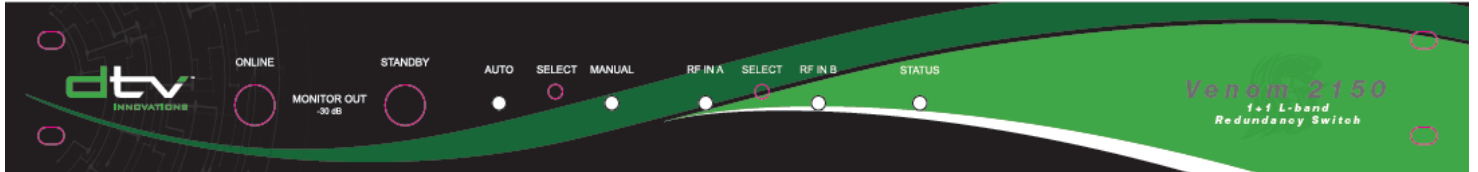# Venom 2150
1+1 L-band Redundancy Switch

The **Venom 2150** is a professional grade, state-of-the-art, and high availability L-band Redundancy Switch providing 1:1 redundancy protection for modulators. The switch is designed for operation with any modulator providing alarm contacts such as DTV Innovations' Vyper 7 stand-alone modulators or the optional internal modulators, offered for the Gryphon family of video encoders. The two 15-pin D-sub connectors can also be used with a variety of modulators from other manufacturers.

The switch operates in either a manual or an automatic mode for redundancy switching between the two RF inputs. When a failure is detected in automatic mode, the switchover is very rapid with a typical switching time of 100 ms and guaranteed maximum switching time of 250 ms. While in manual operation mode, the front panel switch allows the RF input to be manually controlled. The front panel LED indicators display the health status of the unit and indicate the RF input that is routed to the primary output of the switch. The alarm output connector provides status to an external network management system or can be used to trigger an external audible or visual indicator that an event has occurred.

The **Venom 2150** switch includes dual, redundant power supplies with separate AC inputs for high reliability. Inside the chassis are two power supplies that operate independently so the redundancy switch will continue operating even if one of the power supplies fails. This results in an MTBF greater than one million hours, providing peace-of-mind for mission critical applications where even a few minutes of downtime could represent thousands or even millions of dollars in lost revenue.

FEATURES LIST

- 1+1 redundancy
- Automatic & Manual Mode
- 950-2150 MHz Frequency
- 100/250 ms typical/maximum switching time
- Front Panel LED Status Indicators
- SMA 50Ω L-band Inputs
- Rear Panel 50Ω Standby and Switched Outputs
- Front Panel 50Ω Online & Standby Monitor Outputs
- Control from Front Panel, Web Interface, or SNMP
- Switching on Alarm Contact Input
- Input Stream Monitoring (option)
- Low power consumption
- Compact 1RU Chassis

VISION + INNOVATION

Venom 2150
1+1 L-band Redundancy Switch

Key Features

• 1:1 modulator redundancy switching
• Compatible with Vyper 7 modulators and other alarm contact based modulators
• Fast switching times
• Dual, redundant power supplies with separate AC inputs for high availability
• Frequency range from 950 MHz to 2150 MHz
• Manual and automatic modes of operation
• LED status indicators
• Alarm output indicators for integration with external network management systems
• Full width 1U rackmount chassis
• (Optional) Innovative redundancy switching based on input signal quality
• Web-based user interface
• SNMP V2c interface
• (Optional) DVB-S/S2 Monitoring

Signal format	CCM
Modulation format and FEC rates	QPSK; FEC rates 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10[2]
	8PSK, FEC rates 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
	16APSK, FEC rates 2/3, 3/4, 4/5, 5/6, 8/9, 9/10*
	32APSK, FEC rates 3/4, 4/5, 5/6, 8/9, 9/10*
Roll-off factor	0.05 to 0.35 with 0.05 resolution

Certifications

EMC/EMI: EN 61000-6-2:2005, FCC Title 47, Part 15, Class A
Safety: EN60950-1
                 UL60950-1
                 CSA22.2 No. 60950-1-07

Physical Interfaces

RF Inputs (Input A, B):
    2 x SMA-F, 50 Ω
RF Outputs (Primary, Standby, Primary and Standby Monitor)
    2 x N-F, 50 Ω
    2 x BNC-F, 50 Ω (Monitor output)
Alarm connectors:
    2 x 15 pin D-sub connectors
AC power: IEC 60320
Mechanical: 1.75"H x 19" W x 5.5" D
Weight: 7 lbs

Specifications

Modulator switching time:
    100 ms (typical)
    250 ms (maximum)
MTBF
    >1,000,000 hours
RF input
    Input frequency range: 950 MHz to 2150 MHz
    Maximum safe input: +10 dBm
    Input return loss: 15 dB (minimum)
    Port to port isolation: 45 dB (min) at 2.0 GHz
    Insertion loss: < 3 dB
Power requirements
    120/240 VAC, 50/60 Hz
    Dissipation: 10 W
Operating temperature range:
    0ºC to +50ºC, 80% humidity non-condensing
Storage temperature range:
    -20ºC to +70ºC, 95% humidity non-condensing

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