



FEATURES

Four way diversity Receiver

One or two SMPTE remote fibre heads.

Ultra low latency decoding

UHD or HD HEVC and H.264

Integrated camera control with multizone

RF loop through for multi-camera support

IRFCCU Integrated Fibre Receiver and Camera Control Unit

The IRFCCU is a 4 way diversity COFDM receiver and camera control unit in a single 2U 19" chassis. The IRFCCU can operate with two remote fibre heads over SMPTE fibre.

Each remote fibre head incorporates diversity receive antennas and reverse camera control transmitter. The use of SMPTE fibre allows each of the heads to be positioned up to 1km remote from the receiver.

The system is typically used with integrated wireless camera transmitters as shown (see separate data sheets), DBS has integrated solutions for Grass Valley, Sony and Hitachi cameras.

The IRFCCU combines a 4 way diversity COFDM receiver and DBS' Sapphire Ultra-Low Latency HEVC decoder, 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. Four-way Maximum Ratio Combining diversity inputs ensure reception in the most difficult RF environments, The RF inputs are looped allowing multiple base units to be stacked in multicamera environments. 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. The IRFCCU incorporates a comprehensive internal camera controller, supporting all major camera suppliers and camera features, including a multizone solution allowing cameras to move between coverage zones.

The remote fibre heads are designed for outdoor mounting, they are equipped with two NType antenna inputs, and an SMA output for UHF camera control. The antenna inputs are available in all major broadcast bands to 7GHz. The remote fibre heads can be powered over the SMPTE cable or locally with 12V inputs.

Connectors

12G/HDS DI	4 x HD-BNC Female 75 ohm
SFP	1 x SFP Interface
ASI In/Out	BNC Female 75 ohm
Genlock In	BNC Female 75 ohm
RF In	4 x BNC Female
RF Out	4 x BNC Female
Audio Out	2 x XLR Male 3 pin
Control	RJ45
Stream	RJ45
RCP	RJ45 Ethernet
Data	9 way DType
Tally	2 x 4 pin Lemo
Serial RCP	2 x 6 pin Hirose
ODU	2 x SMPTE Fibre
Power 12V In	XLR Male 4 pin

RF

UHF Inputs	4 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.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 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
-----	---

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" Rack 2RU
Weight	5Kg
Cooling	Front to rear forced air

Power

Power In:	12V DC
	Up to 90W depending on number and type of downconverters

ODU-G

RF Inputs	2 x NType
Frequency	2-2.7GHz or 7-7.5GHz others on request
Output	SMPTE Fibre
Camera Control	1 x SMA UHF Band
Dimensions	30 x 20 x 10cm weight 2kg
Mounting	Pole Mount

Part Numbers

IR FCCU	2U 19" 4 way Receiver Decoder with SMPTE inputs
ODU-G	Outdoor Receiver with SMPTE outputs

Optional Extra software Licenses

LIC-4K-RX	UHD / 4K decode
LIC-IP	IP Streaming / IP decoding
LIC-ASIPS	ASI Packet switching
LIC-DPED-RX	Dual Pedestal demodulation

