Falcon HMR Series
Professional Video Receivers
Falcon HMR5440 and Falcon HMR5442

A series of rugged, compact, multi-format professional IRDs, the Falcon HMR5440 and Falcon HMR5442 professional video receivers are used in broadcast contribution and distribution applications where multiple video formats (SD and HD), interface flexibility (Satellite and IP) and content protection (BISS) are required.

Performance

The Falcon HMR series offers an unprecedented combination of features, performance, and reliability at an industry-leading value. Both versions of the Falcon HMR support SD and HD resolutions, and MPEG-2 and MPEG-4 decoding. The Falcon HMR5442 adds 4:2:2 functionality in MPEG-2 and MPEG-4, including 10 bit 4:2:2 in MPEG-4. The Falcon HMR5442 also includes full 1080p 60 decoding and output along with support for AAC audio. The Falcon HMR series is a perfect complement to DTVI's Gryphon series of MPEG Video Encoders.

Video

The Falcon HMR5440 and Falcon HMR5442 support all common HD and SD video formats. Multiple video output formats are supported including: analog NTSC and PAL, and digital SDI for standard definition; and HD-SDI and component video for high definition. The Falcon HMR5442 adds support for 1080p50/60 3G-HD-SDI and HDMI. Video processing is automatically sensed by the decoder and processed as either MPEG-2 or MPEG-4, SD or HD. Included in the basic functionality of the Falcon HMR5440 is video resolution conversion from HD to SD, and from SD to HD, and aspect ratio conversion from 4:3 to 16:9 and from 16:9 to 4:3.

Audio

Both Falcon HMR models decode up to eight audio channels (four pairs) with analog and digital outputs, and embedded within the SDI or HD-SDI video signal.

Genlock (frame sync)

Either Falcon HMR may optionally be configured with internal frame sync for Genlocked applications. Unlike competitive products, correct lip sync is guaranteed—even while operating in frame sync mode.

Input Interfaces

Both Falcon HMR models are highly flexible and offer various input interfaces including ASI, DVB-S, DVB-S2, or MPEG TS over IP.

Operator Control

The Falcon HMR family provides an embedded Web browser, an intuitive front panel interface, or RS-232 command line interface for easy configuration and monitoring.

Features

- SD and HD Resolution
- MPEG-2 and MPEG-4 Decoding
- 4:2:0 and 4:2:2 Chroma
- Video Resolution Conversion
- Aspect Ratio Conversion
- SDI and NTSC/PAL Composite SD Output
- 3G-HD-SDI, HD-SDI, HDMI or Analog HD Output
- ASI, DVB-S, DVB-S2, and MPEG Over IP input options
- Eight Audio Channels
- MPEG, AAC, AC3, Dolby® E and Uncompressed Audio Support
- Full Front Panel Control
- Remote Control via Web Browser or RS-232 Command Line Interface
- PGCA, BISS 1 and E Decryption
- Genlock (Frame Sync) Option
- Companion Product to the Gryphon MPEG Video Encoders

VISION + INNOVATION

Falcon HMR Series
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HMR5440

Output	Video	Audio
• SDI/HD-SDI & Simultaneous dual ASI • YPrPb • Analog Audio and Video • Digital and Embedded AES Audio	• MPEG-2 4:2:0 (MP@ML&HL) • MPEG-4 4:2:0 (HP@L.4.1)	• MPEG decode • AC3 2.0 decode • AC3 5.1 pass • Dolby E pass • Linear PCM

HMR5442

Output	Video	Audio
• SDI/HD-SDI & Simultaneous dual ASI • 3G-HD-SDI (1080p60) • HDMI • Analog Audio and Video • Digital and Embedded AES Audio	• MPEG-2 4:2:0 (MP@ML&HL) • MPEG-2 4:2:2 (422P@ML&HL) • MPEG-4 4:2:0 (HP@L.4.1) • MPEG-4 4:2:2 8&10bit (Hi422P@L4.2&5.0)	• MPEG decode • AAC decode • Dolby E pass • Linear PCM

HARDWARE OPTIONS (Only One Option Card per Chassis)
DVB-S2 Advanced Satellite Receiver Module - Generation 2
IP Interface Module
Genlock - Internal Frame sync

SOFTWARE OPTIONS
AC3 Audio Decoding (HMR5440 only)
AAC Audio Decoding (HMR5442 only)

INPUT INTERFACES

QPSK L-band DVB-S Receiver	QPSK 2 * L-band 950 to 2150 MHz, 1 to 45 MSps
DVB-S/DVB-S2 Demod Gen 2	DVB-S (QPSK) DVB-S2 (QPSK, 8PSK, 16APSK, 32APSK) 2 * L-band 950 to 2150 MHz, 256 ks/s to 45 MSps
IP Input Interface	UDP, RTP, RTP with COP3 FEC
E3/DS3 Interface	44.736 or 34.368 Mbps
ASI Input	Maximum transport rate = 213 Mbps
ASI Output	Active ASI loop output

VIDEO CAPABILITIES

Horizontal and Vertical Resolutions	• 720 x 480i (29.97 fps) NTSC • 720 x 576i (25 fps) PAL • 1280 x 720p (25 or 29.97 fps) • 1920 x 1080i (25 or 29.95 fps) • 1920 x 1080p (25, 29.97, 50, 59.94 fps)
Video Format Conversion (HMR5440 Only)	• HD to SD and SD to HD • 720p to 1080i and 1080i to 720p • 16x9 to 4x3 and 4x3 to 16x9
VBI Data	ATSC Closed Captioning (EIA-608) and (EIA-708)

FRONT PANEL INDICATORS
Rugged push buttons, illuminated LCD, bright indicator LEDs

CONDITIONAL ACCESS
BISS Modes 1 and E, PGCA

STATUS AND CONTROL INTERFACES
• Embedded Web browser interface for command and control
• SNMP
• RS-232 command line monitor and control
• Fully featured front panel control

POWER REQUIREMENTS

Supply Voltage	95 to 135 VAC or 180 to 265 VAC
Power Consumption	32 Watts (typical)

PHYSICAL PARAMETERS

Chassis	1RU rackmount
Dimensions (H, W, D)	4.5 cm x 44.5 cm x 39 cm (1.75" x 17.5" x 15.5")
Weight	5 kg (11 lbs.)

ENVIRONMENTAL CONDITIONS

Operating Temperature	0° to 50° C (32° to 122° F)

Made in the USA

VISION + INNOVATION

DTV Innovations │2402 Millennium Dr. │Elgin, IL 60124