to +35°C (+41°F to +95°F)
DIMENSIONS		1.5"H x 12.0"W x 3.0"D (3.81H x 30.48W x 7.62D cm)
WEIGHT		1.0 lbs (0.5 kg)
HUMIDITY		0-95% (without condensation)
PASSBAND INSERTION LOSS		< 1.5 dB
TYPICAL		< 1 dB
INSERTION LOSS (Digital Channels)	**LOWER ADJACENT DIGITAL CHANNEL (Center Frequency)**	3 dB
	UPPER ADJACENT DIGITAL CHANNEL (Center Frequency)	2 dB
INSERTION LOSS (Analog Channels) SURGE RATING	**LOWER ADJACENT ANALOG CHANNEL (Video)**	1 dB
	LOWER ADJACENT ANALOG CHANNEL (Audio)	6 dB
	UPPER ADJACENT ANALOG CHANNEL (Video)	2 dB
	UPPER ADJACENT ANALOG CHANNEL (Audio)	1 dB

NOTES:

(1) Although passband is specified to 1000 MHz, if the channel to be deleted is greater than 800 MHz, the specifications in this table may not be applicable. Consult ATX for more details.

(2) This does not apply within 20 MHz (average) from the channel being deleted.

Ordering Information

Part Number	Description
DVISM*CECD	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3, 4, 5 or 6), NTSC/AC-3 Dolby and Channel Deletion Filter.
DVISM*CEQMBCD	Digital Audio/video Insertion Unit QAM Out with * MPEG-2 SD A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4), NTSC/AC-3 Dolby, QAM-B Demodulator Card and Channel Deletion Filter.
DVISMCD	Separate Channel Deletion Filter.

ORDERING NOTES:

1. Following values MUST be specified by customer at time of ordering:
   - **DC** (Deleted Channel) = channel #, analog OR digital
   - **LAC** (Lower Adjacent Channel) = analog OR digital
   - **HAC** (Higher Adjacent Channel) = analog OR digital
   - **IC** (Inserted Channel) = digital (no option as the DVISm output is digital)
   - **CT** (Channel Table) = Standard OR HRC

   EXAMPLE:
   Part #: DVISM*CECD
   Specified by Customer: DC=37 digital, LAC=digital, HAC=analog, IC=digital, CT=Standard

2. **Customers outside North America, please specify RF channel beginning and end frequency (NOT center frequency or video/audio carrier frequencies) instead of channel numbers.**

* Please see Ordering Information

Old Way – Analog System

One Channel contains one Program
One channel is deleted
A new program is modulated and reinserted
All channels can be tuned by an Analog TV Tuner
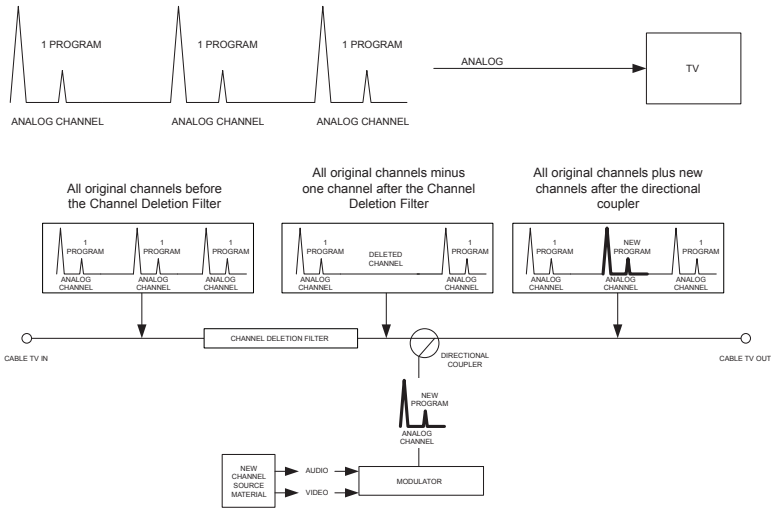
New Way – All Digital System

One Channel can typically contain up to 10 programs
One channel is deleted
Any number of programs within that channel can be "dropped"
One to Four new programs can be "added", modulated and inserted
The new channel can only be tuned with a Digital Set-Top Box
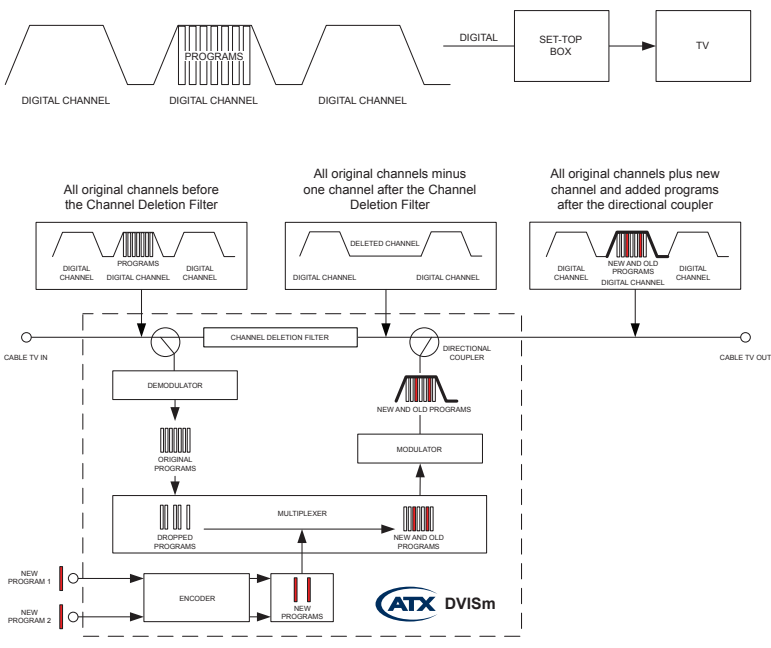
Add/Drop Application Note

MDU Solutions® is a registered trademark of ATX in the United States and/or other countries. Products or features contained herein may be covered by one or more U.S. or foreign patents. Dolby® and other non-ATX product and company names mentioned in this data sheet are the property of their respective companies.

ISO
9001:15
REGISTERED

www.amt.com

advanced / media technologies®

Advanced Media Technologies, Inc. · 3150 SW 15th Street Deerfield Beach, FL 33442
(888) 293-5856 · (954) 427-5711 · Fax (954) 427-9688