The TP160-IRD is a powerful and cost-effective broadcast level decoder. It supports signal receiving, multi-channel descrambling, PID filtering, and IP or ASI stream outputs. It also supports MPEG-2/H.264 SD/HD program decoding to HDMI, SDI and CVBS with dual audio PID decoding. By utilizing a remote, web-based management interface, it is ideal to support advanced content distribution, real-time signal conversion and transmission for any video delivery system.

OVERVIEW

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KEY FEATURES

Receiving and Input
- Includes a standard DVB-S2/S RF input with loop-thru output
- Supports DVB/S2 multi-stream receiving (optional)
- Supports ASI and IP input and redundancy
- Genlock input for studio synchronization

Data Processing
- Two DVB-CI CAM slots support multi-channel descrambling and are compliant with various popular CAS systems
- Embedded BISS-1 & BISS-E support TS & Service level descrambling (optional license)
- PID filtering capabilities
- Full 608/708 caption decoding and embedding

Output
- MPEG-2 and H.264 SD and HD video decoding
- HDMI, SDI/HD-SDI and CVBS video outputs
- SDI outputs capable of two embedded PCM audios
- One PCM audio output via AES/EBU digital audio connector
- Two pairs of balanced and unbalanced analog audio outputs
- Multicast or unicast TS-IP output
- GPI alarm output

Management
- One Ethernet 10/100Base-TX, RJ45
- Web-based user interface with password access control
- Front panel buttons and backlit LCD
- SNMP supported for system integration
### SPECIFICATIONS
SD/HD Receiver/Decoder TP-160 IRD

#### DVB-S/S2 INPUT
- **Input**: 1xRF, F-type, 75Ω
- **Constellation**: QPSK, 8PSK
- **Symbol Rate**: 1~45 Msps
- **Input Frequency**: 950~2150 MHz
- **Max Bit-rate**: 150Mbps
- **Signal Level**: -65~25 dBm
- **LNB PS**: DC 13/18V
- **22K Switch**: On/off

#### TS-IP
- **Interface**: GbE level RJ45 port
- **Speed**: up to 1000Mbps
- **Package Format**: UDP & RTP (auto detection)
- **Traffic Types**: Unicast or multicast
- **IGMP**: V2, V3
- **FEC**: ProMPEG CoP3v2
- **TCP/IP Protocol**: IPv4

#### ASI
- **Interface**: 4 BNC, 75Ω (2xASI input, 2xASI output)
- **Max Bit-rate**: 100Mbps
- **Packet Type**: 188/204 bytes
- **Input Mode**: Byte and burst
- **Output Mode**: Byte burst

#### 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**: TS & Program level

#### VIDEO DECODING
- **Decoding Format**:
  - MPEG-2 SD 4:2:0 MP@ML
  - MPEG-2 HD 4:2:0 MP@ML
  - H.264 AVC SD MP@L3
  - H.264 AVC HD MP@L4.0/HP@4.0

#### 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 ~ 0 dB

#### CAPTIONS
- **CEA-608 and CEA-708 Supported Embedding**: CVBS Line 21 (608), SD-SDI digitized Line 21 (608), SD/HD-SDI VANC (608 and 708)

#### 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
- **Operating Humidity**: < 95% non-condensing
- **MTBF**: >150,000 hours

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bob@technalogix.ca
Ph. 403-347-5400

romeo@technalogix.ca
Ph. 213-703-9107