



KEY BENEFITS

- 8 or 16 way diversity receive antennas
- Ultra Low-Latency
- h.264 Diversity Receiver with optional HEVC
- Intuitive touch screen control
- ST2110 interfaces high rate video over IP interfacing (SFP)

SAPPHIRE

RXD5

RACK-MOUNT RECEIVER DECODER

Sapphire-RXD5 is a Broadcast quality H.264 & HEVC receiver decoding system, combining class-leading RF technology with Ultra Low-Latency H.264 & HEVC decoding, presented in a compact 1U 19" chassis.

The Sapphire-RXD5 cleverly combines an 8 way (upgradeable to 16 way) diversity COFDM receiver and DBS' Sapphire Ultra-Low Latency H.264 & HEVC decoder in a single 1RU 19" package, offering end to end latency of less than 40mS which makes it ideal for live action scenarios. Operators requiring legacy support for H.264 decoding can add this via an optional licence.

Eight-way (optional 16 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, video interfaces are 12G capable. A monitoring port can be provided on SFP which can be down sampled to

HD in the case of a 4K signal. Sapphire-RXD5 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-RXD5 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-RXD5 enables onward streaming of video and audio and supports multiple streaming formats including SRT. Timecode and HDR signalling are also fully supported. The Sapphire-RXD5 can support ST2110 interfaces for users requiring high rate video over IP solutions using the SFP interface provided.

SAPPHIRE RXD5 | KEY FEATURES

CONNECTORS

12G/HDSDI	4 x HD-BNC Female 75 ohm
SFP	1 x SFP Interface
ASI Out	BNC Female 75 ohm
Genlock In	BNC Female 75 ohm
RF In	8 or 16 x BNC Female
Audio Out	2 x Lemo
Control	RJ45
Stream	RJ45
Data	Hirose
Power 12V In	XLR Male 4 pin

RF

UHF Inputs	8 or 16 off UHF Maximum Ratio Combining
Tuning Step Size	250kHz

DVB-T MODULATION

DVB-T Bandwidth	Dual Ped, 8/7/6MHz and 5MHz 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.265 and Optional H.264
Input Format H.264	1920x1080p 60/59.94/50Hz 1920x1080i 60/59.94/50Hz 1920x1080p 30/29.97/25/24/23.97Hz 1920x1080psf 30/29.97/25/24/23.97Hz 1280x720p 60/59.94/50Hz
Input Format H.264 & 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

MONITOR

SFP	MSA or non-MSA modules 12G-SDI secondary output for monitoring including down sampling to HD
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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
Quantity	8 pairs
Analogue	Line Level (+18/+24 dBu)

DVB ASI

Transport stream to 100Mb/s

IP STREAMING

Formats	Unicast / Multicast / UDP / RTP / SRT
Bitrate	50Mb/s maximum

GENLOCK

Tri Level / Black Burst

CONTROL

Local	Touch Screen
Remote	IP web browser Control

DIMENSIONS

Size (WxDxH)	19" 1RU
Weight	4Kg
Cooling	Front to rear forced air

POWER

Power In:	12V DC 50-80W depending on number of downconverters
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PART NUMBERS

SAPPH-RXD5-8	Sapphire RX H.264 & HEVC Decoder 8 way Diversity
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SAPPHIRE RXD5 INCLUDES:

H.264 & HEVC HD Decode, DVB-T, UMLV, 8 Way Diversity

OPTIONAL EXTRA ITEMS

DEM0D-8	Additional 8 Demodulator Input PCB
LIC-4K-RX	UHD / 4K decode license
LIC-IP	IP Streaming / IP decoding license
LIC-ASIPS	ASI Packet switching license
LIC-H264-HD	Ultra low latency H.264 HD decoding license
LIC-DPED-RX	Dual Pedestal demodulation license

