HELIOS
BTX

HEVC **HDR** **10 BIT**

Broadcast performance RF System

The Rogue Waves Helios BTX

With Exceptional RF performance and picture quality in both HD and UHD the Rogue Waves BTX integrates a HEVC encoder with a COFDM modulator creating a single, compact package suitable for camera-back mounting, it can accept 12G or 3G SDI inputs.

V Lock or Anton Bauer battery plates facilitate pass-through power whilst an additional external power connector is provided at the base.

The BTX is equipped with a high-quality, low latency encoder capable of up to 10bit 4:2:2 and HDR metadata support.

Up to 8 stereo pairs of audio in either MPEG-1 layer 1. PCM format (4 stereo pairs in AAC-LC) can be extracted and encoded by BTX. Analogue audio inputs with phantom power are also available.

The onboard recording function controlled with the GUI allows recording on a memory card via USB with playback through the link.

Video Key Points

- 10 bit 4:2:2 video
- HEVC and H.264 encoding
- Accepts all HD SDI formats
- Auxiliary Metadata passthrough
- SDI Loop through
- Low latency
- Rugged design and build quality
- HDR metadata Support

RF Key Points

- COFDM Ultra long range RF
- DVB-T
- Licensable frequency options
- Doesn't use standard Wifi Channels
- Transmit to unlimited simultaneous receivers

The Helios range

The Helios range from Rogue Waves is designed from years of wireless systems experience in broadcast and film industries.

We have specifically constructed each component to be practical for the unpredictability of a film and TV set, while keeping it rugged and lightweight at the same time.

Using up to 10bit 4:2:2 sampling bonded with low latency HEVC encoding, allows for an exceptional video signal to be carried through the air, even when transmitting HDR or Camera native log images (S-Log, C-Log, 3G10, etc.)

Helios is a 4K UHD capable system, with a 12G input for professional film and broadcast cameras.

rogue waves

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Specifications

Video

Input	HD-SDI - 1.5G/ 3G/ 6G /12G*
Output	Uncompressed SDI Loop through
Streaming Output	Ethernet RJ45 1000/Base-T/100bT / VoIPP (SRT / UDP)
Video Encoding	HEVC - H.265 / H.264
Video Sampling	YCbCr - 4:2:2/4:2:0, 8/10-bit
Video Formats	720p: 50 / 59.94 / 60 1080i: 50 / 59.94 / 60 1080p: 23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60 2160p*: 23.98/24/25/29.97/30/50/ 59.94/60
HDR Support	Rec. ITU-R BT.2100-2 (PQ and HLG) and Rec. ITU-R BT.2020 Metadata
Ancillary Data	Timecode, Record Flag and ANC Camera Metadata
Auxiliary Data	RS232 1.2k to 115.2k baud

Audio

Audio Formats	SDI Embedded, Analogue stereo pair or differential mono +4dBu max input level (up to 63dB gain) +48v Phantom
Audio Encoding Encoder	MPEG-1 Layer 2/, Linear PCM/, AAC-LC
Quantity	2 pairs

Streaming

Video/Audio Encoding	Same as above
Streaming Output	Ethernet 1000/Base-T/100bT
Protocols	Unicast / Multicast, UDP / RTP / SRT
DVB-T Modulation	QPSK, 16QAM, 64QAM
Bitrate	25Mb/s maximum

Control

Local	Menu screen and Joystick
Remote	IP web GUI browser Control RJ45 1000/Base-T/100bT
Ethernet	RJ45 1000/Base-T/100bT
Data	1.2k to 115.2k baud, 8-bit

Connectors

RF out	N-Type female
Video In	BNC
Video Loop Out	BNC
Analogue audio in	Lemo 0B 5 pin Female
Power	Lemo 0B 4 pin Female
Ethernet	Hirose 6 pin Female
Data	Hirose 6 pin Male

Dimensions

Size (WxDxH)	113 x 88 x 27 mm
Weight	892g (with V-lock battery plates)
Mounting	V-Lock or AB plates with power pass

Power

DC In	9 – 36V Reverse polarity protection
Connector	0B 4 Pin Lemo
Power consumption	14W typical

Environment

Temperature Range	-10 to +50 ºC

Overview

Ultra Long Range COFDM

Keep away from Wifi frequencies

Low Delay

Unlimited simultanious receivers

Dimensions

w: 196mm

d: 101mm

h: 37mm

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