



TT6120

Transport Stream Processor

With varying interface standards in a network, invariably there is a need to adapt one standard to another. Space is always a premium and as such an adaptation unit also needs to be more than just an interface converter - it needs to provide additional functionality while providing easy operation and configuration.

The TT6120 provides an extensive range of well-proven interfaces to cover every transmission need. With a modular design concept, it is ideal for converting one interface standard to another through an easy to operate GUI. Apart from functioning as a standards converter, the TT6120 provides functionality for PID, component and service filtering, as well as PSI/SI/PSIP table manipulation. For IP input and output interfaces, SMPTE 2022 ProMPEG FEC is also available. The TT6120 is a highly flexible interface adaptation unit.

PRODUCT OVERVIEW

Extensive Range of Options

The TT6120 is ideal for delivering transport streams across a wide variety of transport mediums. An extensive range of input and output option cards can be combined to provide a product that is suitable for most interfacing needs.

Filtering Capabilities

With the capability to add data-piping and service filtering, the TT6120 provides real efficiency within any video link. Transmitter links, IP and telecom based content exchange and TV distribution, are just some of the many applications for which the TT6120 is perfect.

BASE UNIT FEATURES

TT6120 Format Converter (TT6120/BAS/V3)

- Basic format and rate conversion
- PSI/SI/PSIP table insertion
- SNMP remote control
- Easy-to-use web interface

TT6120 Format Converter with PID filtering (TT6120/BAS/V1)

- As above plus...
- PID filtering and re-mapping

TT6120 Extended (TT6120/BAS/V2)

- As above plus...
- Service and/or component filtering
- Dynamic regeneration of PSI/SI/PSIP tables

HARDWARE OPTIONS

Input Options

QPSK demodulator (TT6120/HWO/IM3)

- 2 - 30.6 MSym/sec

Cable demodulator (TT6120/HWO/IM5)

- 16, 32, 64, 128 and 256QAM (ITU-T J.83 Annex A)

C-OFDM demodulator (TT6120/HWO/IM8)

- For channel bandwidth of 8 MHz

IP-Ethernet input (TT6120/HWO/IT20)

- 100BaseT MPEG-2 over IP with FEC

IP-Ethernet with FEC input (TT6120/HWO/IT22)

- 100BaseT MPEG-2 over IP with DVB-IPI FEC

IP-Ethernet with SMPTE 2022 ProMPEG FEC input (TT6120/HWO/IP1)

- 100BaseT MPEG-2 over IP with SMPTE 2022 ProMPEG FEC

Ethernet Data IPED (TT6120/HWO/IT21)

- Encapsulates and de-encapsulates IP data to/from MPEG-2 transport streams

G.703 E3 input (TT6120/HWO/IT5)

- PDH 34.368 Mbps, unframed or G.832 framing

G.703 T2 input (TT6120/HWO/IT3)

- PDH 6 Mbps

G.703 DS3 input (TT6120/HWO/IT6)

- PDH 44.736 Mbps, unframed, M13 or C-bit framing

ATM AAL5 OC3c Multi-mode input (TT6120/HWO/IT9)

- AAL5 OC3c 155 Mbps (SDH/SONET) multi-mode fiber

SMPTE310M input (TT6120/HWO/IT12)

- SMPTE310M 19.39 Mbps transport stream input

Other input options:

- ATM AAL5 OC3c single-mode fiber, ATM AAL5 STM1 electrical, M2S

Output Options

QAM modulator (TT6120/HWO/OM1) (This product requires an external up-converter)

- 16, 32, 64, 128 and 256QAM (ITU-T J.83 Annex A and B)

QAM modulator with up-converter (TT6120/HWO/OM33)

- 64 and 256QAM (ITU-T J.83 Annex A, B and C)

IP-Ethernet output (TT6120/HWO/OT20)

- 100BaseT MPEG-2 over IP without FEC

IP-Ethernet with FEC output (TT6120/HWO/OT22)

- 100BaseT MPEG-2 over IP with DVB-IPI FEC

IP-Ethernet with SMPTE 2022 ProMPEG FEC Output (TT6120/HWO/OP1)

- 100BaseT MPEG-2 over IP with SMPTE 2022 ProMPEG FEC

Ethernet Data IPED Datacast (TT6120/HWO/OT21)

- Encapsulates and de-encapsulates IP data to/from MPEG-2 transport streams

G.703 E1 output (TT6120/HWO/OT2)

- PDH 2.048 Mbps

G.703 E3 output (TT6120/HWO/OT5)

- PDH 34.368 Mbps, unframed or G.832

G.703 DS3 output (TT6120/HWO/OT6)

- PDH 44.736 Mbps, unframed, M13 or C-bit framing

ATM AAL5 OC3c Multi-mode output (TT6120/HWO/OT9)

- AAL5 OC3c 155 Mbps (SDH/SONET) multi-mode fiber

SMPTE310M output (TT6120/HWO/OT12)

- SMPTE310M 19.39 Mbps transport stream output

Dual DVB ASI output (TT6120/HWO/OL0)

- Additional ASI outputs

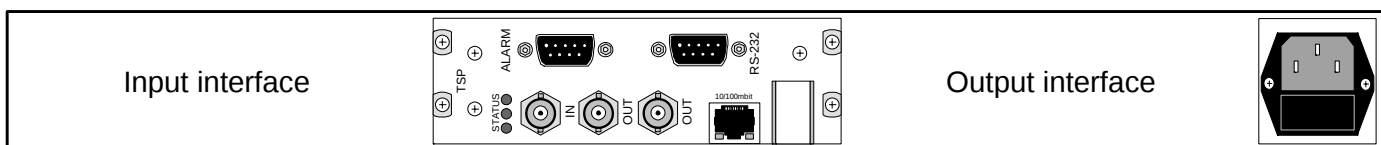
Quad DVB ASI output (TT6120/HWO/OL1)

- Additional ASI outputs

Other output options

- ATM AAL5 OC3c single-mode fiber, ATM AAL5 STM1 electrical
- DVB ASI-optical, M2S

SAMPLE CONFIGURATION



SPECIFICATIONS

Inputs

Default input interface is DVB ASI. A selection between DVB ASI and one of the available interface options can be made

Available interface options:**Satellite**

QPSK demodulator

Carrier frequency range: 950 - 2150 MHz

Symbol rate: 2-30.6 Mbaud

Cable

QAM demodulator

16, 32, 64, 128 and 256 QAM (ITU-T J.083, Annex A)

Tuner frequency range: 47 - 859 MHz

Channel Bandwidth: 8 MHz

Terrestrial

COFDM demodulator ¹⁾

Carrier frequency range: 47 - 862 MHz channel bandwidth: 8 MHz

IP – Ethernet

100BaseT Ethernet (MPEG over IP) with either DVB or Pro-MPEG FEC option

100BaseT IP data encapsulation (maximum 50 Mbps data rate)

G.703

TANDBERG Protocol: 8 (E2), 34 (E3) or 45 (DS3) Mbps

ATM

155 Mbps AAL-5 electrical (SDH/SONET, STM-1)

155 Mbps AAL-5 optical (SDH/SONET, OC-3) SM/MM

Other

M2S

SMPT 310M

¹⁾ The nature of the COFDM demodulator design introduces an end-to-end PCR jitter that is larger than DVB ETR290 specification (<500ns). The typical magnitude is around 1000ns; this will trigger alerts in an ETR290 monitor but will, in the vast majority of cases, have no practical decoding implications.

Outputs

Default output interface is dual DVB ASI/M2S (always active). In addition, one of the available interface options can be chosen.

Available interface options:**Cable**

QAM modulator (without RF up-converter)

16, 32, 64, 128 and 256 QAM (ITU-T J.083, Annex A and B)

QAM modulator (with RF up-converter)

64 and 256 QAM (ITU-T J.083 Annex A, B and C)

Frequency range: 91 – 873 MHz

IP – Ethernet

100BaseT Ethernet (MPEG over IP) with either DVB or SMPTE 2022 ProMPEG FEC option

100BaseT IP data de-encapsulation (maximum 50 Mbps data rate)

G.703

TANDBERG Protocol: 2 (E1), 34 (E3) or 45 (DS3) Mbps

ATM

155 Mbps AAL-5 electrical (SDH/SONET, STM-1)

155 Mbps AAL-5 optical (SDH/SONET, OC-3) SM/MM

Other

DVB ASI optical

M2S

Features

Format conversion between all major industry standards

Rate conversion by null packet insertion and removal. PCR re-stamping

Automatic detection of input packet length and bit-rate

User control of output rate and packet length

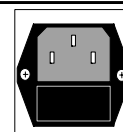
Configurable alarm handling

Automatic start up after power break

MPEG rate up to 100 Mbps

DVB ASI input and dual output available on all models. SCTE 35 controlled by DV525 or GPI contact closure

Output interface



Control

Front panel and keypad for direct configuration

On-board web server for remote control, using an ordinary web browser

SNMP remote control for integration in centralized management applications (TDC)

Physical and Power

Dimensions (W x D x H)

483 x 370 x 44mm (19" x 13.5" x 1RU)

Power Input

110/240 VAC, -48 VDC (option)

Power Consumption

Max. 50W depending on configuration, typically 25W

Environmental Conditions

Operating Temperature

0°C to +45°C (32°F to 113°F)

Relative Humidity

5–95%

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