



Compact Multichannel MPEG-2 Encoder/Multiplexer (DigiVu Mini) - QAM Output:

Features:

- ▶ Compact & flexible audio/video encoding solution for digital transmission and/or insertion applications
- ▶ A cost-effective & space-efficient encoding, multiplexing & transmission (QAM or GigE) platform ideal for digital simulcast, applications or digital delivery of PEG or hub site specific programming
- ▶ Scalable 1RU (19" rack mount) solution: up to 4 A/V programs can be directly encoded/multiplexed with QAM output or up to 2 A/V programs with GigE output
- ▶ Hot-pluggable 1-channel & 2-channel encoder cards available for easy upgrade & unit configuration
- ▶ Hot-pluggable QAM Demodulator card available for QAM processing functionality
- ▶ Hot-pluggable GigE output card (copper/SFP optical) available
- ▶ Plug-in cards are externally accessible & easily replaceable; no need to open or remove unit from rack
- ▶ Fully integrated system components & QAM Modulator with Agile Wideband RF Upconverter (15-975 MHz)
- ▶ Front accessible & replaceable fans with in-line fan connector
- ▶ HTTP-based GUI allows for easy set-up & control without the need for proprietary software installation
- ▶ Remote access & SNMP monitoring available via integrated RJ45 Ethernet interface
- ▶ Includes the following operational modes (set through GUI): IP output only, IP+QAM output simultaneously, & QAM output only (please see appropriate spec sheet for IP/QAM specs)



Ordering Information

Part Number	Description
DGVU1RU*CE ⁽¹⁾	Compact Multichannel Digital Encoder with * A/V Baseband Inputs (* = Number of Inputs, ie. 1, 2, 3 or 4).
DV1CE ⁽¹⁾	Separate 1-channel Encoder Plug-in Card (1 Video + 2 Audio Inputs) for Subsequent Plug-in Installation.
DV2CE ⁽¹⁾	Separate 2-channel Encoder Plug-in Card (2 Video + 4 Audio Inputs) for Subsequent Plug-in Installation.
DV2DA	Baseband Audio/Video Distribution Amplifier (2-way split).
DVDMQMB	Separate QAM-B Demodulator Plug-in Card (Add/Drop Functionality) for Subsequent Plug-in Installation.
DVDMQMAC	Separate QAM-A/C Demodulator Plug-in Card (Add/Drop Functionality) for Subsequent Plug-in Installation.
DVGIGE	Separate Gigabit Ethernet Output Plug-in Card SFP/RJ45.
NOTE:	
(1) To order PAL/MPEG-1 Layer II Encoding, add letter M to the end of part number.	

Compact Multichannel MPEG-2 Encoder/Multiplexer (DigiVu Mini) - QAM Output:

DigiVu Mini - QAM Output Specifications

BASE PLATFORM SPECIFICATIONS	
CHASSIS OVERVIEW	
SIZE	1.75"H x 19.0"W x 16.5"D (4.45H x 48.26W x 41.91D cm); 19" Rack Mount (1RU)
EXPANSION CARD SLOTS	2
ENCODED PROGRAMS	Up to 4 into one QAM Channel, Scalable (plug-in cards with 1 or 2 encoders per card) Up to 2 with Gigabit Ethernet Output Card Module Up to 2 with Demodulator Card Module
POWER SUPPLY	IEC Connector/ 90-264 VAC, 50/60Hz
POWER CONSUMPTION	43W
DEVICE MANAGEMENT	HTTP/SNMP Network Interface (RJ45)
OPERATING TEMPERATURE	0°C to +50°C (+32°F to +122°F)
HUMIDITY	0-95% (without condensation)
TS MULTIPLEXER	
PACKET SIZE	188 Bytes
TS SUPPORT	QBA, AF
PROGRAM NUMBER & TS NUMBER	User Settable (Program #: 1-65535; TS ID: 1-65535)
PSI / SI INFORMATION TABLE (PAT, PMT)	Automatically Generated
SETTABLE PIDs	PMT, PCR (0x0015-0x1FFE; dec. 21-8190)
QAM MODULATOR/RF UPCONVERTER	
QAM MODULATION	ITU-T J.83 Annex A/Annex B/Annex C
MODULATION FORMAT	16, 32, 64, 128, 256 QAM
RF QAM OUTPUT POWER AT RF OUT	57.5 +/- 1.5 dBmV
ATTENUATOR	0-26 dB
ATTENUATOR STEP	1.0 dB
RF QAM FREQUENCY OUTPUT RANGE ⁽¹⁾	45-870 MHz ⁽¹⁾
SUPPORTED CHANNEL PLANS	STANDARD, HRC, IRC
FREQUENCY STEP	250 kHz
RF QAM CHANNEL BANDWIDTH	6 MHz (Annex B) Max. 8 MHz (Annex A/C)
EXCESS BANDWIDTH	Annex B: 12% (256 QAM), 18% (64 QAM) Annex A: 15% Annex C: 13%
SYMBOL RATE	Annex B: Automatically Set with Selected Modulation Format 5.360537 MSymb/s - 256 QAM 5.056941 MSymb/s - 64 QAM Annex A/C: max. 7 MSymb/s
MER EQUALIZED ⁽²⁾	> 40 dB ⁽²⁾
FREQUENCY OFFSET	< 2ppm
SYMBOL RATE OFFSET	< +/- 50 Hz
CARRIER SUPPRESSION	> 55 dB
SIGNAL/NOISE	> 45 dB
SPURIOUS	-60 dB
TS PROCESSING	Null Packet Insertion & PCR Correction
FEC	ITU-T J.83 Annex B; DVB-C EN300429 & ITU-T J.83 Annex A/C
RF INTERFACES	
RF OUT	F, 75 Ohm
RF OUT TEST	F, 75 Ohm (-20 dB)
RF OUT RETURN LOSS	> 15 dB
NOTES:	
(1) Extended Tune Range 15-975 MHz. Contact factory for details.	
(2) Measured with Rohde & Schwarz EFA (FW Ver 05.33).	

Compact Multichannel MPEG-2 Encoder/Multiplexer (DigiVu Mini) - QAM Output:

DigiVu Mini - QAM Output Specifications (cont'd)

ENCODER PLUG-IN CARD SPECIFICATIONS		DV1CE / DV1CEM	DV2CE / DV2CEM
VIDEO			
INPUT CVBS, NTSC / PAL ⁽¹⁾			
INPUT INTERFACE		1 x BNC, 75 Ohm	2 x BNC, 75 Ohm
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	
	VERTICAL	480, 576	
FRAME RATE		29.97fps, 25fps	
VIDEO ENCODING BIT RATE		1 - 8 Mbps	
GOP STRUCTURE		IBBP - Length 15	
VIDEO PID SETTING		Yes (0x0015-0x1FFE; dec. 21-8190)	
CLOSED CAPTIONING		EIA-608	
AUDIO			
INPUT Analog, Unbalanced			
INPUT INTERFACE		2 x RCA (pair L, R)	4 x RCA (2 x 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)	
NOTES:			
(1) DV1CE & DV2CE provide NTSC/Dolby Digital AC-3 encoding; DV1CEM & DV2CEM provide PAL/MPEG-1 Layer II encoding.			
Dolby is a registered trademark of Dolby Laboratories. Manufactured under license from Dolby Laboratories.			

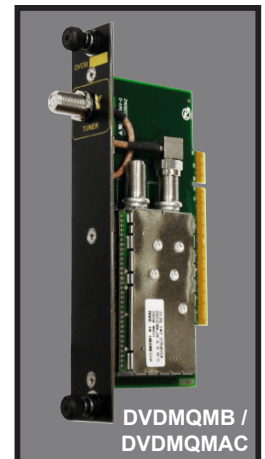


DV1CE / DV1CEM



DV2CE / DV2CEM

DEMODULATOR PLUG-IN CARD SPECIFICATIONS		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 Ohm	
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 DEMODULATOR CARD		10-15 dBmV	
INTERMEDIATE CENTER FREQUENCY		44 MHz	36.15 MHz
OSCILLATOR PHASE NOISE (@10 kHz)		-88 dBc (min.)	
RF AGC RANGE (Typ.)		45 dB	
OSC. VOLTAGE AT DEMOD. CARD RF INPUT (Max.)		< -45 dBmV (40 MHz < f < 900 MHz)	



DVDMQMB / DVDMQMAC

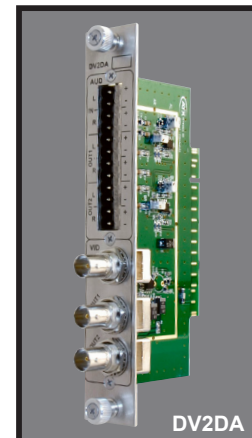
Compact Multichannel MPEG-2 Encoder/Multiplexer (DigiVu Mini) - QAM Output:

DigiVu Mini - QAM Output Specifications (cont'd)

GIGABIT ETHERNET CARD SPECIFICATIONS		DVGIGE
PHYSICAL		
COPPER PORTS		2 X RJ45
SFP PORTS		2 X SFP Cage
POWER CONSUMPTION (w/ 4 Active Ports)		~ 4W
BITRATES & 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 (1 Program), MPTS (≥ 2 Programs)
NULL STUFFING		OFF, ON (User Settable Limit)

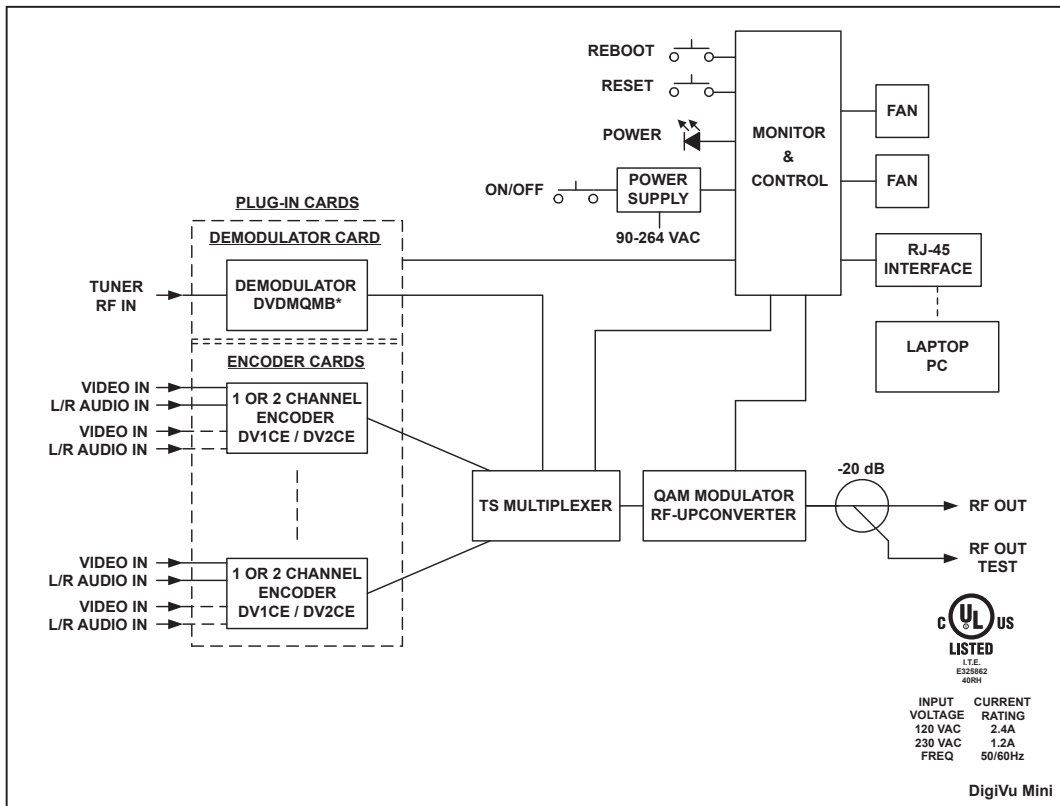


A/V DA (2-WAY SPLIT) CARD SPECIFICATIONS		DV2DA
VIDEO		
INPUT/OUTPUT		CVBS (PAL/NTSC)
INPUT/OUTPUT INTERFACES		1xBNC (75 Ohm) / 2xBNC (75 Ohm)
INPUT IMPEDANCE		75 Ohm
OUTPUT IMPEDANCE		75 Ohm
VIDEO INSERTION LOSS (0.3 - 12.0 MHz)		< 0.4 dB
INPUT/OUTPUT RETURN LOSS		> 30 dB
OUTPUT TO OUTPUT ISOLATION		> 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 Ohm
OUTPUT IMPEDANCE		200 Ohm
AUDIO BANDWIDTH		50 Hz to > 20 kHz

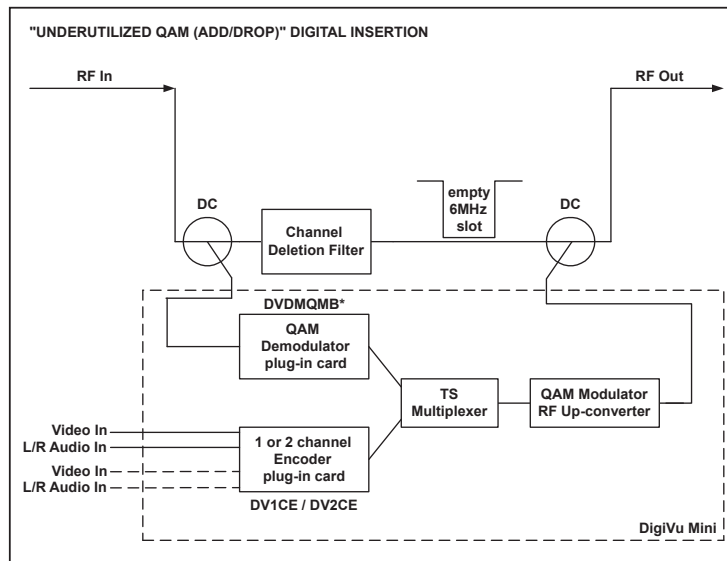


Compact Multichannel MPEG-2 Encoder/Multiplexer (DigiVu Mini) - QAM Output:

Functional Schematic



Application Diagram



* Please see Ordering Information

Specifications subject to change without notice.

