EH24 Encoder Host

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The scalable Drake Digital EH24 Encoder Host features six bays fitting any combination of SDE24 and HDE24 modules, all within in a 2 rack unit (RU) chassis. The EH24 system can encode up to 12 analog video inputs when fully populated with six SDE24 Encoder Modules. The EH24 can multiplex the encoded video streams and output them via an integrated 1GHz QAM modulator and/or an integrated DVB-ASI port, to transmit the digital video over the network.

The EH24's sophisticated transport stream multiplexer can combine any or all of the program streams from the Encoder Modules. The operator may select what programs to include in the QAM output channel and, independent of the QAM output, what programs to output via the DVB-ASI port. The QAM RF output can be specified for either off-air or CATV frequency plans in the 54 to 1002 MHz spectrum. The EH24 and installed Encoder Modules are powered by a highly-efficient, integrated switching power supply.

Applications

- Hospitality
- Health Care
- Commercial
- Government/Military
- Digital Signage
- Cable Networks

Benefits

- **Dual Output Multiplexing QAM modulation**
  The Drake Digital™ EH24 Encoder Host can multiplex the encoded video streams and output them via an integrated 1GHz QAM modulator and/or an integrated DVB-ASI port, to transmit the digital video over the network.
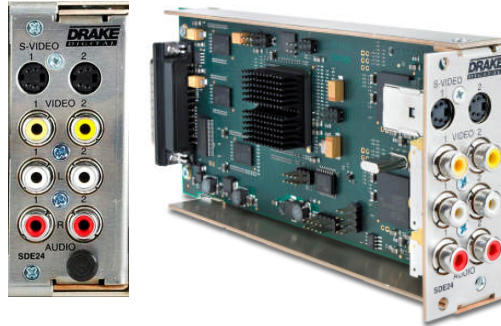
- **Scalable System**
  The Drake Digital™ EH24 Encoder Host features six bays fitting any combination of SDE24 and HDE24 modules, all within in a 2 rack unit (RU) chassis. The EH24 system can encode up to 12 analog video inputs when fully-populated with six SDE24 Encoder Modules.

- **Customizable**
  The EH24's sophisticated transport stream multiplexer can combine any or all of the program streams from the Encoder Modules. The operator may select what programs to include in the QAM output channel and, independent of the QAM output, what programs to output via the DVB-ASI port. The QAM RF output can be specified for either off-air or CATV frequency plans in the 54 to 1002 MHz spectrum.

SDE24 Standard Definition Encoder Module

SDE24 Standard Definition Encoder Module

The SDE24 module can encode up to two input sources, source 1 and source 2 in real-time. The module may be configured to encode source 1 in either MPEG2 or MPEG4 (H.264) transport streams. Source 2 may be encode in MPEG2 only. Thus each Encoder Module can output one MPEG2 stream, two MPEG2 streams, one MPEG4 stream, or one MPEG2 and one MPEG4 stream.

Each SDE24 module provides two sets of input connectors for NTSC composite or S-video with stereo audio. Audio is encoded using Dolby AC-3 encoding.

Applications
- Hospitality
- Health Care
- Commercial
- Government/Military
- Digital Signage
- Cable Networks

Benefits
- **Analog to Digital encoding**
  The Drake Digital™ SDE24 Standard Definition Encoder Module receives up to two input sources via NTSC Composite or S-video with stereo audio.

- **MPEG2 or MPEG4 compression for bandwidth efficiency**
  Input 1 on the SDE24 can encode analog signals to either MPEG2 or MPEG4 (H.264) transport streams. Input 2 can encode an analog signal to a MPEG2 transport stream only. Each SDE24 Encoder Module can output as one MPEG2 stream, two MPEG2 streams, one MPEG4 stream and one MPEG2 stream.

- **Dolby Digital™ AC-3 audio compliant**
  Audio output is rated as Dolby Digital™ AC-3 compliant.

SDE24 – Rev 4

The SDE24 Standard Definition Encoder Modules can be used in the EH24 Encoder Host or MEQ1000

EH24 Encoder Host   MEQ1000

SDE24 Standard Definition Encoder Module Technical Specifications

Analog Interface	
Composite Video Inputs:	2 composite inputs, one for each program
Composite Video Input Level:	1 Volt p-p +/- 3 dB
S-Video Inputs:	2 S-Video connectors, one for each program
Composite or S-Video select:	User selectable for each program input
Audio Inputs, for 2 programs:	RCA type for L and R audio channels, 2 sets
Audio Input Level:	1 V rms or 2 V rms max, user selectable
User adjustable audio gain:	+/- 15 dB
MPEG Encoder	
Encoder Formats – Input 1:	MPEG2 or MPEG4 H.264, selectable
Encode Format – Input 2:	MPEG2 only
Note: Each encoder module has two sets of inputs marked 1 and 2. Number 1 input from all installed modules will appear as odd-numbered encoders in the EH24 menu. Likewise, number 2 SDE24 inputs will correspond to even-numbered encoders in the EH24 menu. The number 2 inputs/even numbered encoders cannot be set to encode MPEG4/H.264.	
Encoding Bitrate:	Constant Bitrate 1 Mbps to 8 Mbps
Encoding Resolution:	720x480 (Standard Definition)
Video Adjustments:	Brightness, Contrast, Saturation & Hue
Audio Encoding format:	Dolby AC-3
Output:	The output of each SDE24 module is connected internally to the EH24 or MEQ1000 Encoder Host bus
Latency SD, 480i, MPEG2:	Typically 50 mS
Latency SD, 480i, MPEG4:	Typically 100 mS

Specifications, price, and availability are subject to change without notice or obligation.

SDE24 – Rev 4

EH24 Encoder Host Technical Specifications

Program Filtering and Grooming:	Encoded programs may be disabled or sent to one or both output ports – ASI or QAM, user selectable. The output timing is restamped and null packets are managed as required.
Multiplexer:	Built in multiplexer circuitry combines the outputs of all enabled encoders in an EH24 into multi-program transport streams, one to the QAM output and one to the ASI output.
MPEG Program Numbers:	Configurable by operator. If not individually configured, default MPEG program numbers in the output transport stream will be assigned sequentially, corresponding to the encoder number. The leftmost encoder input, as viewed from the rear panel, will be # 1.
ASI Output:	Any or all of the enabled encoders may be directed to the ASI output by means of the user selectable program filter.
QAM Modulator:	Any or all of the enabled encoder outputs may be directed to the QAM Modulator by means of the user selectable program filter.
Output Symbol Rate:	1 to 7 MSps
Modes/FEC:	ITU-A: 16, 32, 64, 128, 256, 512, 1024 QAM ITU-B (DigiCipher): 64, 256, 1024 QAM
I/Q Phase Error:	Less than 1 degree.
MER:	Greater than 38 dB with blind EQ
Upconverter RF Output	
Output Frequency Range:	54 MHz to 1002 MHz.
Channel Plan:	Standard CATV, HRC, IRC or Broadcast.
Frequency Stability:	+/- 5 ppm.
Maximum Output Level:	40 dBmV to 61 dBmV, adjustable
Output Level Accuracy:	+/- 1 dB.
Output Impedance:	75 Ohms, RL 14 dB or better, 54 – 10002 MHz
Spurious Outputs:	-60 dBc from 40 MHz to 1000 MHz.
Broadband Noise:	Less than -12 dBmV (6 MHz BW@+/- 12 MHz)
Phase Noise:	-101 dBc @ 10 kHz offset.
General	
Power:	90-132 VAC / 47-63 Hz, 70 W maximum
Weight:	11 lb. 5 oz. (5.2 Kg)
Size:	19" (48.26 cm) W x 14.25" (36.20 cm) L x 3.5" (8.89 cm) H
Operating Temperature:	0º C (32º F) to 50º C (122º F)

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