



WISI FIREFLY GBA02D2A2

HLS Streaming IRD and Modulator .

Up to 2 HLS inputs, up to 2 QAM and up to 2 PAL outputs



Description

FIREFLY HLS RECEIVER AND MODULATOR is a Smart Broadcast Platform. The FIREFLY HLS Receiver has been developed specifically to provide an alternative content contribution method. This smart receiver and decoder can convert HLS streams to both analog and digital formats, and provides a cost-effective solution for operators who wish to distribute linear TV channels to each sub headend. The FIREFLY HLS receiver and modulator model GBA02D2A2 allows you to receive up to 2 HLS streams, processing, modulation of up to 2 QAM and up to 2 PAL channels.

Scope of delivery

- 1x GBA02D2A2
- 1x Quick Guide

Technical data

HLS Streaming Input	
HLS IRD	Up to 2 HLS streams
HLS SD bitrate	Up to 4 Mbps per stream
HLS HD bitrate	Up to 8 Mbps per stream
HLS Adaptive Bitrate (ABR)	No (optional)
Streaming- In-/Output	
IP-Inputs	32 pcs.
IP-Outputs	32 pcs.
IP-Compliance	ISO/IEC 13818
IP-Input bitrate	max. 425 Mbit/s per IPTS, max. 850 Mbit/s total
IP-Output bitrate	max. 425 Mbit/s per IPTS, max. 850 Mbit/s total
IP-Input protocol	UDP/RTP/RTP+FEC Unicast and Multicast, IGMP v2 and v3
IP-Output protocol	UDP/RTP/RTP+FEC Unicast and Multicast, IGMP v2 and v3
IP-TS-Input format	SPTS CBR/VBR, MPTS CBR
IP-TS-Output format	SPTS CBR/VBR, MPTS CBR
IP-FEC Inputs	32 pcs.
IP-FEC Outputs	32 pcs.

At a glance:

- Single or dual HLS stream reception, up to 2 HD sources with 1 profile each or up to 2 SD sources with 1 profile each
- Conversion of HLS to IP Multicast/Unicast streams
- Integrated analog and digital modulator. Up to 2 QAM and up to 2 PAL channels
- Intuitive graphical user interface
- Output interface: IP or ASI and RF
- Deployment Scenarios: satellite distribution replacement, hospitality and cable operators, refugees TV, universities

Technical data

IP-FEC compliance	SMPTE 2022-1, SMPTE 2022-2
IP-Packet format	MPEG over UDP/IP and RTP/IP
IP-Packet size	188 Byte
IP-PCR restamping	Yes
IP-Dejittering	Yes, per default 100ms, individual adjustable
ASI Input/Output	
ASI-Input/Output	2 pcs. (max.)
ASI-Impedance	75 Ω
ASI-Frequency range	<270 MHz
ASI-Return loss	>17 dB (27...270 MHz)
ASI-Compliance	EN 50083-9:2002
ASI-Packet size Input/Output	188, 204/188 Byte
ASI-PCR restamping	Yes
ASI-Input/Output max. payload bitrate	Typ. 200 Mbit/s
MPEG Decoder - Video/Audio	
Video decoder	MPEG-2 SD (MP@ML) 1,5..15 MBit/s, MPEG-4 SD (MP@ML) Level 4.1, MPEG-4 HD (MP@HL) Level 4.1

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Technical data

Audio decoder	ISO 13818-3 MPEG-1 (L1/L2) MPEG-2 (L1/L2), Dolby Digital AC-3 (Dolby and the double-D symbol are trademarks of Dolby Laboratories. Manufactured under license from Dolby Laboratories)
Video downscaling	HD to SD for 1 Service
Video-Scaling	Auto, Ignore, Letterbox, Pan and scan, Combined, Forced
Subtitle	DVB and Teletext (EBU) EN 300 743
Audio format	Mono/Stereo/Dual NICAM mono/ BTSC/SAP/A2 Stereo/A2 Dual mono, AC-3
Compliance	ISO 13818-2 (MPEG-2/H.262); ISO 14496-10 (MPEG-4/H.264/AVC)

PAL-625/SECAM/NTSC Modulation (Analog TV)

Number of output channel	2 pcs.
Video standard	PAL/SECAM/NTSC
TV systems	PAL B/G, B/H, D/K, I, Nc, SECAM B/G, D/K, NTSC M
Audio system	A2 Stereo, NICAM, Mono, A2 Dual mono, NICAM Dual mono, AC-3
OSD Test pattern	Yes
WSS fade in	Yes, Auto, Off, Forced 4:3/14:9/16:9
Stereo mode	Stereo, Dual mono, Dual left/right
VPS Signaling	Yes, from Teletext or EIT
Carrier wave	Yes
Channel bandwidth	5/6/7/8 MHz
Video carrier modulation depth	adjustable 80...90%, 1% steps
Video group delay pre-correction	Yes, B/G general, D/K GOST 20532-75, M FCC
Test lines	Yes
Audio gain	adjustable 12...-12 dB, 1 dB steps
Audio subcarrier level	Auto, -10...30 dBc, 1 dB steps
Output level	84...111 dBμV (1 ch), 81...108 dBμV (2 ch)
Output frequency	45...862 MHz
Frequency table	OIRT, EIA, CCIR, OI
S/N Video, weighted (CCIRrec. 567-1)	typ. 64 dB
C/N, broadband	>70 dB (65 dB typical at adjacent channel)
Spurious suppression	>60 dBc

DVB-C Modulation (Digital TV/Radio)

Number of output channel	2 pcs.
Constellations	16-, 32-, 64-, 128-, 256-QAM
Spectrum	normal or inverted
Symbol rate	2,4...13,6 MS/s

Technical data

MER (at RF out)	> 43 dB for 256-QAM
Output frequency	45...862 MHz
Frequency table	OIRT, EIA, CCIR
Output level	78...105 dBμV (1 ch), 75...102 dBμV (2 ch), 72...99 dBμV (3 ch), 69...96 dBμV (4 ch)
Spurious suppression	>60 dB
Compliance	DVB-C (EN 300 429)
Processing	
Service remultiplexing	Yes
PID filtering and remapping	Yes
PCR correction and de-jitter	Yes
Advanced PSI/SI regeneration	Yes
Processing bitrate	max. 850 Mbps total
Number of PIDs	max. 2000 PIDs total
Compliance	ETSI EN 300 468

Connectors

RJ45	3 pcs. (1x Management, 2x Streaming)
BNC-socket	6 pcs. (2 Individually configurable for in/out via UI)
F-socket RF- output	3 pcs. (1 for digital out, 1 analog out and 1 is not in operation)

General data

Power consumption	45 W
Power supply	Redundant power supply, internal, 90...260 V, 47...63 Hz
Operating temperature range	-5°C...+45°C, 23°F...113°F, (ETSI EN 300 019-1-3 Class 3.1)
Max. humidity, non condensing	95 %
Electro Magnetic Compatibility (EMC)	EN 50083-2
Safety compliance	CE
Signalling	Multicolor LEDs (Power on - green, Error - red)
Hardware revision	1000
Software version	-

Packaging data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	483 x 45 x 410 mm (1HE, 19"- Rack)
Packaging volume sales unit	dm ³
Gross weight sales unit	kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	570 x 100 x 550 mm
Packaging volume shipping package	31.35 dm ³
Gross weight shipping unit	kg
EAN	4010056755430
Article number	75543
Customs tariff number	85437090

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