VELOCITY

TXRPM

HEVC Transmitter with Record and Live Playback

Sapphire-TXRPM is a rugged HEVC encoder and COFDM transmitter designed for motorsport and mobile applications. It delivers ultra-low latency encoding and transmission of a single 4K UHD image or up to four synchronized HD camera feeds simultaneously.

The Sapphire Codec system provides exceptional HEVC compression, allowing multiple camera angles — such as Front, Rear, Driver and Instruments — to be transmitted individually or simultaneously with seamless switching. HEVC delivers significant bitrate savings over H.264, reducing storage and contribution bandwidth requirements while supporting 4K UHD formats.

In addition to live transmission, Sapphire-TXRPM records to USB mass storage, with typical recording times of up to 12 hours. Real-time over-air playback allows operators to instantly recall pre-recorded footage that may have been missed during live coverage.

An optional built-in CyanView camera control module enables remote control of up to four cameras for colour balancing, gain and black level adjustment.

With end-to-end latency of less than 40 ms, Sapphire-TXRPM is ideal for live broadcast applications. Its compact, rugged design and built-in 100 mW COFDM transmitter, supporting DVB-T or UVML for high-speed applications, make it particularly well suited to the demanding motorsport environment.



LIVE APPLICATIONS

- **Motor Sports**
- **Mobile Applications**

KEY FEATURES

- **High quality HEVC encoder with COFDM transmitter**
- **Record and Live Playback facility to mass storage USB device**
- **Low Latency for live applications**
- **Optional Cyanview Camera Control**
- **COFDM or DVB-ASI out**
- **Built in microphone to capture vehicle audio**

CONNECTORS

HDSDI 3G 1-4	DIN 1.0/2.3 75 ohm
ASI Out	DIN 1.0/2.3 75 ohm
RF Out	SMA Female
Data	Binder 3-pin Male
USB	Lemo 5-pin OB Female
Audio	Lemo 6-pin OB Female
DC In	Lemo 4-pin OB Female
Camera	Control 4 x 7pin Lemo OB Female
Ethernet	Binder 4-pin Male

RF

Frequency	2.0 – 2.7, 3.0 – 3.5, 5.5 – 6.0GHz
Output Power	100mW
Modulation	DVBT 8MHz, 7MHz and 6MHz or UVML 8MHz
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
DVB-T Bit Rate	3.6Mbps to 40Mbps

VIDEO ENCODER/DECODER

Profiles UHD	4K UHD. 4:2:2/4:2:0, 8/10-bit 2160p / 23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60
Profiles HD	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
Profiles SD	SD 4.2.2/4.2.0 480i / 29.97 576i / 25
Legacy Decoding	h.264
Latency	<40mS

STREAM INPUTS / OUTPUTS

DVB_ASI	Transport stream to 100Mb/s
IP Interference	1/100/1000 Base-T
IP Stream Format	Unicast/Multicast/RTSP (up to 30Mbps

AUDIO ENCODER/DECODER

Format	Embedded
Encoder	MPEG-1 Layer 2, ACC-LC Linear PCM
Quantity	4 Pairs (8 pairs in ACC-LC or Linear PCM)

ANALOG AUDIO

Formats	2 Pair Mic/Line
Built In Microphone	Omni Directional 6mm 16000Hz 40db

RECORD/PLAYBACK

Recording Indicators	Generic Mass Storage USB device
Interface	USB 2.0
Max Recording	Depends on Bitrate Typical 12 Hours
Playback	Granularity 1 Minute

POWER

DC Input	9 – 18VDC
Power Consumption	25W Typical at 4K

INDICATORS

Power	Green LED

CONTROL

Remote	IP web-browser Control RS232 for Record and Playback

PHYSICAL

Dimensions (W x D x H)	6.9 x 6.9 x 2.4 inches 175 x 174 x 60 mm
Weight	35 ounces 1 Kg

PRODUCT CODES

RPMTX-200270	TXRPM 2.0 - 2.7GHz
RPMTX-300370	TXRPM 3.0 – 3.7GHz