



FEATURES

- 8 way diversity receive antennas

- Ultra Low-Latency HEVC/H.264 decoder

- 4K UHD processing

- Support for HD HDR and Timecode (film industry) signal insertion

- Intuitive touch screen control

- Web browser control

- Upgrade to ST2110 interfaces

Sapphire-RXD Rack-mount Receiver Decoder

Sapphire-RXD is a Broadcast quality HEVC/H.264 receiver decoding system, combining class-leading RF technology with Ultra Low-Latency HEVC/H.264 decoding, presented in a compact 1/2 19" chassis.

The Sapphire-RXD cleverly combines DTC's 8 way diversity COFDM receiver and BWS' Sapphire Ultra-Low Latency HEVC/H.264 decoder in a single 2RU 1/2 19" package. This allows support for all legacy DTC transmitters while future proofing to HEVC and 4K.

Eight-way Maximum Ratio Combining diversity inputs ensure reception in the most difficult RF environments whilst configurable LO frequencies and variable power ensures support for a variety of external downconverters.

The Ultra-Low Latency H.265 decoder supports resolutions up to 4K in 10 bit 4:2:2 format and with full support for HDR reinsertion.

Sapphire-RXD will decode up to 8 stereo audio pairs and output them embedded on SDI, 1 pair of analogue audio outputs are also provided on XLR.

The Sapphire-RXD has a unified web-browser control interface for remote control. Local control is achieved with a single touch screen interface offering immediate status on transmitter performance and receiver status. The display can be set to operate in day or night modes, with intuitive configuration entry.

The Sapphire-RXD enables onward streaming of video and audio and supports multiple streaming formats including SRT. Timecode and HDR signalling are also fully supported.

Connectors

3G/HDS DI	4 x BNC Female 75 ohm
ASI Out	BNC Female 75 ohm
Genlock In	BNC Female 75 ohm
RF In	8 x BNC Female
Audio Out	2 x XLR Male 3 pin
Network	RJ45
Data	Hirose
Power 12V In	XLR Male 4 pin

RF

UHF Inputs	8 off UHF Maximum Ratio Combining
Tuning Step Size	250kHz

DVB-T Modulation

DVB-T Bandwidth	Dual Ped, 8MHz, 7MHz and 6MHz modes
DVB-T Guard	1/32, 1/16, 1/8, 1/4
DVB-T FEC	1/2, 2/3, 3/4, 5/6, 7/8
DVB-T Modulation	QPSK, 16QAM, 64QAM

Video

Video Coding	H.264 (DTC) and H.265
Input Format H.264	1920x1080p 59.94/50Hz 1920x1080i 59.94/50Hz 1920x1080p 30/29.97/25/24/23.97Hz 1920x1080psf 30/29.97/25/24/23.97Hz 1280x720p 60/59.94/50Hz
Input Format HEVC 4K UHD.	4:2:2/4:2:0, 8/10-bit 2160p 23.98/24/25/29.97/30/50/59.94/60 HD: 4:2:2/4:2:0, 8/10-bit 720p 50/59.94/60 1080i 50/59.94/60 1080p 23.98/24/25/29.97/30/50/59.94/60 1080psf 23.98/24/25/29.97/30

HDR/WGC

We support	Rec. ITU-R BT.2100-2 (PQ and HLG) Rec. ITU-R BT.2020
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Audio

Format	Embedded
Decoder	MPEG-1 Layer 1, MPEG-1 Layer-2, Linear PCM, AAC-LC
Quantity	4 pairs (8 pair if MPEG or Linear PCM)
Analogue	Line Level (+18/+24 dBu)

DVB ASI

Transport stream to 100Mb/s

IP Streaming

Formats	Unicast / Multicast / UDP / RTP / SRT
Bitrate	25Mb/s maximum

Genlock

Tri Level / Black Burst

Indicators

Display	Hi-brightness OLED with touch screen control.
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Control

Local	Touch Screen
Remote	IP web browser Control

Dimensions

Size (WxDxH)	½ 19" 2RU
Weight	4Kg
Mounting	Side-by-side mount kit available as an option
Cooling	Front to rear forced air

Power

Power In:	12V DC 45W 4K Decoding
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Part Numbers

SAPPH-RXD-2	Sapphire RX Decoder 2 way Diversity
SAPPH-RXD-4	Sapphire RX Decoder 4 way Diversity
SAPPH-RXD-6	Sapphire RX Decoder 6 way Diversity
SAPPH-RXD-8	Sapphire RX Decoder 8 way Diversity

