Datasheet

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Itus RF redundancy switch

High reliability, fast switching

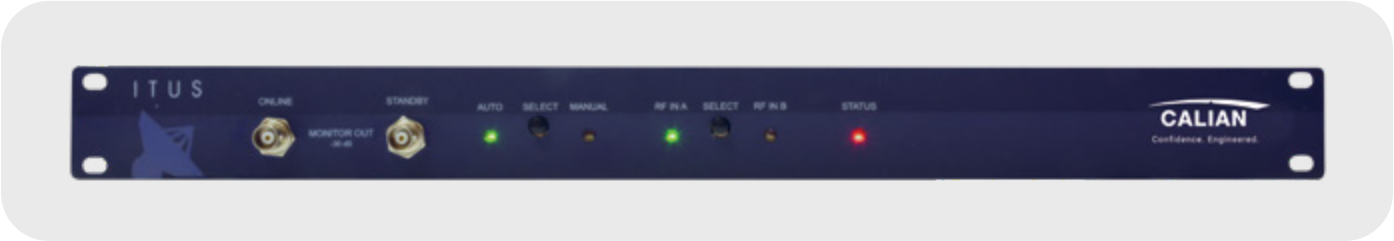
The Itus L-band redundancy switch provides 1:1 redundancy protection for modulators. The switch is suited for operation with any modulator with alarm contacts, such as the Calian family of modulators. The two 15-pin D-sub connectors can be used with a variety of modems from other manufacturers.

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 occurs at lightning speed with a typical switching time of 100 ms and guaranteed maximum switching time of 250 ms. In manual mode, the front panel switch allows the RF input to be manually controlled.

The 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.

The switch includes dual, redundant power supplies with separate AC inlets for high reliability. Inside the chassis are two power supplies that operate independently so the redundancy switch keeps operating even when one of the supplies fails. This results in an MTBF greater than one million hours.

Itus is capable of demodulating up to 16 DVB-S/S2 signals in the 950 MHz - 2150 MHz frequency range on the RF input ports. This innovative feature allows the switch to detect the demodulator/decoder lock status, MER, frame error rate and power level for the carriers on the input ports. It can perform a switchover based not only on the external modulator status, but also on the state of the incoming signals. A rear panel Ethernet management port provides easy access to the user interface from any standard web browser. An SNMP based monitor and control interface provides connection to external network management systems.



ITUS RF redundancy switch features

Features

Key features	• 1:1 modulator redundancy switch. • Compatible with Calian's odulators and other alarm-contact based modems and modulators. • Fast switching times. • Dual, redundant power supplies with separate AC inlets 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. • Innovative redundancy switching based on input signal quality. • Web-based user interface. • SNMP V2c interface. • DVB-S/S2 Monitoring.
Signal format	• CCM
Modulation format and FEC rates	• **QPSK;** FEC rates 1/4, 1/3, and 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/102 • **8PSK;** FEC rates 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 • **16APS;** 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

Physical interfaces

RF inputs (Input A, B)	• 2 x SMA-F, 50 Ω
RF outputs	• Primary • Standby • Primary and standby monitor
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

Modular 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
Operations temperature range	• 0°C to +50°C, 80% humidity non-condensing
Storage temperature range	• -20°C to +70°C, 95% humidity non-condensing

Certifications

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

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