



AMETHYST

Smart Switcher

AMETHYST Smart Switcher is a stand-alone 1 + 1 redundancy switch designed for the intelligent protection of a pair of MPEG-2 transport stream devices or channels.

Featuring secured switching coupled with enhanced reliability, the industry-renowned AMETHYST ensures the entire broadcast network will run smoothly.

Key Benefits

- Stand-alone 1+1 switch
- Active switching without packet synchronization loss
- Main/spare and redundancy operating modes
- Bypass mode for secured operation
- Multiple outputs for monitoring purposes
- Multiple smart switching conditions
- LEDs/relay contact closure alarms
- LCD display for local configuration and supervision
- EIA232/EIA485 port for remote configuration and supervision
- Redundant power supply with double feed-in

SMART SWITCHER

Overview

Part of the AMETHYST product family, AMETHYST Smart Switcher is housed in a 1RU rack mount frame.

AMETHYST analyzes in parallel the two incoming transport streams, and automatically selects the best output, according to the testing configuration.

Working at the MPEG-2 level, AMETHYST is designed to operate in DVB and ATSC environments.

Operating Modes

Two operating modes are available:

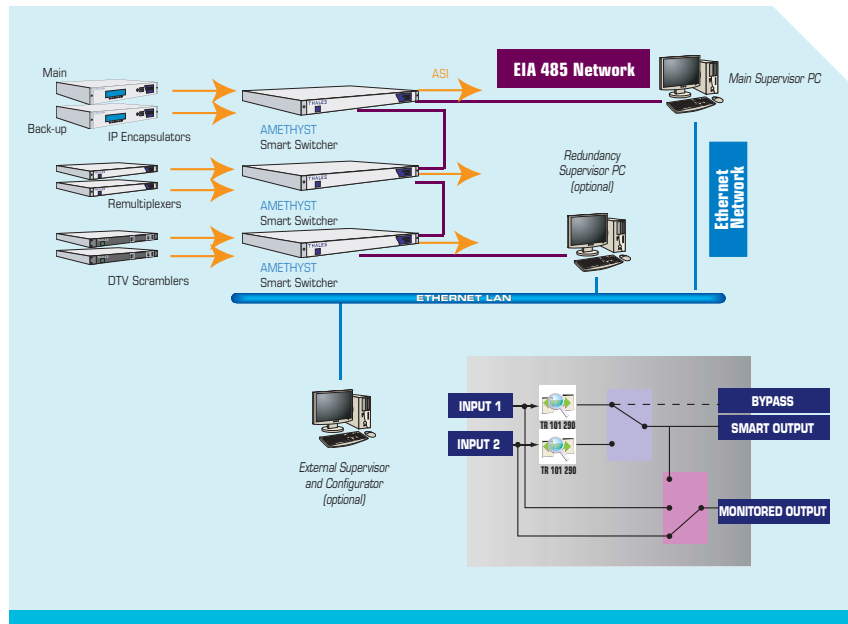
- Main/spare mode: automatic return from spare to main when valid
- Redundancy mode: no switching while current input remains valid

A bypass guarantees service continuity, even in the case of power failure.

Switching Conditions

AMETHYST features the following configurable switching conditions:

- Loss of packet synchronization: this mandatory test causes switching after N consecutive packets carrying wrong synchro byte (0x47) occur, N varying from 2 to 65535.
- Excess stuffing: optional test detecting too many consecutive stuffing packets (from 2 to 65535).
- Absence/presence of PIDs, within a list of 20 PIDs and over a specified time period (from 1ms to 60s, with 1ms steps).
- Loss of ASI signal over a certain period of time (from 1µs to 50ms, with 1µs steps).



AMETHYST Environment

Active Switching

Because of its embedded high precision electronic switch, AMETHYST guarantees precise, seamless switching.

Downtime is minimized, as transport stream packet synchronization is maintained, avoiding additional re-sync delay after switchover.

Local/Remote Configuration and Supervision

The operation and adjustment controls are easily accessible directly from the front panel or from an external port.

Configuration

- Switching conditions.
- Main/spare or redundancy modes.



AMETHYST TNM-7022 Supervision Software

Supervision

- Input signal decoding (packet size, byte/packet mode, bit rate).
- Signal failure alarm.
- Supply failure alarm.

In addition, AMETHYST provides remote configuration and operation through an EIA232/485 port. The intuitive and user-friendly graphical interface runs under Windows NT/2000.

The supervisor PC manages up to 30 AMETHYSTs on a single EIA485 link.

Physical Characteristics

- Dimensions: (W x D x H) 485 x 410 x 50 mm (19" x 16.1" x 1RU)
- Weight: Approx. 4.5Kg (10 lbs)
- Power supply: 100-240 VAC and 50-60Hz
- Operating temperature: 5°C to 40°C (41°F to 104°F)

Ordering Information

Ordering number	Description
TNM-7022	ASI Smart Switcher

Please contact Thales at the numbers below for further details on AMETHYST's available options.