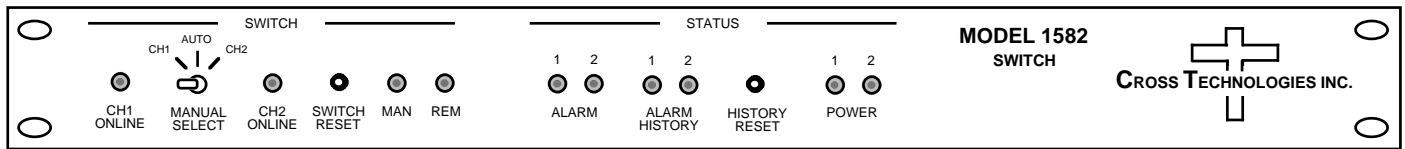


**1582-654 - IF/RF 1x1, Quad Protection Switch**

The 1582-654 Dual IF/RF Protection Switch provides Auto, Manual or Remote relay switching between CH1 and CH2 for both IF signals (DC to 1.5 GHz) and RF signals (DC to 6.5 GHz) typically for use with combination Up/Downconverters to C-band . Alarm conditions on CH1 and CH2 are either a contact closure to ground or an open (selectable). The logic controls two RF switches (A and C) and two IF switches, (B and D) which all switch together. Switching logic can be selected as follows:

1. 1) CH1 Prime Mode - Switches from CH1 to the CH2 only if CH1 alarms and CH2 is good. Switches back when CH1 is no longer in alarm or both CH1 and CH2 are bad.
2. 2) Latch to CH2 Mode - Switches to CH2 if CH1 alarms and CH2 is good. Latches to CH2. Push Manual Reset or ground Remote Reset pin to return to CH1 if it has no alarm.
3. 3) Minimum AUTO switching, Initial Channel Select (ICS) Mode - Switch stays on channel last selected by Manual or Remote selection after return to AUTO. AUTO switching occurs only if current channel alarms and other channel is clear.

When power is lost, CH1 is selected. The Manual Select switch and (when in AUTO) contact closures to Remote Select pins select CH1 or CH2 independent of alarms. LEDs indicate alarm and switch conditions for CH1 and CH2 and REMOTE or MANUAL operation. The 1582-652 is housed in a 1RU x 12" deep chassis, and is powered by two redundant power supplies.



**1582-654**

**EQUIPMENT SPECIFICATIONS\***

**IF Switches (SWITCHES B & D) Characteristics**

Impedance / Connectors 75Ω / BNC (50Ω BNC-option M)  
 Isolation >65 dB DC to 10 MHz  
 >50 dB to 1.0 GHz;  
 >40 dB to 1.5 GHz  
 Switch time ≤10 milliseconds  
 Insertion Loss ≤1 dB to 1.0 GHz;  
 ≤1.5 dB to 1.5 GHz  
 Configuration DPDT

**RF Switches (SWITCHES A & C) Characteristics**

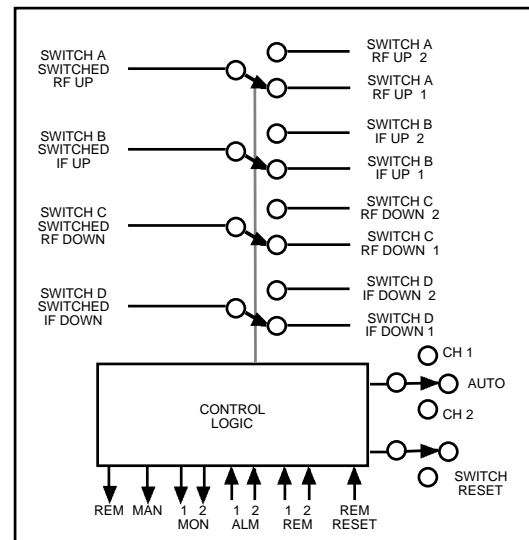
Impedance / Connectors 50Ω / Type N  
 Return Loss >18 dB DC to 4 GHz  
 >15 dB to 6.5 GHz;  
 Type Relay  
 Isolation >70 dB DC to 4 GHz  
 >60 dB to 6.5 GHz;  
 Switch time ≤10 milliseconds  
 Insertion Loss ≤1 dB to 4.0 GHz;  
 ≤1.5 dB to 6.5 GHz  
 Configuration SPDT, no termination

**Other**

Alarm/Remote Connector Terminal Strip  
 Power Redundant power supplies; 100-240 ±10% VAC, 47 -63 Hz, 30 watts

**Options**

M 50Ω N-Type /RF, 50Ω / BNC (female) IF Connectors



**1582-654 BLOCK DIAGRAM**

\*10°C to 40°C; 2000m max elevation; 80% max humidity; Specifications subject to change without notice.