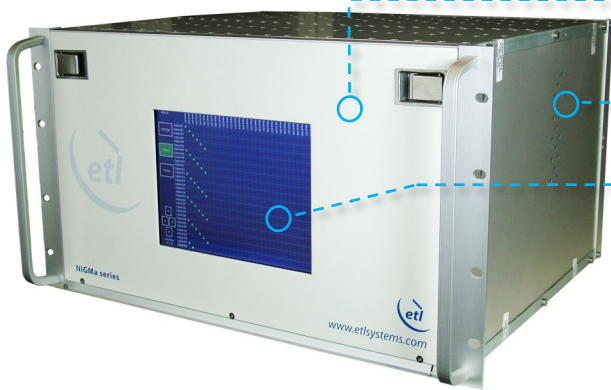




32 x 32 L-band Bidirectional Passive Enigma Switch Matrix / Router for high power applications

Typical applications:

- RF content acquisition for TVRO & IPTV headends
- Signal monitoring of satellite traffic
- Remote controlled unmanned satcom sites



850 - 2150 MHz
operating frequency range



High Linearity ensures overall RF gain signal performance is optimised



Local control & monitoring via front panel VGA touchscreen



Self diagnostics with continuous monitoring of amplifiers, CPU's & PSU's



Expansion in single increments or with additional matrix modules for larger systems



Minimal impact from failure with hot-swap single input & output RF cards, dual power supplies, dual CPU's, fans



Compact up to 32 inputs x 32 outputs housed in a 6U high chassis



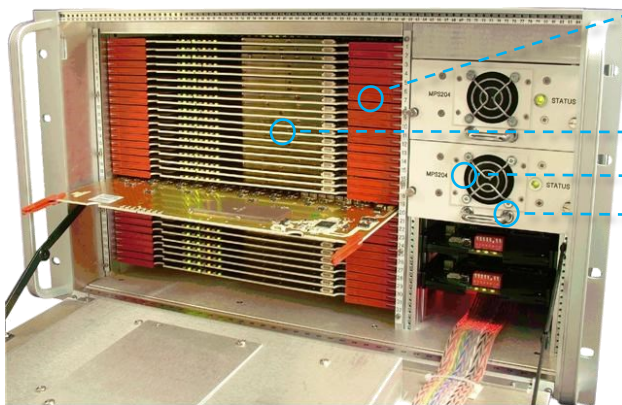
Resilience from dual redundant power supplies & CPU modules



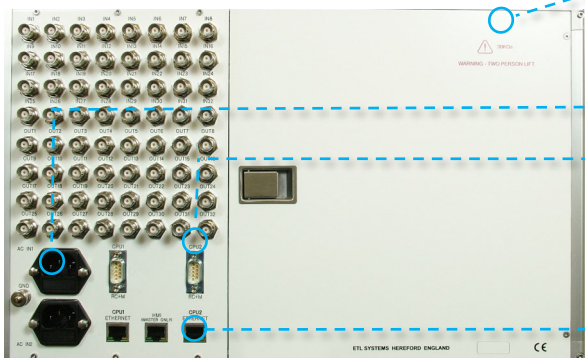
Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface



Dry contact alarm port & serial communications for amplifier & power supply status



64 x 64 Enigma system with splitters & combiners





Technical specifications and operating parameters

RF Parameters					
Capacity	32 inputs x 32 outputs, fully populated				
Routing	Bidirectional, passive		Many inputs can be routed to each output or any input can be connected to any number of outputs		
Frequency Range	850-2150 MHz (L-band)				
Impedances & RF connector	50Ω SMA	50Ω BNC	75Ω BNC	75Ω F-type	
Loss	32 ± 2 dB typical, mean across band				
Flatness	Full band	±1.0 dB	±1.0 dB	±1.5 dB	±1.5 dB
	Any 36MHz	±0.4 dB	±0.4 dB	±0.5 dB	±0.5 dB
Input Return Loss	Typical	18 dB	18 dB	14 dB	12 dB
	Minimum	14 dB	14 dB	10 dB	8 dB
Output Return Loss	Typical	18 dB	18 dB	14 dB	12 dB
	Minimum	14 dB	14 dB	10 dB	8 dB
Isolation Minimum between any 2 ports	I/P - I/P	75 dB			
	O/P - O/P	75 dB			
	I/P - O/P	65 dB			
Noise Figure	34 dB equal to insertion loss				
1dB Gain Compression Point	+40 dBm output power				
OIP2	+75 dBm 2nd order intercept point				
OIP3	+55 dBm 3rd order intercept point, output power				
Group Delay	<1 ns across operational bandwidth				
Switching Time	<50 ms from receipt of command to implementation of path change				
Input RF Power	+ 20 dBm Absolute maximum				

Power		
AC Power	85-264Vac 50/60Hz, Fused 2A	
PSU	Dual redundant and alarmed	Diode OR
CPU	Dual redundant	Hot Swap
Hot-swap PSU	Yes	
AC consumption	40W	
Alarms	Dry Contact (D-Type) & Ethernet (RJ45)	
Remote Control & Monitoring	Serial (RS232 or RS422/485) and Ethernet (RJ45) on Rear Panel	
MTBF (hours)	Chassis	271,444
	Switch Card	270,297
	Divider Card	317,227

System Control	
Local Control	Touchscreen & VGA Display
Remote Connection	Via RS232/RS485 and RJ45 Ethernet
SNMP Traps	For alarms & monitoring
Comms/Power Failure	Retains settings
Remote Control Software	Available
Web Browser Interface	Standard

Environmental	
Operating temperature	0 to 45°C
Location	Indoor use only
Storage temperature	-20°C to +75°C
Humidity	20 - 90% non-condensing
Altitude	10,000 feet AMSL

Physical	
Dimensions	6U high x 450mm deep x 19" wide
Weight	35 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.