

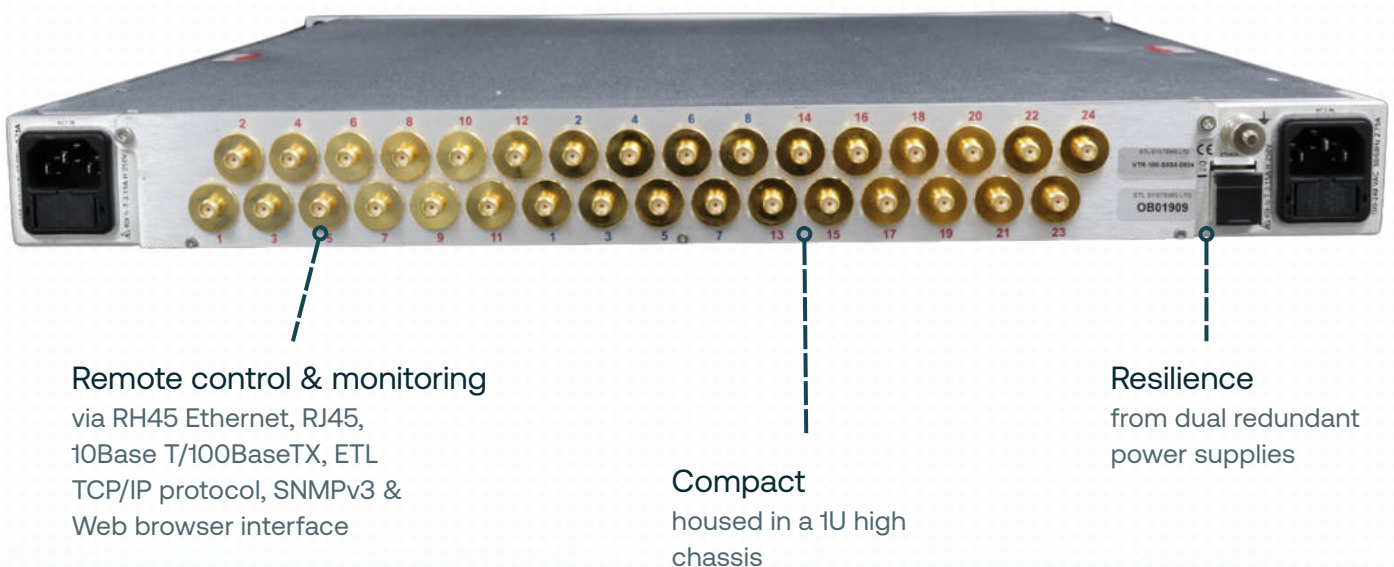
Victor Series Switch Matrix/Router

16 x 16 Distributive IF/L-band

VTR-180 is an extended IF/L-band 16x16 distributive matrix in a compact 1U chassis. Features RF detection and selectable LNB powering.



Images for reference only!





RF Parameters					
Capacity		Up to 16 inputs x 16 outputs			
Routing		Distributive, non-blocking		Any input can be connected to any number of outputs	
Frequency Range		50-2500 MHz			
Switching Time		< 50ms (From receipt of a command to implementation of path change)			
RF Connectors		50 Ω SMA	50 Ω BNC	75 Ω BNC	75 Ω F-type
Flatness	Full Band	±1.75 dB	±1.75 dB	±2.0 dB	±2.5 dB
	850-2150 MHz	±1.5 dB	±1.5 dB	±1.75 dB	±1.75 dB
	50-200 MHz	±0.5 dB	±0.5 dB	±0.5 dB	±0.5 dB
	Any 36 MHz (50-2150MHz)	±0.25 dB	±0.3 dB	±0.4 dB	±0.45 dB
	Any 36 MHz (Full Band)	±0.35 dB	±0.4 dB	±0.5 dB	±0.5 dB
Input Return Loss	Typ.	18 dB	16 dB	12 dB	10 dB
	Min. 2150 MHz	10 dB	12 dB	8 dB	8 dB
	Min. 2500 MHz	10 dB	10 dB	6 dB	6 dB
Output Return Loss	Typ.	18 dB	16 dB	12 dB	10 dB
	Min. 2150 MHz	12 dB	12 dB	8 dB	8 dB
	Min. 2500 MHz	10 dB	10 dB	6 dB	6 dB
Gain	Gain	0 ± 2 dB		Typical, mean across band	
	Gain Control	-3 to +3 dB			
	Gain Steps	0.25 dB			
1 dB GCP	50-2150 MHz	Typical. +1 ± 2 dBm		1 dB Gain Compression point, output power, at Unity Gain	
	2150-2500 MHz	Typical. -3 ± 2dBm			
OIP3	Full Band	+12 dBm typical		At Unity Gain	
OIP2	Full Band	+20 dBm typical		At Unity Gain	
Isolation	I/P - O/P	60 dB		Minimum between any 2 ports	
	I/P - I/P	75 dB		Minimum between any 2 ports	
	O/P - O/P	75 dB		Minimum between any 2 ports	
Group Delay		≤ 3 ns over 50 to 2500MHz ≤ 1 ns over 200 to 2500MHz			
Noise Figure	Full Band	17dB at max gain setting 21dB at unity gain setting 25dB at min gain setting		Unity Gain, with one input routed to one output	
Input RF Power		+24 dBm		Absolute maximum	
RF Monitoring		-50 to +5dBm		Input power, high and low limits.	
LNB Power		0V/13V/18V selectable, 22kHz ON/OFF		350mA maximum per channel, LNB current monitoring	



Environmental		
Operating Temperature	0 to 45°C	
Location	Indoor use only	
Storage Temperature	-20°C to +75°C	
Humidity	20 to 90% non-condensing	
Altitude	10,000 feet AMSL (Operational) 30,000 feet AMSL (Storage)	
Gain Stability vs Temperature	0.05 dB/°C	
Power		
PSU Power	85-264Vac 50-60Hz	Fused 2A
AC Consumption	50W	Max. consumption at steady state
PSU	Dual redundant	Diode OR
MTBF	114,000 Hours	
System Control		
Local Control & Monitoring	HMI	
Remote Control & Monitoring	Ethernet via RJ45, 10BaseT/100BaseTx ETL TCP/IP, SNMPv3, HTTPS, Built in Web Server	
Alarms	Via Ethernet (RJ45) or HMI	
PSU Redundancy	Dual Redundant & Alarmed	
Physical		
Dimensions	1U high x 550mm deep x 19" wide	
Weight	10 kg	
Colour	RAL 9003 semi-matte (white)	
Spec. Version	0.1	

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

Note 3: Typical parameters are guide figures and measured data may deviate from the quoted figures. ETL endeavours to exceed the quoted typical parameters where practically possible.