

WDH-5600P

H.264 HD 4:2:0 IRD and Processor

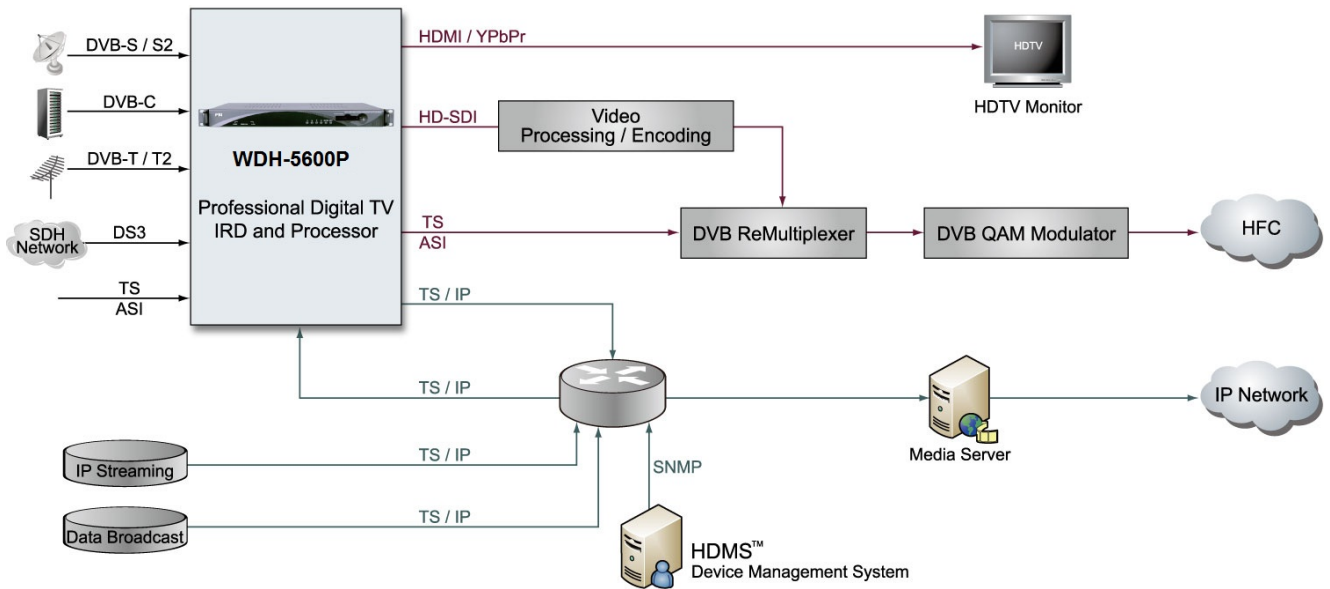


The WDH-5600P IRD and Processor provides operators an ideal solution for receiving, remultiplexing, descrambling and decoding operations. Equipped with a variety of inputs that ensures compatibility with all transmission media. The WDH-5600P's remultiplexing capabilities enable creation of new transport streams that are subsets of the original stream. Customized services may be output as multiple SPTS or MPTS over IP, as well as over ASI. By the dual DVB common interfaces, WDH-5600P could decrypt multiple services in one transport stream or two. WDH-5600P is also a professional IRD that features a broadcast quality decoder for MPEG-2 and MPEG-4 AVC/H.264 in both Standard Definition and High Definition formats, and provides a variety of industry standard digital and analog outputs, including CVBS video, AES/EBU Audio, analog Audio, SD-SDI and HD-SDI. The unit also performs HD down-conversion and aspect ratio adaptation of HD programs to generate professional quality baseband analog video and audio outputs for easy integration with existing cable network infrastructure. This all-in-one architecture makes the WDH-5600P an ideal product for distribution and contribution networks.

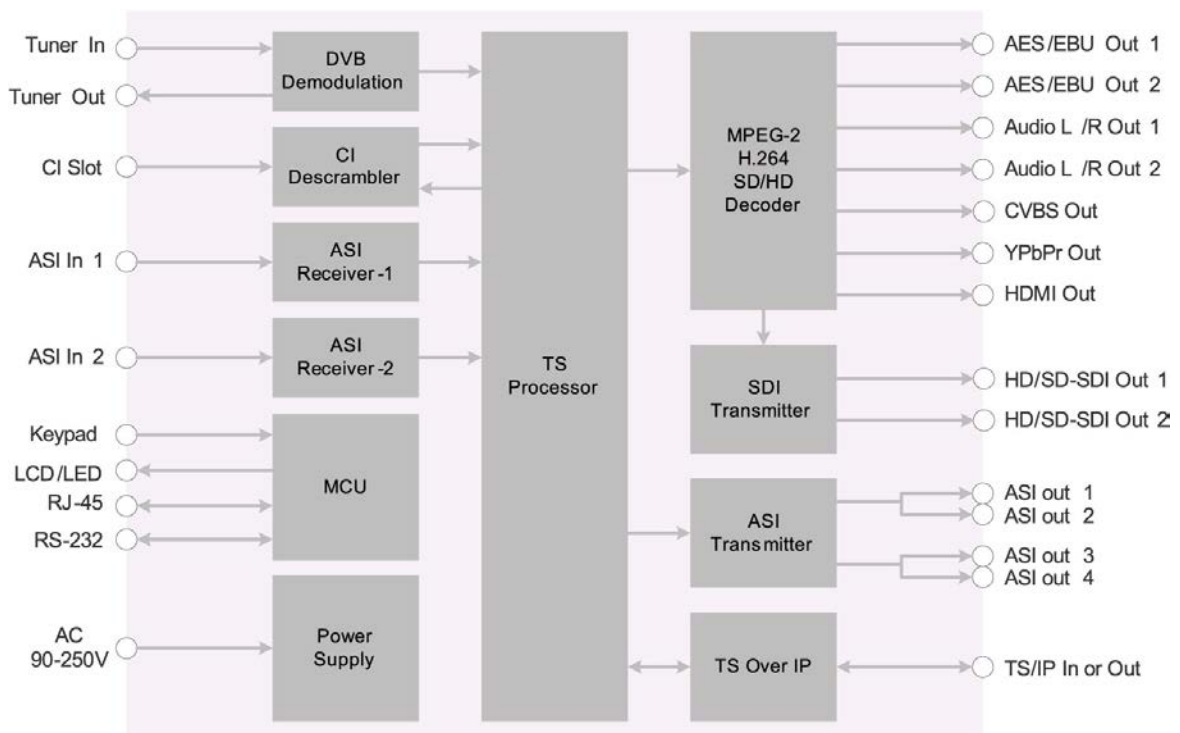
Main Feature

- Multiple inputs DVB-T2/S2/S/C/T/T2, TS/IP, ASI and DS3/E3 (optional)
- Supports DVB-S2 Input Stream Identifier (ISI, optional) and DVB-T SFN MIP pass through
- Redundant backup among Tuner, ASI and TS/IP with configurable priority
- SD/HD MPEG-2 and MPEG-4 AVC/H.264 digital video decoding
- Two Audio PIDs decode or pass through (compressed) in SDI output
- Multiple Analog and Digital Outputs, ASI, CVBS, YPbPr, HDMI, SD/HD-SDI, AES/EBU Audio, TS/IP
- Built-in TS re-multiplexer receives 2xASI, Tuner and TS/IP Inputs
- 2xDVB-CI Slots, multi-program decryption, BISS-1 and BISS-E decryption
- Dynamic PMT detection and automatic updating
- Supports VBI TELETEXT, EBU/DVB Subtitle, Closed Caption
- UDP/RTP, Unicast/Multicast, and SPTS/MPTS over IP (full duplex, optional)
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- PCM audio embedded in SDI and HDMI outputs
- PCM audio output on two AES/EBU audio output ports
- On Site software update through IP
- RSSI, received Eb/No & BER monitoring

Application Case



Block Diagram



Tuner Input

DVB-S/S2 Tuner Input

Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	950~2150MHz
Input Level	-25~-65dBm
Symbol Rate	5~45MBaud/s for QPSK
Roll Off Factor	DVB-S QPSK: 0.35 DVB-S2 8PSK: 0.35, 0.25, 0.2
Punctured Rates	DVB-S QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
LNB Polarity Selection Voltage	0, 13V, 18V selectable
LNB Band Selection Tone	0/22KHz selectable
Satellite Selection Command	DiSEqC 1.0

DVB-C Tuner Input

Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency	48~860MHz
Input Level	45~75dBμV
Symbol Rate	1~7MBaud (ITU J.83 Annex A)
Constellation	16/32/64/128/256QAM
Bandwidth	6MHz/7MHz/8MHz
Input Return Loss	7dB (typ.)

DVB-T/T2 Tuner Input

Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency	104 ~ 862MHz (VHF/UHF)
Input Level	-20 ~ -70dBm Quasi Error Free, QEF
Constellation	DVB-T: QPSK, 16QAM, 64QAM DVB-T2: QPSK, 16QAM, 64QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
FFT Mode	DVB-T: 2K, 8K
Guarding Interval	DVB-T: 1/4, 1/8, 1/16, 1/32

FEC Code Rate	DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8
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Input Return Loss	7dB (typ.)
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ASI Input

Connector Type	1×BNC, 75Ω
Standard	DVB-ASI, EN50083-9
Input bit rate	≤ 100Mb/s

DS3 Input (Option)

Connector type	2×BNC Female, 75Ω, including loop through
Standard	Compliant with ITU-T G.703
Frame Structure	Compliant with ITU-T G.752 and ITU-TG.804
Bit rate	44.736Mb/s

TS over IP

Connector type	1×RJ-45, 10/100M for TS/IP
Useful bit rate	70Mb/s for 10/100M
Protocol	UDP / RTP, Multicast / Unicast, IGMPv2, ARP

SD-SDI Output

Connector type	1×SDI output, BNC Female, 75Ω
Serial interface	SMPTE 259M, 270 Mb/s (10bit)
Single level	800mV p-p

Analog Video Output

YPbPr Connector	1 set of RCA, 75Ω
CVBS Connector	1×BNC 75Ω, 1×RCA 75Ω
Video Standard	NTSC, PAL, and SECAM

Signal Level	1.0 Vp-p±5%
Frequency Response	<±1 dB, at 5.5 MHz
Chroma-Luma Delay	<±30 ns
Field Time Distortion	<2%
Line Time Distortion	<1%
Short Time Distortion	<2%
Differential Gain	<4%
Differential Phase	<2°
Signal to Noise Ratio	>55 dB (luminance weighted)

Analog Audio Output

Connector type	XLR Male Socket
Output Impedance	600Ω (balanced)
Output mode	Left, Right, Dual Mono, Stereo
Number of Outputs	1 pair of stereo audio output

Ancillary Data Processing

Subtitle	DVB/EBU
VBI	Teletext, WSS, VFD, VPS

Control & Monitoring

Connector Type	1×RJ-45, 10/100 for equipment IP Control
Remote Control	SNMP, HTTP Web, Proprietary HDMS Network System Management Software
Local Control	LCD display and 6-key keypad
Serial Port	1×RS-232 9-pin D-sub, for debug use only
Equipment upgrade	FTP loader

Physical

Dimension	44mm×483mm×255mm
Weight	3.4Kg Net, 5.4Kg Gross
Power Supply	AC 90V~250V, 50/60Hz
Power Consumption	24W
Operating temperature	0~45°C
Storage temperature	-10~50°C
Operating Humidity	10~90%, non-condensed

Certification

EMC: EN 55024:1998+A1:2001+A2:2003, EN 55022:2006+A1:2007, EN 61000-3-2:2006, EN 61000-3-3:2008
FCC: Part 15 Class B
LVD: EN 60950-1:2006 + A11:2009

TS Processing

TS Input Management	Remux and demux among Tuner / DS3(optional) / , ASI and TS/IP Inputs
Service and PID management	Remux, filtering and remapping
PSI/SI	PSI/SI table regeneration, NIT and SDT edition
Descrambler	DVB Common Scrambling Algorithm (CSA)
BISS mode	BISS-1, BISS-E
Common Interface	Dual PCMCIA slots, compatible with major CA CAMs in the market

Digital Video Processing

Video Standard	MPEG-2(MP@ ML)
SDI Video Resolution	PAL, NTSC. SECAM
Video Bit Rate	< 80Mb/s

ASI Output

Connector type	2×BNC Female, 75Ω
Standard	DVB-ASI, EN50083-9
TS processing	2 TS Re-multiplexing from tuner, TS/IP and ASI input (1 for mirror)

Order Information

Interface/ Model	WDH-5600P-60X	WDH-5600P-86X	WDH-5600P-88X	WDH-5600P-92X
Tuner Input	X=Tuner option	<input type="checkbox"/> -T2:DVB-T2 <input type="checkbox"/> -T:DVB-T <input type="checkbox"/> -C:DVB-C <input type="checkbox"/> -S2:DVB-S2 <input type="checkbox"/> -IS1:DVB-S2 IS1	<input type="checkbox"/> -D:DS3 <input type="checkbox"/> -E3:E3	
ASI Input	x2	x2	x2	x2
Common Interface	x2	x2	x2	x2
Built-in Re-mux	•	•	•	•
ASI Output	x2	x2	x2	x2
HDMI	x1	x1	x1	x1
SDI	x2	x2	x2	x2
YPbPr	x1	x1	x1	x1
Audio L/R	x2	x2	x2	x2
AES-EBU	x2	x2	x2	x2
CVBS	x2	x2	x2	x2
10/100M extension board (Dual 6 Ch)		•		
10/100M extension board (32 Ch)			•	
GbE extension board (Full duplex)				•

Back Panel Interface

