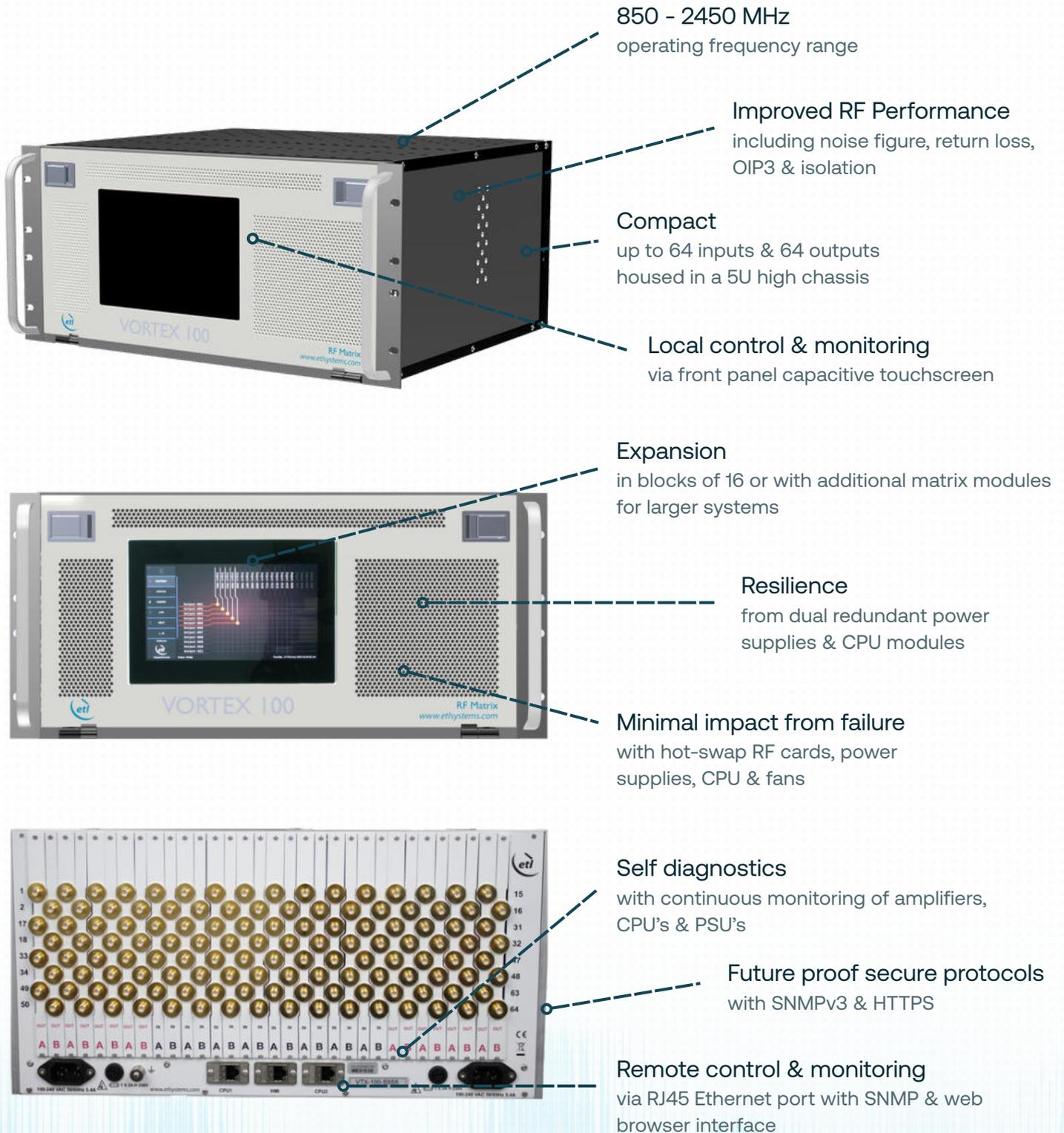


64 x 64 Vortex L-band Combining Switch Matrix / Router

New compact design & enhanced RF performance

ETL's Vortex Extended L-band matrix has been redesigned to now offer an extremely compact form factor, and enhanced RF performance. Vortex uses leading edge technology switching cards, giving excellent RF performance in a compact chassis.



RF Parameters					
Capacity		64 inputs x 64 outputs			
Routing		Combining, non-blocking. Many inputs can be routed to each output.			
Frequency Range		850-2450 MHz (Extended L-band)			
Switching Time		< 150ms from receipt of a command to implementation of path change			
Input RF Power		+ 20 dBm		Absolute maximum	
RF Connectors & Impedances		50Ω SMA	50Ω BNC	75Ω BNC	75Ω F-type
		All ports DC blocked			
Gain (Typical, mean across band)		0±2 dB	0±2 dB	0±2 dB	0±2 dB
Gain Flatness	850-2450MHz	±2.5 dB	±2.5 dB	±2.75 dB	±2.75 dB
	Any 36MHz in 850-2450MHz	±0.45 dB	±0.45 dB	±0.5 dB	±0.5 dB
	850-2150MHz	±1.25 dB	±1.25 dB	±1.5 dB	±1.5 dB
	Any 36MHz in 850-2150MHz	±0.3 dB	±0.3 dB	±0.5 dB	±0.5 dB
Input Return Loss	Typical	20 dB	20 dB	14 dB	14 dB
	Minimum	12 dB	12 dB	8 dB	8 dB
Output Return Loss	Typical	20 dB	20 dB	14 dB	14 dB
	Minimum	14 dB	12 dB	8 dB	8 dB
Isolation (Min. between any 2 ports)	Input-Input	75 dB			
	Output-Output	75 dB			
	Input-Output	60 dB			
Noise Figure	Typical	23 dB		With one input routed to one output.	
	Maximum	26 dB			
1dB GCP (dBm)		Typ. 12 dBm		1dB Gain Compression point, output power	
OIP3 output power	Typical	25 dBm			
	Minimum	21 dBm			
OIP2 2nd order intercept point, output power	Typical	40 dBm			
	Minimum	38 dBm			
Group Delay		≤ 1 ns, variation across operational bandwidth			

System Control			
Local Control	Via Front Panel HMI capacitive touchscreen		
Remote Control & Monitoring	Ethernet via RJ45, 10BaseT/100BaseTx, ETL TCP/IP protocol, SNMPV3, HTTPS, Built-in Web Server		
Alarms	Ethernet (RJ45)		
Power			
PSU Power	85-264Vac 50-60Hz	Fused 2A	
AC Consumption	350W	Max. consumption at steady state	
LNB Power	None		
PSU	Dual redundant & alarmed	Diode OR. Hot swap	
Hot-swap PSU	Yes		
CPU	Dual redundant	Hot swap	
Input cards	Hot swap		
Output cards	Hot swap		
MTTR	20 mins, 15 mins to retrieve spare part and 5 mins to replace		
MTBF (Hours)	Chassis	>250,000	Chassis excludes HMI & RF cards
	Switch card	>250,000	
	Divider card	>300,000	
	Matrix card	>100,000	
Environmental			
Operating temperature	0 to 45°C		
Gain Stability versus Temperature	0.05dB/°C		
Storage temperature	-20°C to +75°C		
Location	Indoor use only		
Humidity	20 to 90% non-condensing		
Altitude (operational)	10,000 feet AMSL (Above Mean Sea Level)		
Altitude (storage)	30,000 feet AMSL (Above Mean Sea Level)		
Physical			
Dimensions	5U high x 550 mm deep x 19" wide		
Weight	40 kg		
Colour	RAL9003—White (Semi-Matte)		

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.