



## AMETHYST

Advanced Switcher

**AMETHYST Advanced Switcher is a state-of-the-art redundancy switcher, designed to intelligently protect DTV networks.**

**AMETHYST offers performance and flexibility to increase the robustness of broadcasting chains, from simple synchronization to advanced TR 101 290 testing and template checking.**

### Key Benefits

- Stand-alone 1+1 switch family for DVB and ATSC
- Active and passive switching
- Smart bypass for secured, power-free operation
- Smart output and monitoring output
- TR 101 290 analysis
- Template checking for stream contents matching test
- Fully integrated 1RU design
- Redundant power supplies with double feed-in
- Fault relays providing contact closure alarms
- LCD front panel & keypad for user-friendly control and basic set-up
- Integrates with Thales' Web Network Management System, LAZULITE

# ADVANCED SWITCHER

## Overview

AMETHYST Advanced Switcher represents a quantum leap in the smart switching approach by featuring leading-edge MPEG-2 DVB and ATSC transport stream analysis capabilities.

In addition to active switching, it also offers passive switching through high frequency electro-mechanical relays.

## Operating Modes

Two operating modes are available:

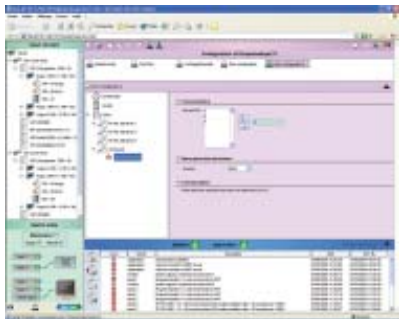
- Main/spare mode: automatic return from spare to main when valid
- Redundancy mode: no switching while current input remains valid

A smart bypass using high frequency relays guarantees service continuity even in the case of power failure. The last valid input is memorized and maintained as an output during power interruption.

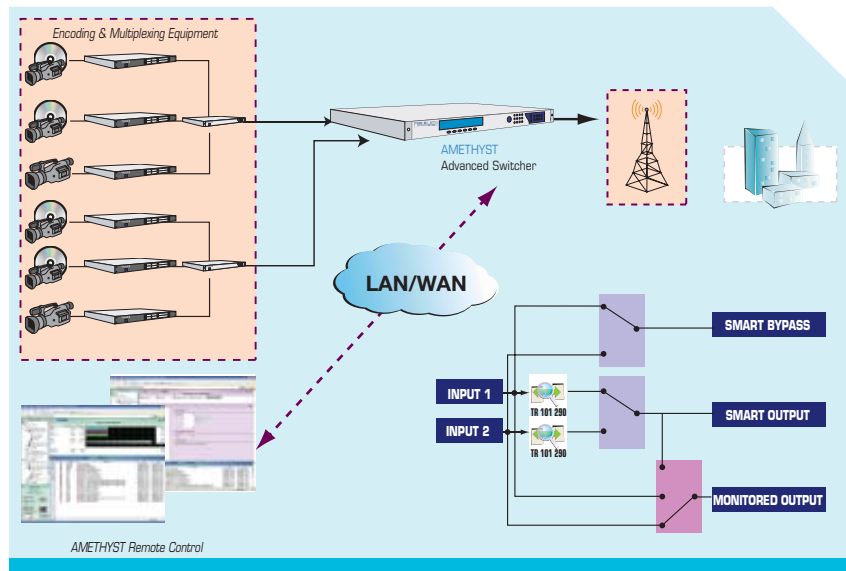
## Error Severity & Persistence

All tests are individually selected and configured through the GUI. Severity criteria may be established, from information that will not provoke a switchover, during critical events.

A persistent time can also be set, to avoid unwanted switching on transitory events.



AMETHYST TNM-7122 Configuration and Supervision



AMETHYST Environment

## TR 101 290 Tests & Monitoring

If a more detailed analysis is desired, AMETHYST also features TR 101 290 analysis allowing a complete health status checkup of the DTV stream. TR 101 290 tests are broken down into three priorities:

- **Priority 1:** basic set of parameters which are considered necessary to ensure that the TS can be decoded.
- **Priority 2:** additional parameters which are recommended for continuous monitoring.
- **Priority 3:** optional additional parameters which may be of interest for some applications.

A similar concept has been developed to provide the same level of information based on the ATSC signaling for the ATSC environment.

Optionally, a monitoring view is supplied to offer a summarized alarm status display.

## Template Checking

The superior processing capabilities of AMETHYST allows for real time template checking to verify transport stream contents actually match what is expected. Tests include: checking the presence of expected services or PIDs, rate limits, and/or the scrambling status of program components.

## Remote Configuration & Supervision

With its embedded Ethernet 10/100BT port, AMETHYST contains a web server which can be accessed remotely through any standard Web browser. The

AMETHYST GUI performs a complete display of switching configurations and also provides input/output status information, error log and bit rate graphics.

AMETHYST provides easy local control using its graphical front panel and versatile input keyboard.

An embedded SNMP agent is also available for centralized management.

## Input & Output Features

- 2 ASI inputs, 4 ASI outputs
- Monitoring and Smart Bypass outputs
- Active and passive switching
- I/O bit rates up to 200 Mbps on ASI
- Automatic byte or packet mode detection
- Relay contact closure for power supply, temperature and input signal alarms
- GPI interface for external switch trigger

## Physical Characteristics

- Dimensions: (W x D x H) 482 x 525 x 44mm (19" x 20.7" x 1RU)
- Weight: Approx. 9Kg (20 lbs)
- Power supply: 100-240 VAC and 50-60Hz
- Operating temperature: 0°C to 50°C (32°F to 122°F)

## Ordering Information

Ordering number	Description
TNM-7122-A	ATSC Advanced Switcher
TNM-7122-D	DVB Advanced Switcher

Please contact Thales for further details on AMETHYST's available options.