

# Inverto Digital Labs sarl

## Modular Head End Systems

Who we are

Products &  
Solutions

Frames

IRDs,  
Receivers

Encoders

Multiplexers

Trans-  
modulators

Scrambler

**Market:** Worldwide

**HQ:** Luxembourg

**Staff:** ≈63

**Engineering**>60%

**Nationalities of Staff** >14

**R&D team location:** Luxembourg,  
Poland, Israel



- ▲ Experts in the fields of DVB, RF, embedded software and server technologies
- ▲ Solution provider of choice – end-to-end validation from inception of service to ongoing guarantee of manufacturing and supply
- ▲ Channels: Operators, OEM's, and Retail/Distribution
- ▲ Shipping volume, over 25 millions of dishes carrying our microwave components since 2006 have been deployed till end of 2012

Who we are

Products & Solutions

Frames

IRDs, Receivers

Encoders

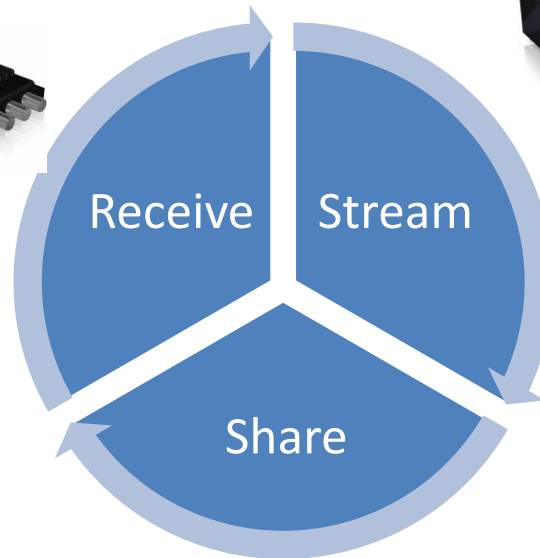
Multiplexers

Trans-modulators

Scrambler



- Leaders in Low Noise Block (LNB) and microwave products with over 17% market share in EMEA and millions of LNBs shipped to the market



- Developer and vendor of operator-grade set top box and streaming appliance



- Middleware for Hybrid / OTT services
- Headend



## **CATV Deca Modular Frame** **IDLH-1000MF**

Suitable for up to 8 modules  
and (redundant) PSU

- Standard 4 RU chassis with 8 slots for functional modules and 2 slots for Power Supplies
- Hot-backup power supply unit
- Intelligent cooling system with temperature sensor
- Wall mounted or Rack mounted
- Compatible with new successive modules
- Power Supply: AC 90V-250V, 150Watts, 50-60Hz
- Optional Build-in IP Switch
- Dimension: L=340mm, W=483mm, H=178mm (4U)
- Operating temperature: 0 ~ 45°C(for all modules)
- Storage temperature: -10 ~ 60°C-(for all modules)



## **CATV Dual Modular Frame**

**IDLH-200MF**

Suitable for up to 2 modules  
1 PSU included

- Standard 1 RU chassis with 2 slots for functional modules
- 1 power supply
- Intelligent cooling system with temperature sensor
- Wall mounted or Rack mounted
- Compatible with new successive modules
- Power Supply: AC 90V-250V, 150Watts, 50-60Hz
- Dimension: L=340mm, W=483mm, H=44.5mm (1U)

## Professional IRD

### IDLH-1200P / 1400P

IRD with internal mux and optional IP interface



- Multiple inputs DVB-S2/S/C/T, TS/IP and ASI
- SD MPEG-2 MP@ML digital Video decoding
- Flexible built-in re-multiplexing between ASI, Tuner and TS/IP Inputs
- 2x DVB-CI Slots, Multi Programs, BISS-1 and BISS-E decryption
- Dynamic PMT detection and automatic updating
- UDP, RTP Multicast / Unicast IP output, supports up to 32 independent channels
- PCM audio embedded in SDI output
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- RSSI, received Eb/No & BER monitoring
- On Site software update through IP

## Professional H.264 SD/HD IRD IDLH-1500P

MPEG2/MPEG4 AVC SD/HD IRD  
 with internal mux and optional IP interface



- Multiple inputs DVB-T2/S2/S/C/T/T2, TS/IP and ASI
- Redundant inputs between Tuner, ASI and TS/IP
- SD/HD MPEG-2 and MPEG-4/H.264 digital Video decoding
- Digital Audio decoding and loop through via
- Multiple Analog and Digital Outputs, ASI, CVBS, YPbPr, SDI, TS/IP
- Flexible re-multiplexing between 2×ASI, Tuner and TS/IP
- Inputs
- 2×DVB-CI Slots, Multi Programs, BISS 1 and BISS E decryption
- Dynamic PMT detection and automatic updating
- Support VBI TELETEXT, EBU/ DVB Subtitle, Closed Caption
- UDP/RTP & Unicast/Multicast SPTS and MPTS over IP I/O
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- PCM audio embedded in SDI output
- On Site software update through IP
- RSSI, received Eb/No & BER monitoring

## Professional Dual IRD

### IDLH-2200P

Dual MPEG2/H.264 SD/HD IRD with 2 DVB front end, ASI And IP out



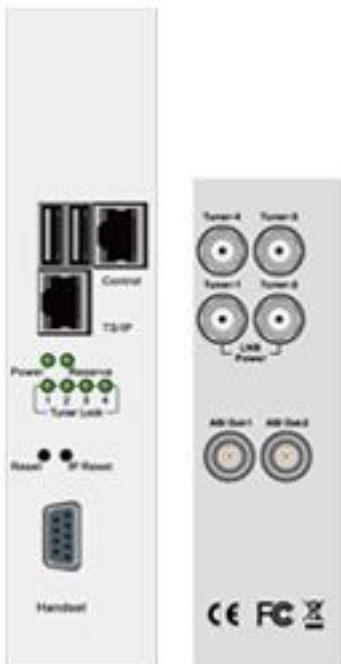
- SD/HD MPEG-2(MP@ML&MP@HL) and MPEG-4/H.264(AVC high profile level 4.1) digital Video decoding
- Twin-tuner design, wide tuner options from DVB-S2/S/C/T/T2
- 2x DVB-CI Slots, Multi Programs, BISS 1 and BISS E decryption
- Support services re-mux/filter and 204/188 transfer
- UDP/RTP & Unicast/Multicast SPTS and MPTS over IP I/O
- Support VBI TELETEXT, EBU/ DVB Subtitle, Closed Caption
- Dynamic PMT detection and automatic updating
- Multiple Analog and Digital Outputs, ASI, CVBS, HDMI, TS/IP
- Support NTP(Network Time Protocol)
- Remote Control and Supervision by SNMP and HTTP WEB
- RSSI, received Eb/No & BER monitoring
- Quick upgraded via USB port
- Auto save settings when sudden power-off



## Professional Quad Receiver

### IDLH-2400D

Quad Receiver with 4 DVB front end,  
ASI and IP Output



- Multiple inputs DVB-S2/C/T/T2 option
- 4 independent tuners on board
- 2 ASI outputs and TS over IP output(option)
- Built-in TS processor for service and PID filtering or remux
- TS over IP support UDP/RTP protocol and SPTS or MPTS mode
- TS over IP output support Multicast/Unicast, can output max. 32 channel multicast
- Web remote management and SNMP supervision
- Software update via ETHERNET port
- Configuration reload after power failure

## DVB MPEG2 Encoder

### IDLH-1300EC

with optional IP in-/output

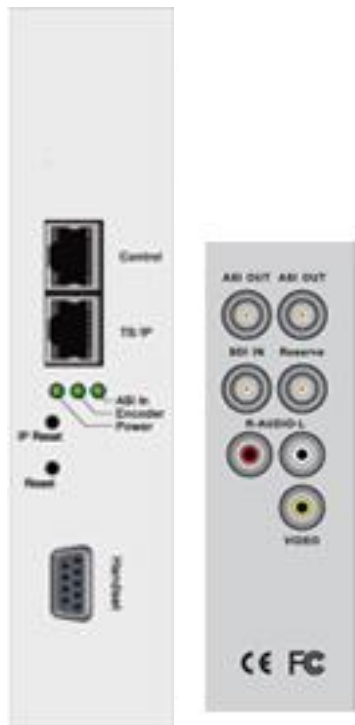


- Digital SDI with embedded digital audio input
- Analog Composite Video for PAL/NTSC/SECAM Input
- MPEG-2 MP@ML Video encoding
- User configurable GOP
- User configurable 4:3/16:9 aspect ratio
- PAT, PMT and SDT generation and NIT Insertion
- 10/100M IP Output, UDP/RTP & Unicast/Multicast SPTS and MPTS
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software

## DVB MPEG4 HD Encoder

### IDLH-1400EC

with optional IP in-/output

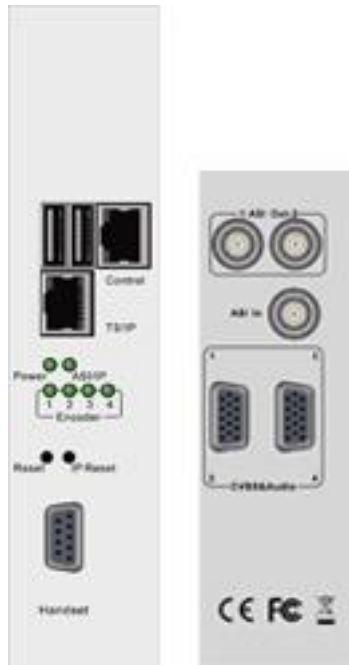


- Fully compliant with H.264 HP@Level 4.0 and MP@Level 3.0
- Multiple video resolution including 1080i, 720p, 576i and 480i
- Multiple inputs HD/SD-HDMI, HD/SD-SDI, and CVBS for encoding
- Support GbE TS/IP input/output(full duplex)
- Built-in Re-mux can multiplex services from ASI Input, IP input with encoded service.
- Can edit PSI/SI
- Support VBR and CBR encoding mode
- Support 2 pairs of analog stereo audio encoding with optional extension audio board
- Remote Control and Supervision by SNMP, HTTP WEB
- 4RU 19" chassis compact modular design, supporting up to 8 modules
- Support Down scale without changing frame rate.

## Quad HD MPEG4 Encoder

**IDLH-2410EC / 2411EC**

With HD-SDI input, remux, IP and ASI output

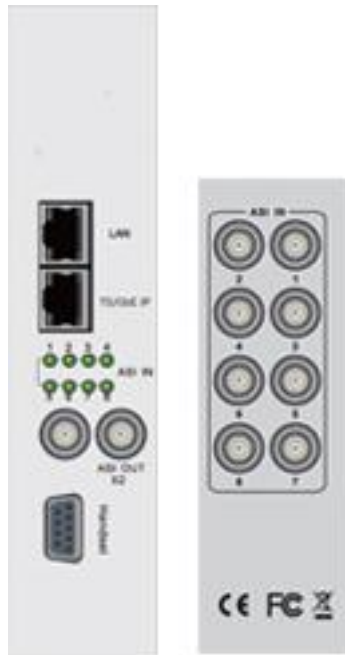


- Compliant with H.264/AVC Baseline, Main & High Profile @ L4.0 or less & MPEG-2 MP@ML
- 4 independent AV inputs (SDI, HDMI, CVBS, note: see Model List)
- Internal reMultiplexer, new MPTS is made up from ASI\_in, TS/IP\_in & Local Encoders
- MPTS remultiplexed and 4 local un-stuffed SPTS available over IP
- Video Input Resolution: 1080i, 720p, 576i, 480i (note: CVBS models support SD only, see Model List)
- Minimum Video Bit Rate 500Kb/s (Standard PAL or NTSC SD video, while total bit rate ~ 700Kb/s)
- Independent Vertical & Horizontal pixel scale
- VBR & CBR
- Audio coding: MPEG1 Layer II, MPEG2/4 AAC-LC (note: see Model List)
- SNMP & HTTP WEB for monitoring & control

## DVB TS Remultiplexer

### IDLH-1300MX / 1400MX

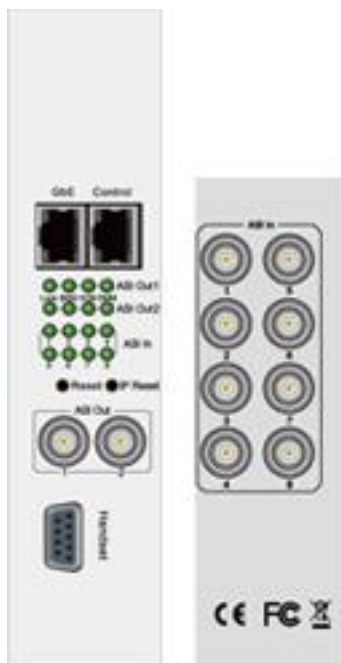
with 8 ASI inputs and optional IP



- 8-way SPTS or MPTS ASI inputs
- Redundant ASI outputs
- Gigabit Ethernet for TS over IP Output (only 1400MX model)
- PSI/SI table regeneration, NIT, EIT and SDT edition, LCN Edition and Re-generation
- Remote Control and Supervision by SNMP and Proprietary HDMS software
- On Site software update through IP

## DVB TS Remultiplexer IDLH-2200MX / 2200MX-TP

with 8 ASI inputs and optional Scrambler functionality



- Fully compliant with IOS13818 and EN300 468 standard
- Support MPEG2/H.264 TS Re-Multiplexing and Scrambling
- Support BISS 1/E, Simulcrypt mode (for enhancement type)
- 8\*ASI for SPTS/MPTS input, up to 213Mbps for each ASI.
- 2\*ASI for MPTS output, up to 213Mbps for each ASI (transparent TS).
- Support error alarm of TS level
- Support statistics of PID and service bit rate
- Support bypass or re-generate EIT
- IP GbE interface with up to 860Mbps input/output (transparent TS)
- Support Null/Non-Null packet transmission mode of TS over IP
- Support PCR re-generation of IP packet
- Support multiplexing output up to 32 services(or 256 PIDs)
- Powerful re-generation and correction ability for PCR of up to 32 services
- Support PID remapping, bypass, filtering, conflict detection and sequence collation
- Support PSI/SI insertion and re-generation. NIT and SDT edition
- Large cache with powerful output buffer against burst overflow
- Can insert, re-mux and transport different data

## Transmodulator

### IDLH-1300TM

DVB/ASI to QAM/COFDM  
Transmodulator

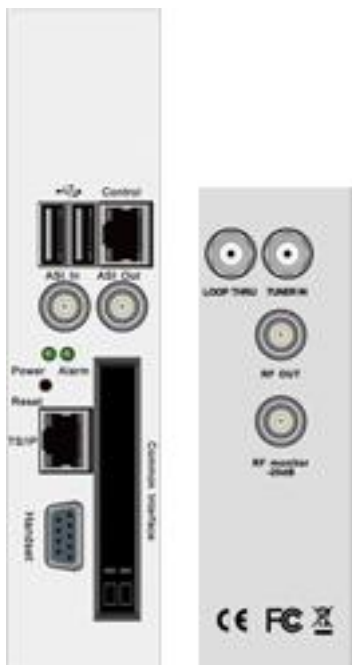


- DVB-S2/S, DVB-C or DVB-T Tuner Input
- ASI input and output
- Flexible re-multiplexing between ASI and Tuner inputs
- PSI/SI adapting and re-generation, including NIT insertion, LCN insertion etc.
- Service Drop or PID filtering and Re-mapping
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- On Site software update through IP
- RSSI, received Eb/No & BER monitoring

## Transmodulator

### IDLH-1400PM

DVB/ASI to QAM/COFDM  
Transmodulator with 2 CI slots



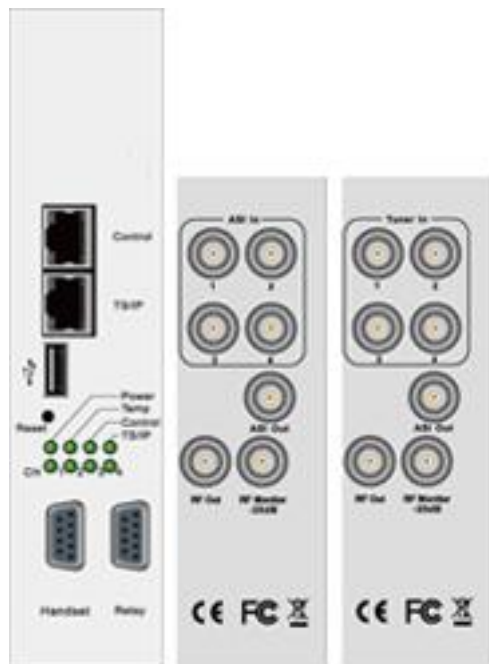
- Multiple inputs DVB-S2/S/C/T/T2, TS/IP, and ASI optional
- DVB-C QAM or DVB-T COFDM RF modulation output
- Supports 2K/4K/8K FFT Mode for DVB-T COFDM modulation
- GbE UDP/RTP, Unicast/Multicast, and SPTS/MPTS over IP(full duplex)
- Flexible re-multiplexing among Tuner, ASI and TS/IP inputs
- PSI/SI adapting and re-generation, including NIT, LCN insertion etc.
- Service Drop or PID filtering and Re-mapping
- 2 x DVB-CI slots, Multiple TV program decryption
- Remote Control and supervision by SNMP, HTTP WEB
- RSSI, received Eb/No & BER monitoring
- On Site software update through IP or USB



## Quad Transmodulator

### IDLH-2400TM

Quad channel transmodulator with DVB or ASI interface

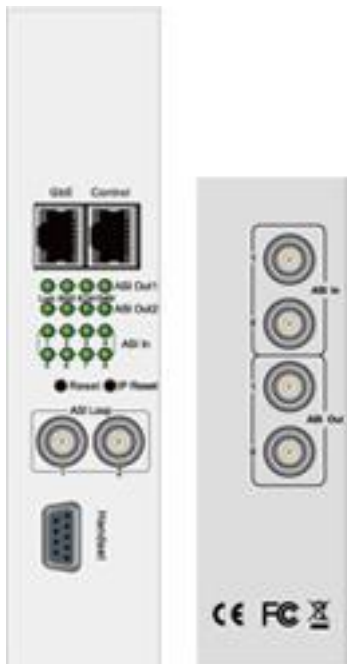


- Multiple inputs DVB-S2/C/T/T2, TS/IP, ASI (option)
- 4 independent tuners or ASI on board (option)
- 4 independent QAM or COFDM modulation (option)
- 1000Base TS over IP support UDP/RTP protocol, IGMP V2,V3 and SPTS or MPTS mode
- TS over IP output support Multicast/Unicast, can output max. 32 channel multicast
- Built-in TS processor for service and PID filtering or remux from ASI, Tuner and TS/IP inputs
- 1 ASI outputs for TS monitor
- Re-generate PSI/SI, can insert NIT, LCN, etc
- Web remote management and SNMP supervision
- Software update via ETHERNET port
- Can upgrade via USB or LAN

## Dual Scrambler

### IDLH-2200TP

Dual Channel DVB Scrambler



- Fully compliant with IOS13818 and EN300 468 standard
- Support MPEG2/H.264 TS stream scrambling
- Support BISS 1/E, Simulcrypt scrambling
- 2\*ASI for SPTS/MPTS input, up to 213Mbps for each ASI.
- 2\*ASI for independent MPTS output, up to 52Mbps for each scrambled TS.
- Can process maximum 48 EMM and ECM for each scramble tunnel
- Support most major CAS in market
- Support local or remote CAS synchronous simulcrypt processing
- Support error alarm of TS level
- Support statistics of PID and service bit rate
- Support PSI/SI insertion or re-generation
- IP GbE interface with up to 860Mbps input/output (transparent TS)
- Large cache with powerful output buffer against burst overflow
- Web remote management and SNMP supervision

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