



VideoSHARE SDI

Any HD/SD SDI Video source to a DVB-T Channel & IPTV network

The VideoSHARE SDI is a stand-alone Video to DVB-T converter, the ideal choice to capture any Live HD/SD audio/video SDI source and encode it to a Digital Terrestrial Television frequency, to distribute to any standard DVB-T Television, in every room, via the existing Antenna Coax Cables.

The Simultaneous Upnp/UDP/RTP/RTSP/RTMP IP streaming output allows the transmission to any IPTV network over cable or WI-FI, to eventually serve any i-pad, i-pod, i-phone, laptop, Internet TV, Recording-to-Disk and monitoring systems.

Easy to install on any DIN Rail Guide or stand-alone as a Desktop module, this converter can inject its DVB-T output frequency to any local wall-mount antenna socket, delivering its signal to all the other Antenna sockets of the building, in most cases without any need for modifications to the existing cables.

Alternatively, this converter can be placed at roof level, mixing its output signal directly to the existing antenna.

Multiple converters can be used together, in order to achieve the required number of distributed video to DVB-T programs and converters can be placed together in one place, or distributed throughout the building based upon wherever the audio/video sources to capture may be located.

Supporting Mpeg2 / H264 / VC1 HD/SD video compression formats as well as all possible audio, plus the ability to downscale any input to the wanted resolution, the VideoSHARE SDI is the perfect choice for HD/SD digital television distribution to common DVB-T TVs in Hotels, Hospitals, Commercial Centres, Digital Signage Applications, Information Points, the creation of Corporate TV channels, Surveillance, HD Home Entertainment, and more.

PRODUCT OVERVIEW

The VideoSHARE SDI is a compact, professional, DIN-RAIL mount digital Audio/Video to HD/SD DVB-T encoder/modulator module, the perfect building-block to distribute one or more HD/SD Video Contents to unlimited standard DVB-T Televisions in every room.

It works in minutes in any building or scenario, providing outstanding picture and sound quality on any receiving DVB-T TV, without any signal adjustments to the existing Antenna Cables.

Audio/Video input can be taken from any existing SDI embedded video source.

The VideoSHARE module accepts any standard Video format as video input, from Full-HD 1920x1080 down to the lowest resolutions. An in-built input scaler then allows to distribute the video source to all the DVB-T TVs as "original" or "scaled", at the chosen target resolution.

Module operation can be set as HD/SD Mpeg-2 or Mpeg-4 H.264 or VC1 and audio can be stereo or taken original if surround type, providing the broadest possible compatibility to any new or existing TV set or Set Top Box in each room and/or area.

The output DVB-T frequency can be set to any free channel within the VHF/UHF range, with the ability to specify the target remote-control button to store this program on each TV, allowing each TV's setup, in each room, via the TV auto-scan function.

CONVERTER FEATURES

Audio/Video Input

- SDI HD/SD with stereo or multi-channel sound
- 1 Stereo pair embedded or AES EBU pass-through
- Full HD, HD-Ready and SD i/p Resolution

Video Encoding Compressions

- HD/SD Mpeg-2 for broad TV compatibility
- Selectable HD/SD Mpeg-4 H.264 AVC and VC1

Audio Encoding Compression

- Standard Stereo and Multi-Channel surround

RF Output

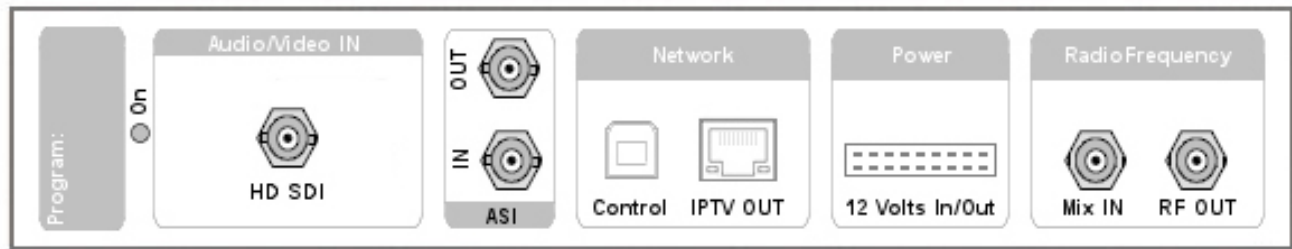
- DVB-T Digital Terrestrial Television Frequency
- World-wide standard, compatible with any TV
- Selectable output channel within VHF/UHF bands
- Injection of RF output signal at any existing wall-mounted antenna socket, or at the roof antenna, distributing to all the other antenna wall-sockets and TVs of the building
- Selectable "store-number" to memorize the chosen programs on the same remote control button on all TVs

IPTV Streaming Output

- Simultaneous RJ45 IP Streaming out, Upnp/UDP/RTP/RTSP

Setup

- Set the required parameters in minutes, via the provided software and any standard laptop



7731 HD/SD SDI embedded to DVB-T Converter

This module can be mounted on any standard DIN RAIL Guide or used as stand-alone DESKTOP

Potential Installations

This converter can be vertically-installed on any existing standard DIN-RAIL Guide, via its rear clamp. A single 12 Volts Power supply is fed via the front panel 2.54 strip in/out connector, by using any standard power supply, or our DIN Rail Power Supply module model #7001. Multiple converters can be installed side-by-side. One single #7001 Power supply can operate up to 5 converters, cascading the 12 Volts between modules through simple power bridge cables, having one provided as standard with each converter module. Where needed, multiple power supplies can be installed to operate the required number of converters, in groups of five, creating a redundancy path system.

Alternatively, the converter can be operated on a stand-alone basis simply as a Desktop or RACK MOUNT device by using our stand-alone power supply model #7002 (optional) and Rack Mount brackets (included).

Multiple converters can be operated in different locations throughout the building, wherever the audio/video source signals are, injecting their output frequencies to the local available wall-mount antenna sockets.

There is no need to inject the output signal at the roof antenna level, as injecting the module output at any antenna wall-socket of the building will distribute the signal to all the other antenna sockets, in every room, without modifications to the existing antenna coax cables.

On-Site Upgrades

Any projected new software feature is typically released via the Internet and can be freely downloaded and used to upgrade our converters if required, maintaining the existing systems up-to-date according to the International Digital Television Standards' compliancy.

Channel Descriptors

Each converter module includes a full-featured user-friendly Transport Stream Multiplexer, which allows the operator to quickly set all the required parameters as the SERVICE PROGRAM NAME that will be shown on the TVs. The converter supports DVB, ATSC and ISDBT descriptors and standards and can be operated world-wide on any TV (this converter is available with DVB-T/C/S/S2, IDB-T and ATSC outputs – refer to our other brochures for specs)

System Redundancy

For mission-critical applications, converters can be installed in couples and each twin is kept in stand-by mode via the existing flat power cable which also includes some data wiring. If a master module is turned off or goes in any failure state, the related twin starts immediately. As soon as the Master module resumes from failure, the twin module automatically returns to its stand-by mode.

Professional RF output

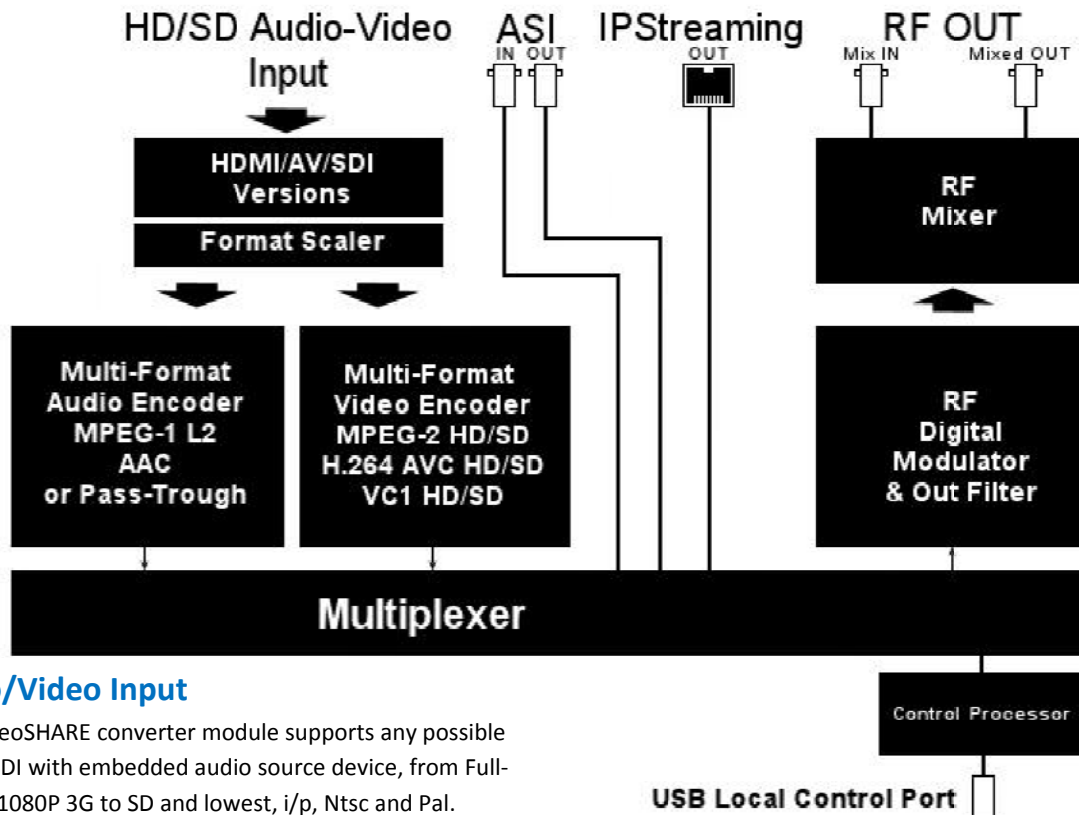
The generated Radio Frequency can be considered Broadcast-Grade, and can be mixed to any existing Coax and HFC distribution network or broadcasted on air via proper boosters and transmitting antennae, up to various hundred Watts of power, with excellent Spectrum Shoulders, out-of-band Harmonic and spurious suppression and excellent MER quality >40 dB.

Professional IPTV output

The same encoded program outputs to the RJ45 IP streaming connector, to distribute it to unlimited IPTV devices on any LAN/WAN/WIFI network. Thanks to the Upnp/UDP/RTP/RTSP/RTMP IGMP protocols, programs can be distributed simultaneously to any i-pad, i-phone, i-pod, smart-phone, Internet-enabled TV, IP set top box, computers and laptops, Hard Disk recording and monitoring systems.



Functional Diagram



Audio/Video Input

The VideoSHARE converter module supports any possible HD/SD SDI with embedded audio source device, from Full-HD and 1080P 3G to SD and lowest, i/p, Ntsc and Pal. Audio can be stereo or multi channel surround, directly taken from the wanted Embedded audio group, Linear PCM or compressed AES-EBU for the pre-encoded compressed surround.

Format Scaler

The VideoSHARE converter module has the power to process full-quality FULL-HD Video up to 1080P, encoding it to either Mpeg2, H264 or VC1 formats for a true Full-HD video distribution.

Where needed, a professional-grade video scaler can be activated in order to reduce any input format to the required target resolution, including HD-READY and SD, down to 144x144 pixels for Internet and mobile delivery.

Video Encoding

The Video Compression can be selected to the standard Mpeg-2 HD/SD, or MPEG-4 H.264 AVC HD/SD, or MPEG-4 base line, or VC1 HD/SD Windows Media.

Mpeg-2 is typically supported by any world-wide TV, while H.264 is the latest standard adopted to push more HD/SD programs over a single terrestrial cable or satellite frequency.

Mpeg-4 base line and VC1 are normally chosen for Internet transmissions (FLASH, YOU TUBE and Windows Media Players)

The VideoSHARE Converter module encompasses all, to match any possible installation and last-minute changes.

Audio Encoding

Input audio can be encoded to a standard Stereo Mpeg1-L2 supported by any world-wide TV, or to the most recent Mpeg-2 AAC, Mpeg-4 AAC, and WMA standards. Original Surround audio can be encoded and distributed as-is, without any multi-channel effect/quality loss.

ASI In/Out

These connectors can be used to input the signal from another module (cascade) or to output the encoded signal with complete SI descriptors to any ASI device, such as broadcast transmitters, gap fillers, splicers, etc.

IP Streaming

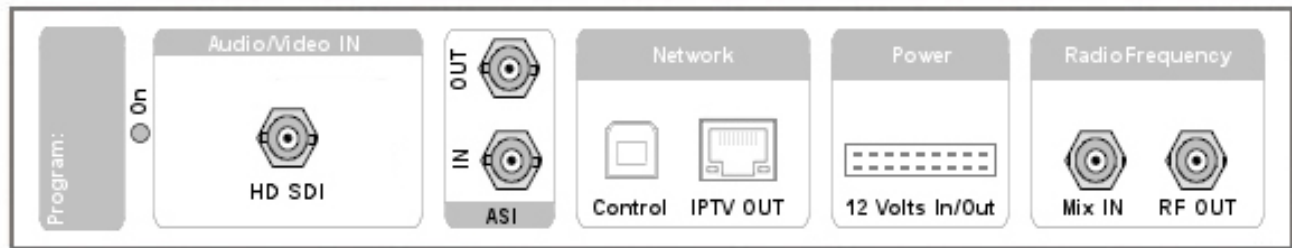
Obtained output that allows to distribute the encoded audio/video to any IPTV network over LAN, WAN, or WI-FI.

RF OUT

Outputs the generated DVB-T frequency with an adjustable level, which can be mixed with any RF signal from the MIX input (this allows to cascade multiple modules with one



Unlimited Applications



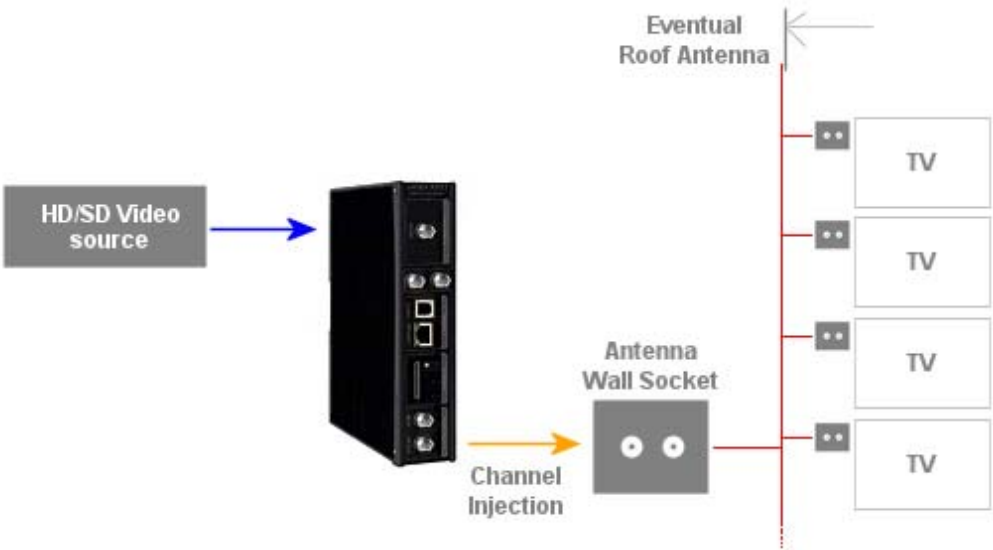
Thanks to its features and available outputs, the VideoSHARE module can be used in almost every possible consumer and professional HD/SD Video capture and distribution application.

Most common Applications

- **Hotels & Resorts**
 - Advertising Channels
 - Restaurant Menu Channel
 - Meeting Video Distribution
 - Local Information Channel
 - BAR Set Top Box Video Distribution
 - Overview Cameras Channels
 - Surveillance
 - Digital Signage
- **Hospitals**
 - Patient TV Channels
 - Hard-Disk Recording surgery rooms
 - Student Training Broadcasting
 - HI-DEF conferencing
 - Training Channels
 - Surveillance/Monitoring
 - Digital Signage
- **Shops & Commercial Centers**
 - Promotional TV channels
 - DVD & BlueRay Players Video distribution
 - Internet Content distribution
 - HD/SD Video distribution via existing Coax Cables or via ON-AIR internal Broadcasting
 - Digital Signage
- **Boats, Yachts, Cruise Liners, Technical Vessels**
 - On-Board Television from Media Players, DVDs, BlueRays, Set Top Boxes
 - Technical Info Channels from computers and instruments
 - GPS Channel & Navigation channels
 - Courtesy-camera channels
 - Training & Corporate channels
- **Corporate**
 - Corporate TV Channels
 - Training Channels
 - VIP Entertainment Channels
 - Meeting(s) Video Distribution
 - Local Information Channel
 - Overview-camera Channels
 - Surveillance
- **Residences and Private Homes**
 - HD Video distribution from any source to all chosen digital TVs, in every room or apartment
 - Centralized Video Surveillance, viewable on any TV
 - Centralized electricity, water, heating monitoring and control via a standard TV
 - HD Set Top Box and HD Player distribution to all TVs
- **Schools and Campuses**
 - Lessons/Courses broadcasting
 - Campus TV Channels
 - Info Channels
 - Courses Recording (IP to disk)
 - Resolution-scaled broadcasting to I-Phones, I-Pads, etc
- **Sport**
 - GYM TV to any TV-Enabled device
 - On-Board HD/SD Camera broadcasting
 - HD camera links to Control Room
 - Sports Events RF and Internet broadcasting
- **More**
 - All other possible applications where Video to DVB-T and IPTV are required.

Typical Configurations

#1 SDI Audio-Video contents distribution to DVB-T televisions

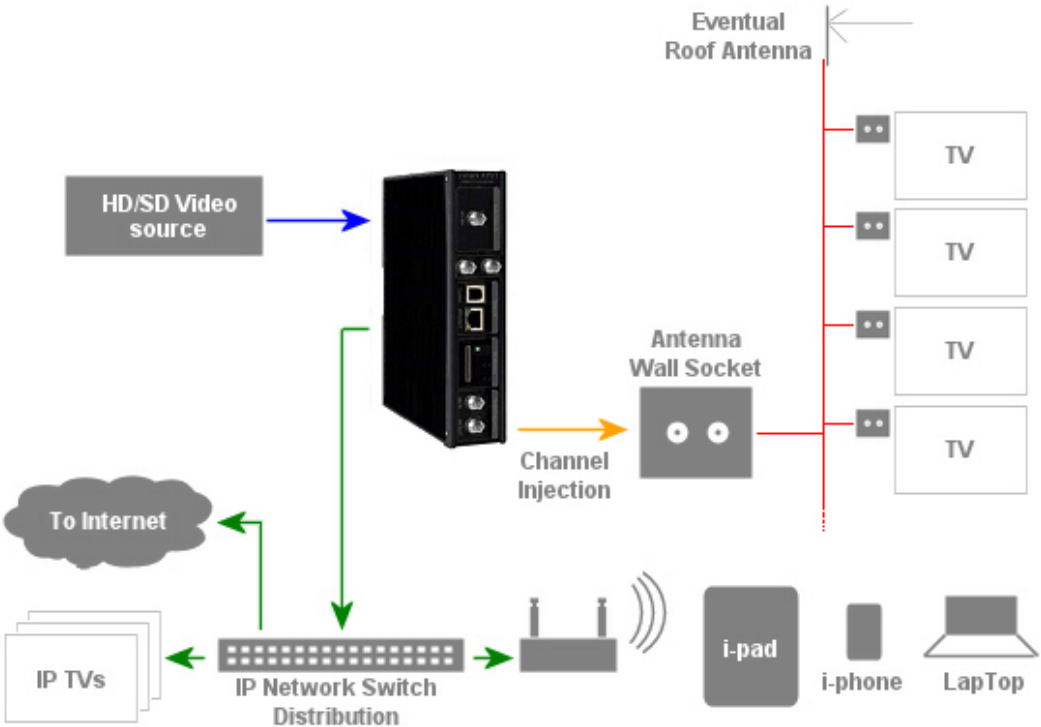


Convert any HD/SD SDI Video to one DVB-T frequency and distribute to any DVB-T TV together with the existing TV programs

Connect any Broadcast and Professional HD/SD Audio-Video Source.

Inject the DVB-T output frequency at any existing wall-mount antenna socket or at the roof antenna, together with the other existing TV channels, then re-scan all the DVB-T TVs in every room to find and add automatically this new video program.

#2 SDI Audio-Video contents distribution to DVB-T televisions & IP streaming Devices

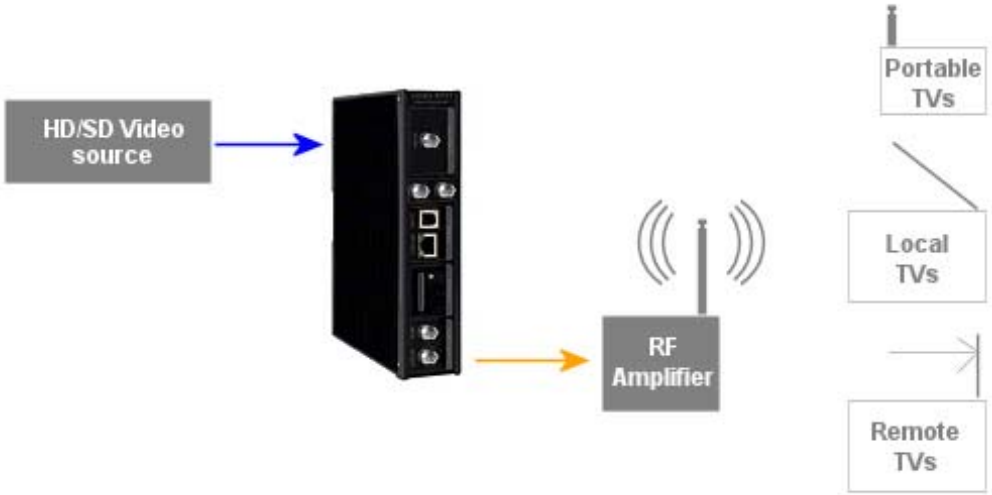


Any SDI Audio-Video to both DVB-T TVs and IP Streaming devices

As application example #1, plus delivery over the existing IP network and WIFI to any IP player, including I-Pads, I-Phones, Laptops, etc.

Typical Configurations

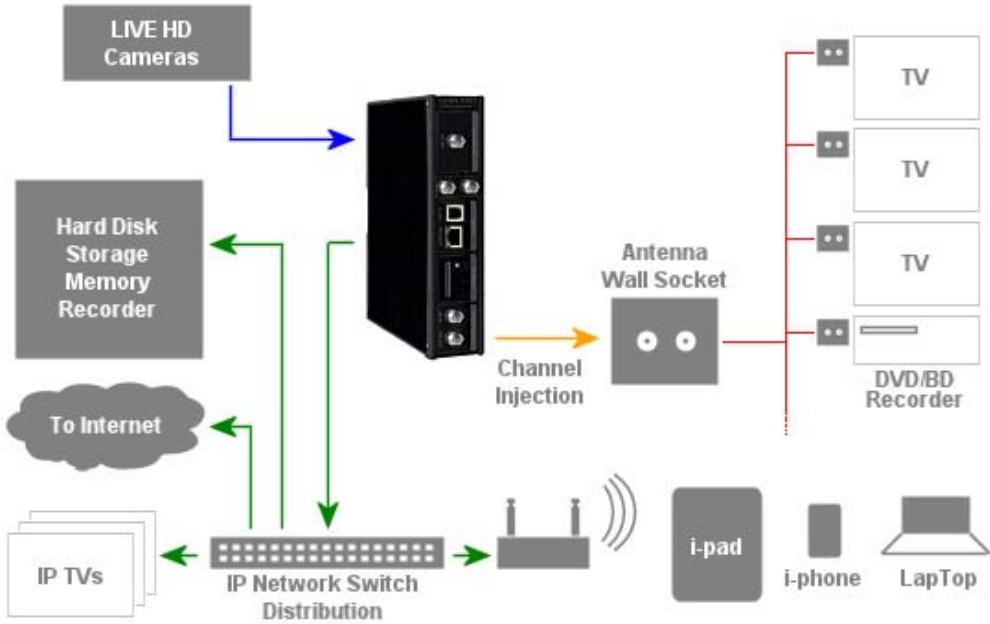
#3 SDI Audio-Video contents **ON-AIR** DVB-T distribution



Transmit ON-AIR any HD/SD SDI embedded Video to local and remote portable and fixed DVB-T television

This example represent the ideal solution for sport and info channels transmission inside sport stadiums.
 Can be used as HD On-Board Camera broadcasting system on cars, motor-bikes, boats during sport competitions.
 It is perfect to distribute TV wireless inside buildings, shops, commercial centers, schools and campus, where cables are not available.
 As turn-key broadcasting solution for churches, communities, both on-air and internet.

#4 LIVE HD SDI recording – Learning solution



Record LIVE HD SDI Cameras to any standard DVB-T DVD/BlueRay disk recorder or to Hard Disk Servers

As Video recording solution in any Hospital Surgery room for assurance and learning purposes, with the ability to distribute the live HD content to learning classes, universities, training rooms, internet, supervisors, distance consultants.
 This example is also suitable for any School Lessons HD broadcasting/webcasting and replay applications



Technical Specifications

Audio/Video Input

- 1x HD-SDI professional video input supporting SD and HD resolutions up to the 1080P 3G, PAL and NTSC, i/p
- 1x Stereo audio pair embedded, selectable from the wanted embedded group and pair as Linear PCM Stereo or Compressed AES-EBU Pass-Through to capture and deliver original multi-channel surround sound

ASI

Transport Stream Input

- 1x ASI transport stream (BNC), supporting up to 210 Megabit/s rates each, MPTS/SPTS
- Operates as cascading input to merge multiple encoded programs from other modules, and use only one frequency out from the final module (max total DVB-T rate is 31.5 megabit/s when used in 8 MHz mode / max parameters. If exceed, must use outputs from more modules (to allow the required bandwidth).
- Normally, ASI is not used on most applications.

Transport Stream Output

- 1x ASI transport stream (BNC), supporting up to 210 Megabit/s each, MPTS/SPTS

Mainframe Output the encoded program, including the generated DVB PSI or ATSC PSIP complete tables,

Modules ready to feed any ASI device as broadcast transmitters etc.

- Normally, ASI is not used on most applications.

IP Streaming Out

- 1x RJ45 Copper cable connector, supporting 10/100 Base-T speeds, auto-sensing
- IP streaming out can be activated simultaneously to the DVB-T Radio Frequency output
- IP streaming supports Unicast connections up to the 100 Base-T speed limit
- IP Streaming supports multicast to unlimited IP players/decoders

Control

USB port

- Connects to any standard Windows laptop, running our control software CD (included)
- Laptop connection is only required for setup, then the computer can be disconnected
- Set parameters are saved in each module memory, and there is no need to reset the parameters following a potential black-out

IP Remote Control

- Remote control over IP is possible "in-band", via a common Web Browser, using a secure Username and Password

RF Output

RF MIX Input

- 1x F-Type connector, 75 Ohm
- 48 – 900 MHz spectrum
- Insertion Loss -0.5 dB
- Input Level from 0 dB to -70dB
- Input signal mix with the modulator signal, then output to the Out connector

RF Output

- 1x F-Type connector, 75 Ohm
- Adjustable Level from 0db to -25dB
- Signals from the RF input connector are mixed with -0.5 dB signal loss to the module modulator signal

DVB-T Modulator

- Frequency range: 30-1000 MHz
- RF Out Level: Adjustable from 0dBm to -25dBm
- MER: Professional-Grade >45 dB
- Spectrum Shoulders: 55 dB for excellent adjacent-channel operations
- Out Filter: -70 dB of Harmonic and spurious suppression
- DVB-T modulations: QPSK, 16QAM, 64QAM
- FFT: 2K / 8K modes
- Guard Intervals: 1/4, 1/8, 1/16, 1/32
- Code Rates: 1/2, 2/3, 3/4, 5/6, 7/8
- 6/7/8 Mhz Channel Bandwidth
- MFN Mode

Compliance

CE marked in accordance with EU Low Voltage and EMC Directives

EMC Compliance
EN55022, EN61000-3-210, EN61000-3-310, EN55024, CISPR22, FCC CFR47 Part 15B Class A

Safety Compliance
EN60950-1, IEC60950-1, UL60950-1

Physical and Power

Dimensions (W x D x H)

50 x 180 x 250mm

Input Voltage

DC 12 Volts – 1 Ampere

Cooling

Natural Convection

Environmental Conditions

Operating Temperature

0°C to +50°C (32° to 122°F)

Storage Temperature

-20°C to +60°C (4° to 140°F)

Relative Humidity

5 to 95%



Technical Specifications – Operational Specs

Video Encoder

Performance

- Hierarchical Multi-look-ahead processing allows Full-Broadcast Quality at lower bitrates
- 2 Megabits for Full D1 Mpeg2
- 1 Megabits for Full D1 H264
- 4 Megabits for 1080i Full HD Mpeg2
- 3 Megabits for 1080i Full HD H264

Video Encoding

- MPEG-2 HD MP@HL Encoding
- MPEG-2 SD MP@ML Encoding
- MPEG-4 HD MP / HP@L4.0 Encoding
- MPEG-4 SD MP / HP@L3 Encoding
- Mpeg-4 Base Line
- VC1 HD
- VC1 SD
- 0.032 Mbps to 25 Mbps
- Hierarchical motion estimation
- VBR Statistical Multiplexing
- Encoding Delay <500 Msec
- Programmable GOP

HD Resolution

- Input Broadcast-type Scaler to reduce any input resolution to required encoding resolution
- 1080 x 1920/1440/1280/960i 25
- 1080 x 1920/1440/1280/960i 29.97
- 720 x 1280/960/640p 50
- 720 x 1280/960/640p 59.94

SD Resolution

- Input Broadcast-type Scaler to reduce any input resolution to required encoding resolution
- 576 x 720/704/352/320 @50i
- 288 x 352/320 @25p
- 144 x 176/160 @25p
- 480 x 720/704/352/329 @ 60i
- 240 x 352/320 @30p
- 120 x 176/160 @30p

Local SI Injection

- Service Name/Provider
-

Audio Encoder

Audio Encoding

- Standard MPEG-1 Layer II audio encoding, rates from 32 kbps to 384 kbps.
 - Selectable Mpeg-2 AAC
 - Selectable Mpeg-4 AAC
 - Selectable WMA
 - Stereo compression mode, as standard
 - Multi-Channel Digital Audio sound can be encoded and distributed “ as-is “ to keep original sound effects
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How to Buy

PN.	Description	PcsBox	Notes
Converter Module			
7731	VideoShare RFHT - SDI to DVB-T + IPTV + ASI converter	1	
Different RF Output Versions			
7732	VideoShare RFHC - SDI to DVB-C (a/b/c) + IPTV + ASI conv.	1	
7733	VideoShare RFHS – SDI to DVB-S + IPTV + ASI converter	1	
7734	VideoShare RFHS2 - SDI to DVB-S2 + IPTV + ASI converter	1	
7735	VideoShare RFHA - SDI to ATSC + IPTV + ASI converter	1	
IP Streaming – only Output Version (No RF output)			
7739	VideoShare IPA - SDI to IPTV + ASI converter	1	
12 Volts Power Supply			
7001	DIN-Rail mount PSU Power Supply – for 8 Modules	1	
7002	Stand Alone Power Supply for 1 Module	1	
Other Accessories			
7020	Wall-Mount DIN Rail for 10 Modules + PSU	1	
7021	Rack Mount 8 Modules Frames + PSU	1	
7030	Modules interconnection RF bridge	1	
7031	75 Ohm termination	1	
7055	USB programming Kit	1	



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