

UMH160R

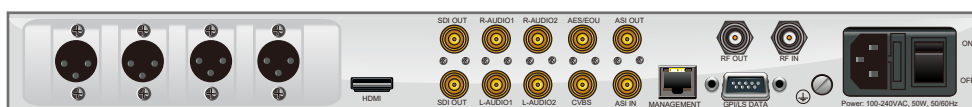
SD/HD Receiver/Decoder



160R-Base



160R-SDI



INTRODUCTION

The UMH160R is a powerful and cost-effective broadcast level decoder. It supports signal receiving, multi-channel descrambling and external table/data insertion. It also supports MPEG2/MPEG4 SD/HD program decoding with two audio channels. With a remote, web-based management interface, it is ideal to support advanced content distribution, real-time signal conversion and transmission for any headend system.

KEY FEATURES

Receiving and Input

- RF inputs support multiple standards of signal receiving including DVB-S2X/S2/S/T2/T/C, 8VSB and ISDB-T
- Supports ASI input

Output

- H.264 or MPEG2 HD/SD 4:2:0 8-bit video decoding
- HDMI, SD/HD SDI and CVBS output
- SDI output with 2 embedded audios
- 1 audio decoding through AES/EBU digital audio output, 2 pairs of balanced and unbalanced analog audio output
- GPI alarm

Data Processing

- Two separate common interfaces support multi-channel descrambling and makes the unit compliant with various popular CAM cards
- Embedded BISS-1 & BISS-E supports service level descrambling
- VBI subtitle insertion on analog video
- PSI/SI processing and regeneration
- Supports TS & EIT pass-through

Management

- 1 Ethernet 10/100Base-TX, RJ45
- Web-based user interface
- Front panel keypad and LCD
- SNMP supported for system integration

SPECIFICATIONS

DVB-S/S2 INPUT	
Input	1xRF (F-type, single input), 75Ω
	2xRF (F-type, dual input), 75Ω
Constellation	QPSK, 8PSK, 16APSK, 32APSK, 64APSK
Symbol Rate	1~45 Mbps
Input Frequency	950~2150 MHz
Max bitrate	150Mbps
Signal Level	-65~-25 dBm
LNB PS	DC 13/18V
22K Switch	on/off

DVB-C INPUT	
Input	1xRF (F-type, single input), 75Ω
	2xRF (F-type, dual input), 75Ω
Symbol Rate	3.6~6.952 MBauds
QAM Type	J.83 A/B/C
Input Frequency Range	48~862 MHz
Max bitrate	55Mbps
Signal Level	40~80 dBuV

DVB-T/T2 INPUT	
Input	1xRF (F-type, single input), 75Ω
	2xRF (F-type, dual input), 75Ω

DVB-T	
Constellation	QPSK/16/64QAM
Bandwidth	6/7/8M
Input Frequency Range	48~862 MHz
Max bitrate	31.67Mbps
Transmission Mode	2K, 8K

DVB-T2	
Constellation	16/32/64/128/256QAM
Bandwidth	1.7/5/6/7/8/10 MHz
Input Frequency Range	48 ~ 862 MHz
Max bitrate	50Mbps
Transmission Mode	1K, 2K, 4K, 8K, 16K, 32K

ISDB-T/TB INPUT (OPTIONAL)	
Input	1xRF (F-type, single input), 75Ω
	2xRF (F-type, dual input), 75Ω
Constellation	QPSK/16/64QAM DQPSK
Bandwidth	1.7/5/6/7/8/10 MHz
Input Frequency Range	48 ~ 862 MHz
Carriers Mode	1K – 42K, 3K

ATSC INPUT	
Input	1xRF (F-type, single input), 75Ω
	2xRF (F-type, dual input), 75Ω
Constellation	8VSB
Bandwidth	6Mhz
Input Frequency Range	57 ~ 803 MHz (Fixed freq)
Max bitrate	19.39Mbps

DVB-ASI	
Interface	2 BNC, 75Ω (1 x ASI input, 1 x ASI output)
Max bitrate	100Mbps
Packet Type	188/204 Bytes
Input Mode	byte and burst
Output Mode	byte and burst

DVB DE-SCRAMBLING	
DVB Common Interface	2 slots
Bit-rate	Max 100Mbps
CAM Supported	NEOTION, SMIT, ASTON and other major CAMs
CAS Supported	CONAX, IRDETO, Novel-Super TV, CTI and other CAS
BISS 1& BISS E	Program level

SPECIFICATIONS

VIDEO DECODING	
Decoding Format	MPEG2 SD 4:2:0 MP@ML
	MPEG2 HD 4:2:0 MP@ML
	MPEG4 AVC SD MP@L3
	MPEG4 AVC HD MP@L4.0/HP@4.0
Resolution	576i, 480i (BT.656)
	1080i50,1080i60,1080i59.94
	720P50, 720P60, 720P59.94
	1080P24, 1080P30, 1080P59.94, 1080P60(HDMI only)
Bitrate	MPEG2 video: 2.0~15Mbps (CBR & VBR)
	MPEG4 Video: 1.0~20Mbps (CBR & VBR)
Subtitle and audio	Passthrough

PHYSICAL & ENVIRONMENT	
Input Voltage	100 ~ 240 VAC
Power Consumption	Approx. 40W
Rack Space	1 RU
Dimensions (WxHxD)	19"x1.7"x17.3"
Operating Temperature	0° C to 50° C
Storage Temperature	-10° C to 70° C
Relative Operating Humidity	<95%
MTBF	>150,000 hours

AUDIO DECODING	
Audio Format	MPEG1 Layer II
	Dolby Digital (AC-3)
	Dolby Digital Plus (E/AC-3)
	AAC (MPEG2, MPEG4/HE v1,2 ,MPEG4/LC)
Adjustable Volume Level	-63~0dB
Audio Mode	Stereo, dual mono, Single Mono
Bitrate	64~384Kbps

ORDER INFORMATION

Model	Description
UMH160R-Base	1 x RF input, ASI in/out, HDMI/CVBS decoding, IP management, MPEG1L2 (support), AC3 (optional), AAC (optional)
UMH160R-SDI	1 x RF input, ASI in/out, HDMI/CVBS/SDI decoding, IP management, MPEG1L2 (support), AC3 (optional), AAC (optional)

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