



**TSX20-30**

**Triple/Dual channel enhanced TS/ASI monitor**

**A Synapse® product**

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DESIGNED FOR  
**ASI/DVB**

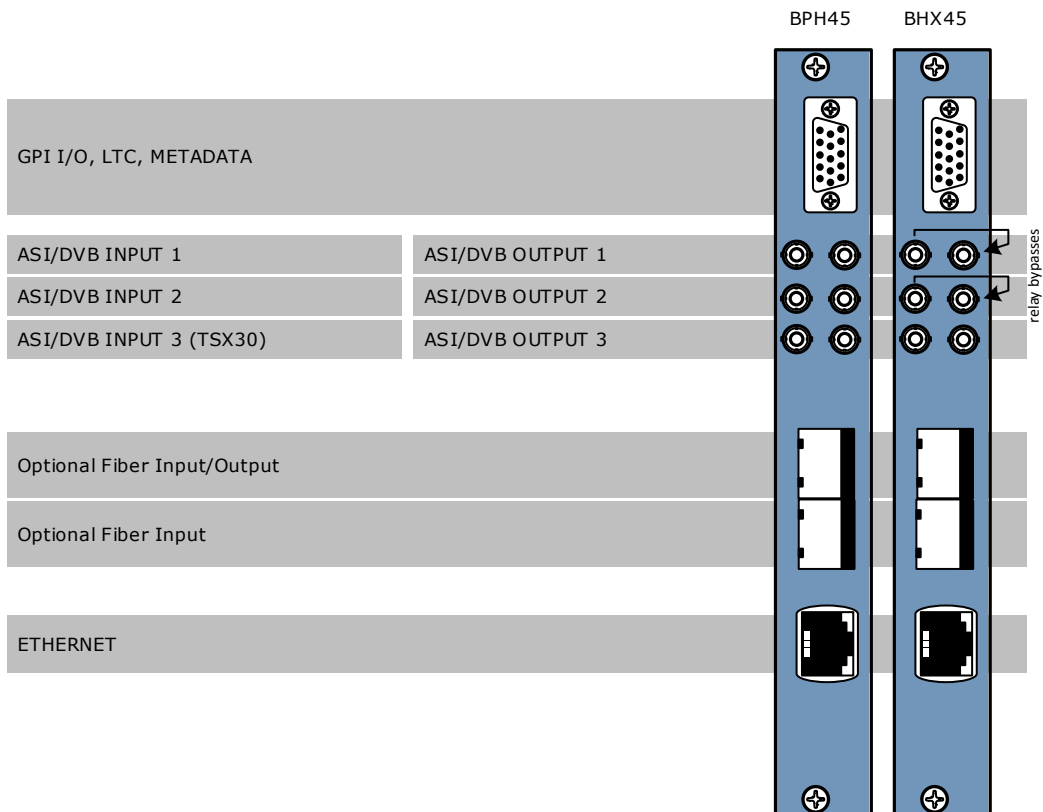
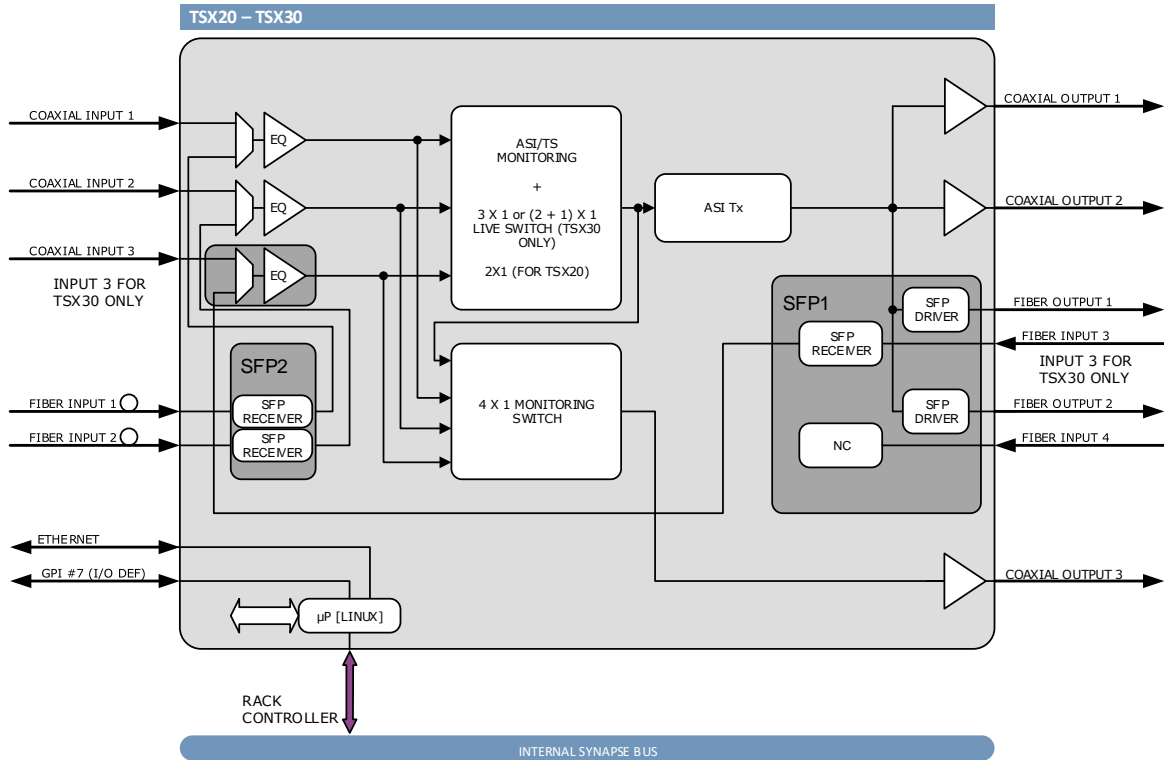
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# Block schematic & I/O panel



## Features

The TSX30 is a triple channel TS/ASI integrity checker with a configurable auto output switch and the TSX20 is a dual input version. The hardware can be fitted with 2 SFP modules that can be used as fiber in and/or outputs.

Depending on the modules up to 3 fiber inputs or 2 fiber outputs can be enabled. A combination of 2 fiber inputs and 2 fiber outputs are also possible.

A TSX20 can be software upgraded to a TSX30

- ASI co-axial Transport Stream I/O
- 3 inputs with 3 analysis cores : configurable as 2+1 or a symmetrical 3 input (TSX30 only)
- 2 inputs symmetrical for the TSX20
- Up to 3 Fiber inputs: SFP2 is always configured as in, SFP1 can be used as dual out or single in
- 3 outputs and optional up to 2 fiber outputs (optional)
- Near-seamless switching between all inputs, preserving TS sync
- On-chip auto-switching and/or external control
- ASI Datalink monitoring with history - byte modes & periodicity
- TS Monitoring with 188/204 modes, rates & customizable alarms
- 64 fully configurable table detection tests
- 64 configurable PID detection tests in 4 upper distance groups
- Optional null TS output on loss of all 3 inputs
- TS and Network Id tests & indication
- Sync\_byte\_error reporting
- Transport\_error\_indicator reporting
- Monitor ASI/DVB streams and triggering of corresponding alarms. These can be used to trigger a switch over:
  - Loss of Transport Stream sync bytes
    - Alarm trigger: sync acquisition, fail
  - No Transport Stream
    - Alarm trigger: data, no data
  - Transport Stream-rate
    - Alarm trigger with lower and upper limit breach
  - Data-rate
    - Alarm trigger with lower and upper limit breach
  - Loss of an expected PID from user definable list of 64 PIDs
  - Loss of an expected table from user definable list of 64 tables
- Monitoring only:
  - Null packets / Active data ratio
  - ASI data link mode
    - Empty
    - Byte
    - Packet
    - Burst
  - 188/204 mode
    - 188 Mode
    - 204 Mode
    - Indeterminate
  - Number of PIDs in the stream
    - Total number of unique PIDs < preset
    - Total number of unique PIDs > preset
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

## Applications

- Generic ASI/DVB integrity monitoring and backup switching
- Autonomous automatic A/B switching
- Redundancy switching at play out centers, head-ends and encoding/multiplexing systems
- Input monitoring and switching at DVB-T and DVB-T2 Transmitter sites

## Ordering information

### Module:

- **TSX30:** Triple channel ASI/DVB monitor with configurable output
- **TSX20:** Dual channel ASI/DVB monitor with configurable output

### Standard I/O:

- **BPH45\_TSX30:** I/O panel for TSX30
- **BHX45\_TSX30:** I/O panel for TSX30 with relay bypass

## Specifications

### DVB/ASI Input

<b>Standard</b>	ISO/IEC 13818-1, BS EN 50083-9, EN 300 468, ATSC Doc. A/65C
<b>Number of inputs</b>	3 (1 per channel)
<b>Equalization</b>	Automatic up to 300m @ 270Mb/s or 100m @ 270Mb/s with BHX32 with Belden 1694A or equivalent cable
<b>Return loss</b>	> 15dB up to 270MHz

### DVB/ASI Output

<b>Standard</b>	ISO/IEC 13818-1, BS EN 50083-9, EN 300 468, ATSC Doc. A/65C
<b>Number of outputs</b>	4
<b>Signal level</b>	800mV nominal
<b>DC offset</b>	0V $\pm$ 0.5V
<b>Rise/fall time</b>	800ps nominal
<b>Overshoot</b>	< 10% of amplitude
<b>Return loss</b>	> 15dB up to 270MHz

### Miscellaneous

<b>Weight</b>	Approx. 250g
<b>Operating temperature</b>	0 °C to 50 °C
<b>Dimensions</b>	137 x 296 x 20 mm (HxWxD)

### Electrical

<b>Voltage</b>	+24V to +30V
<b>Power</b>	<TBD