



ETL Systems

New technologies
in RF distribution

Model Number:

VTRC-100-2408

24x8 Extended L-band Combining Victor series Switch Matrix / Router

Typical applications:

- TVRO, smaller teleports and satellite ground stations.
- Oil and gas applications.
- RF distribution in cruise liners or luxury yachts.
- SNG and outside broadcast trucks.

VTRC-100 is an Extended L Band 24x8 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 SNMPv3, 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

Note that the Images are for indication purposes only. Actual unit may differ.





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Technical specifications and operating parameters

RF Parameters					
Capacity	Up to 24 inputs x 8 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	50Ω SMA	50Ω BNC	75Ω BNC	75Ω F-type	
Flatness	Full band	±1.25 dB	±1.75 dB	±2.0 dB	±2.0 dB
	850-2150MHz	±1.25 dB	±1.25 dB	±1.5 dB	±1.5 dB
	Any 36MHz	±0.2 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	10 dB	8 dB
Output Return Loss	Typical	20 dB	20 dB	14 dB	14 dB
	Minimum	14 dB	12 dB	10 dB	8 dB
Gain	Gain	0 ± 1 dB		Typical, mean across band	
	Gain Control	-5 to +5 dB		Settable at each output	
	Gain steps	1.0 dB			
1dB GCP	850MHz	7 dBm	1dB Gain Compression point, output power Unity Gain.		
	1500MHz	7 dBm			
	2150MHz	5 dBm			
	2450MHz	5 dBm			
OIP3	Full Band	Typ. 24 dBm, min 20 dBm		at 0 dB Gain	
	850-2150 MHz	Typ. 24 dBm, min 21 dBm			
OIP2	Typical	33 dBm		at 0 dB Gain	
	Min	30 dBm			
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	< 1 ns				
Noise Figure	Typical	23 dB at 0 dB Gain, with one input routed to one output.			
	Max	26 dB at 0 dB Gain, with one input routed to one output.			
Input RF Power	+ 20 dBm		Absolute maximum		
Tech Spec Version	1.3				

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	0.05dB/°C

Power		
PSU Power	85-264Vac 50-60Hz	Fused 2A
AC Consumption	40W	Max. consumption at steady state
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)

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.

ETL SYSTEMS LIMITED
Coldwell Radio Station
Madley
Hereford
England HR2 9NE

TELEPHONE
+44 (0)1981 259020

EMAIL
info@etlsystems.com

FACSIMILE
+44 (0)1981 259021

WEB
www.etlsystems.com

