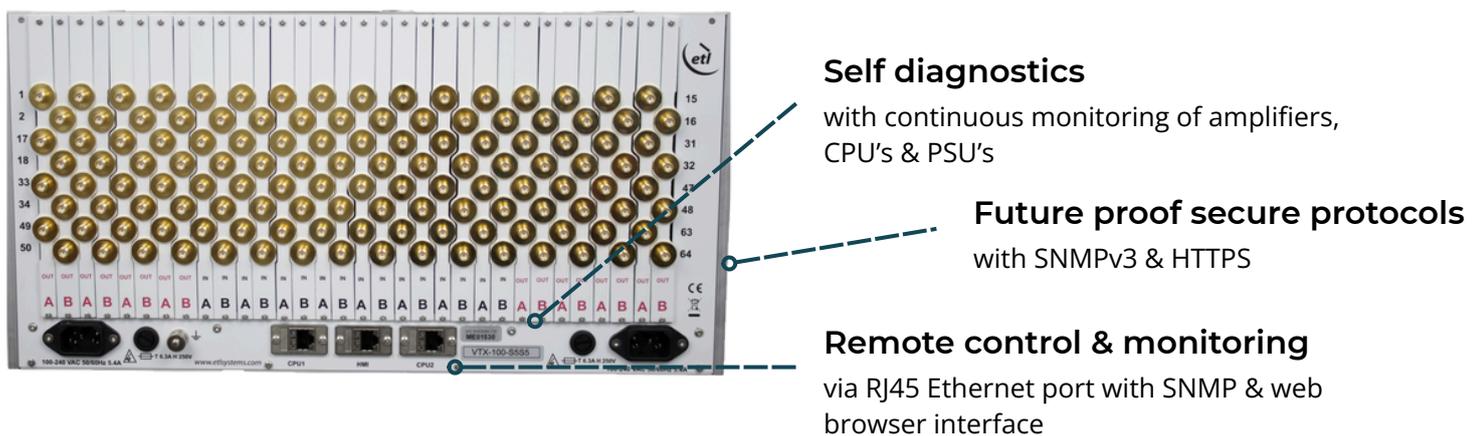
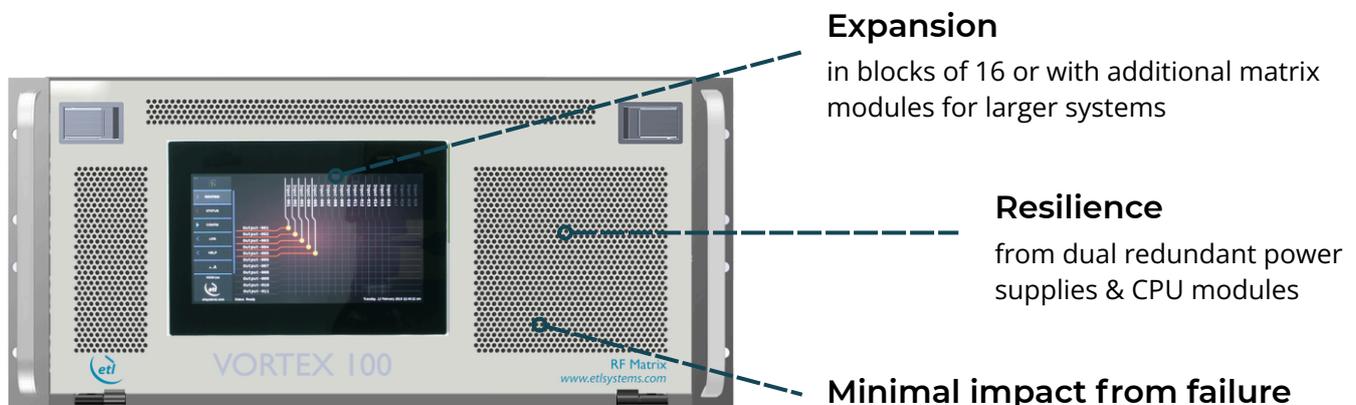
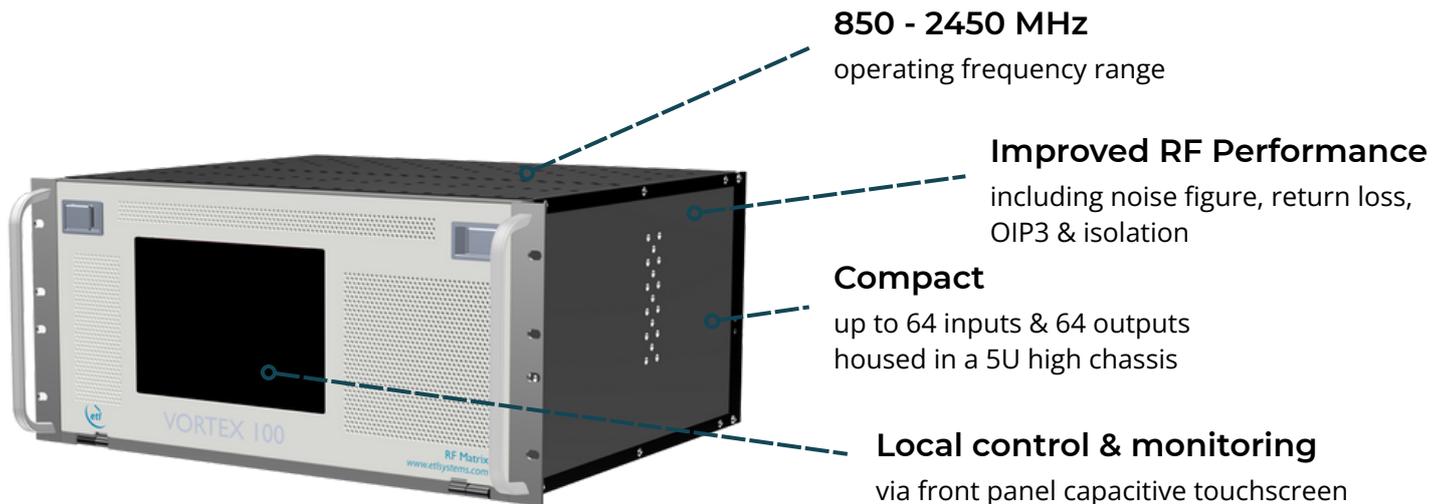


64 x 64 Vortex Extended L-band Distributive Switch Matrix / Router

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	Distributive, non-blocking. Any input can be connected to any number of outputs.				
Frequency Range	850-2450 MHz (Extended L-band)				
Switching Time	< 50ms 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	±2.25 dB	±2.25 dB	±2.5 dB	±2.5 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	14 dB	12 dB	8 dB	8 dB
Output Return Loss	Typical	20 dB	20 dB	16 dB	16 dB
	Minimum	12 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	12 dB		With one input routed to one output.	
	Maximum	14 dB			
1dB GCP (dBm)	Typ. 0 dBm			1dB Gain Compression point, output power	
OIP3 3rd order intercept point.	850-2450MHz	Typ. 14 dBm, min 9 dBm			
	850-2150MHz	Typ. 16 dBm, min 12 dBm			
OIP2 2nd order intercept point.	Typical	26 dBm Min			
	Minimum	24 dBm Min			
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.