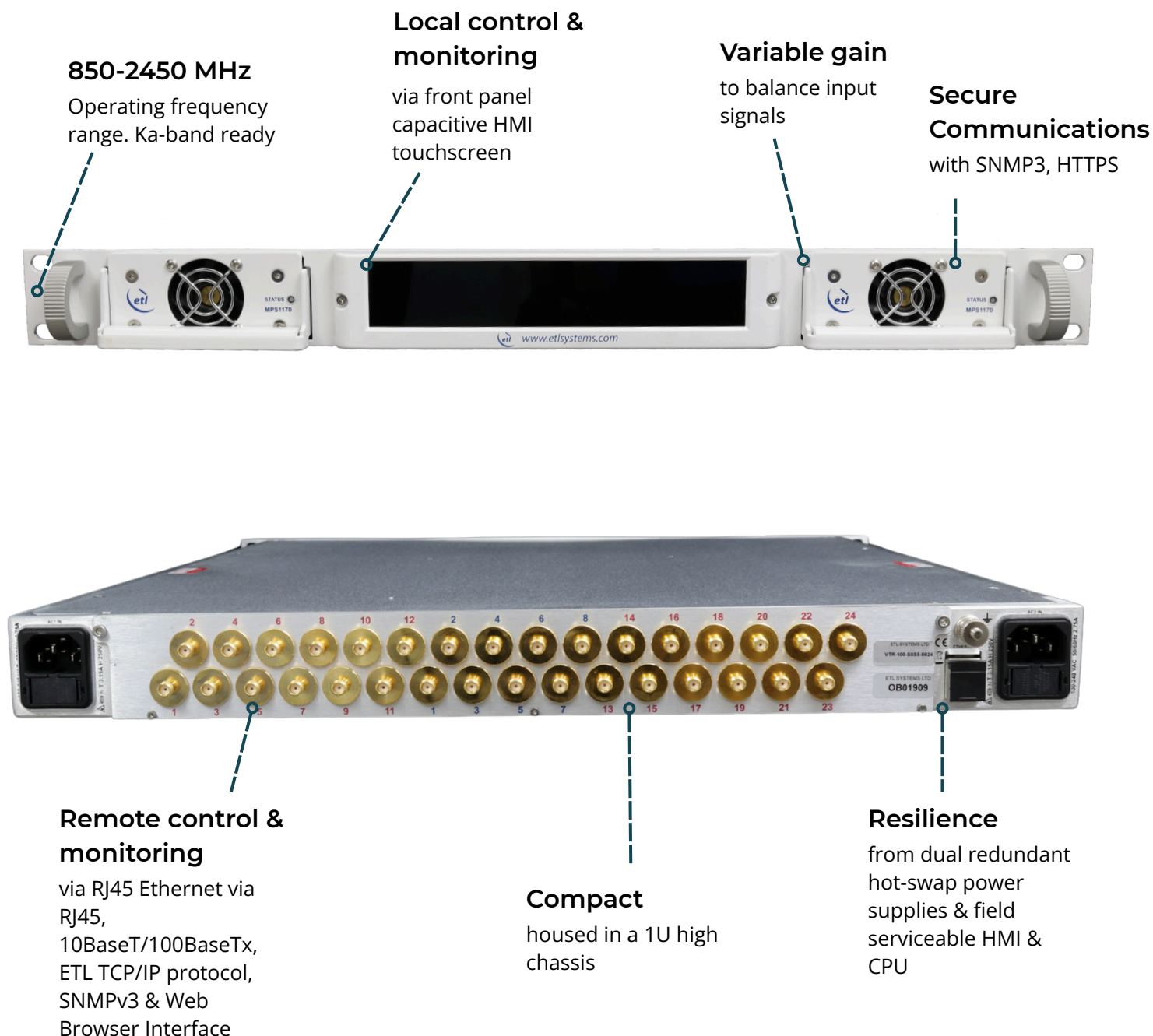# Victor Series Switch Matrix/Router

16 x 16 Combining L-band

VTRC-101 is an extended L-band 16 x 16 combining matrix in a compact 1U chassis.

850-2450 MHz
Operating frequency range. Ka-band ready

Local control & monitoring
via front panel capacitive HMI touchscreen

Variable gain
to balance input signals

Secure Communications
with SNMP3, HTTPS

Remote control & monitoring
via RJ45 Ethernet via RJ45, 10BaseT/100BaseTx, ETL TCP/IP protocol, SNMPv3 & Web Browser Interface

Compact
housed in a 1U high chassis

Resilience
from dual redundant hot-swap power supplies & field serviceable HMI & CPU

RF Parameters				
Capacity		Up to 16 inputs x 16 outputs		
Routing		Combining, non-blocking		Many inputs can be routed to each output
Frequency Range		850-2450 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	±2.0 dB
	850-2150 MHz	±1.25 dB	±1.25 dB	±1.5 dB	±1.5 dB
	Any 36 MHz	±0.3 dB	±0.3 dB	±0.5 dB	±0.5 dB
Input Return Loss	Typ.	20 dB	20 dB	14 dB	14 dB
	Min.	14 dB	14 dB	10 dB	8 dB
Output Return Loss	Typ.	20 dB	20 dB	14 dB	14 dB
	Min.	14 dB	14 dB	10 dB	8 dB
Gain	Gain	0 ± 2 dB		Typical, mean across band	
	Gain Control	0 to +5 dB		Settable at each input	
	Gain Steps	0.25 dB			
1 dB GCP	Full Band	+5 dBm		Output power, at Unity Gain	
	850-2150 MHz	+8 dBm			
OIP3	Full Band	20 dBm		Typical at Unity Gain	
	850-2150 MHz	25 dBm			
OIP2	Typ.	36 dBm		At Unity Gain	
	Min.	34 dBm			
Isolation	I/P - O/P	60 dB		Minimum between any 2 ports	
	I/P - I/P	75 dB			
	O/P - O/P	75 dB			
Group Delay		≤ 1 ns			
Noise Figure	Typ.	20 dB (Typical with one input routed to one output), Unity Gain			
	Max.	22 dB (Typical with one input routed to one output), Unity Gain			
Input RF Power		+20 dBm		Absolute maximum	
Spurious	Carrier Related	-65 dBc		Excluding harmonics. Max. Carrier level -10dBM	
	Carrier Un-related	-85 dBm		Within operating frequencies	
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		20W		Max. consumption at steady state, no load	
PSU		Dual redundant		Diode OR	
MTBF	Chassis	> 250,000			
	Matrix card	> 100,000			

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 650mm deep x 19" wide
Weight	10 kg
Colour	RAL 9003 semi-matte (white)
Spec. Version	1.3

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.

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