



EH244 Series Encoder Host Chassis System

Features and Benefits



Model Numbers

EH244 IP & QUAD ASI Encoder Host	1002579
EH244 IP Only Encoder Host	1002578
EH244 Quad QAM & ASI Encoder Host	1002569
EH244 Quad QAM Encoder Host	1002568
EH244 Q-IP-ASI	1002593
EH244 IP & QUAD QAM Encoder Host	1002580

- Flexible and scalable platform provides cost effective SD or HD MPEG2 and MPEG4 H.264 encoding solution
- Compact 2RU Chassis houses up to 6 Drake Encoder Modules
- Front panel display and control in addition to GUI based remote interface
- Available with any combination of RF Quad QAM, IP or Quad ASI Output
- Encoder cards available to support Composite Video, Component Video, HDMI and HD SD SDI
- Supports both Dolby AC3 and MPEG1 layer2 audio encoding
- EAS Ready (Emergency Alert) Program Replacement and SCTE18 are both supported

The Drake EH244 Series Encoder Host Chassis provides an ideal platform for MPEG 2 and MPEG 4 H.264 video encoding needs due to its many flexible and configurable output options. Designed to house any combination of Drake's popular High Definition or Standard Definition encoder modules the EH244 is designed with a total of 6 input bays and an internal multiplexer that allows the user to construct custom program multiplexes and output them in any combination of RF QAM, ASI (transport stream) or IP based on the output configuration ordered. By offering these flexible options customers can purchase a single output configuration based on an exact need to stay within budget or choose multiple output configurations to support both current and future needs such as RF QAM and IP. Common to all EH244 chassis are an RJ-45 Ethernet management port and an ASI data port for low data rate applications such as EAS (Emergency Alert) and DTA set top box control data to support Drake's "All Digital Bandwidth Recovery Solution". For applications that require ASI for program stream distribution the Quad ASI option must be ordered.

QAM- An integrated Quad QAM modulator provides four bonded 6MHz RF QAM channels that are frequency agile in 24MHz blocks based on the first selected channel. One or more encoded streams may be distributed to each of the 4 QAM channels based on bandwidth requirements, SD and MPEG 4 H.264 content require the least amount of bandwidth so multiple programs can be multiplexed on a single QAM channel as long as the maximum data rate for the selected QAM rate is not exceeded. For example, 38.8 MB/s is the maximum data rate for 256QAM a popular choice for many customers. MPEG2 HD programs require the most bandwidth so users may choose to limit each QAM channel to only one or two programs. Any unused QAM channels may be disabled during setup and that channel may be reused for other content.

IP- An additional RJ-45 port provides IP encapsulate content from each of the encoder modules (up to 12 programs if using SDE24A modules or six programs if using HDE24A or SDI24A modules) in a Multicast of SPTS or MPTS streams as selected by the user.

ASI- The Quad ASI option provides 4 ASI ports that allow users to distribute encoded content as transport streams for monitoring purposes or for additional processing such encryption which may require integration with other vendor supplied products. The internal multiplexer will distribute content to each ASI output port as a mirror of the QAM multiplexes or all data may be routed through a single ASI port of the users choice.

Applications

- Broadcast Cable TV or Telco Networks • Hospitality/Cruise Ships • Health Care
- Government /Military • Educational • Commercial Business Enterprise

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Multiplexer Specifications

Program Filtering and Grooming:	Each encoder output can be disabled or output to any or all output channels
Multiplexer:	All programs directed to each output are multiplexed into a correct multi-program transport stream
ASI Outputs:	An optional 4 ASI Output board may be ordered that mirrors the 4 QAM channel output transport streams

Table Handling – PSIP (Program and System Information)

PSIP Table Rewriting:	Supported
MGT/VCT Table Generation:	Supported
SCTE18 EAS Generation:	Supported

IP (INTERNET PROTOCOL) Output – EH244 IP (Common to all IP models)

1000Base-T Ethernet (GbE) Connector Format:	1 x RJ45 Gigabit Ethernet (GbE)
Data Throughput:	214 Mbps
Standard:	IEEE 802.3 10/100/1000 Base-T Ethernet
Packet Format:	RTP within UDP
Source Address Assignment:	Single IPv4 address & port; user-selectable

QAM (Quadrature Amplitude Modulation) RF Output – EH244 QAM (Common to all QAM models)

Modulation Modes:	64, 256QAM ITU j.83 Annex B 16, 32, 64, 128, 256QAM ITU j.83 Annex A
Symbol Rates:	1 – 7 Msps variable, with presets for Annex B
Frequency Coverage:	54 – 1002 MHz, up to 4 frequency-adjacent channels
Channel Plans:	Standard CATV, HRC, IRC, Broadcast
Max Output Power:	+ 54 dBmV
Min Output Power:	+ 42 dBmV
Output Level Accuracy:	± 2 dB
Phase Noise:	< -108 dBc/Hz @ 10 kHz offset
Broadband Noise:	< -75 dBc @ 12 MHz offset in a 6 MHz bandwidth
MER:	> 44 dB equalized
Channel Frequency Response:	< 1dB
Carrier Suppression:	> 80 dB
I/Q Imbalance:	< 1 degree
Spurious Emissions:	< -60 dBc

STREAMING Quad ASI – EH244 Q-ASI (Common to all ASI Models)

Connector:	4 x BNC
Format:	DVB-ASI; 50083-9
ASI Data Bit Rate:	270 Mbps

NON-STREAMING Single ASI Output – All EH244 models

ASI Connectors:	1 x BNC for EAS/DTA data control only
Format:	DVB-ASI for EAS/SCTE-65
Data Throughput:	214 Mbps
Standard:	ETSI EN 50083-9

Physical Specifications

Temperature Rating:	0 – 50° C ambient
Form Factor:	2RU 19" rack enclosure
Dimensions:	14.25"D x 3.5"H x 19" W
Weight:	12 lbs
Power Requirements:	90 – 260 VAC, 65 W maximum