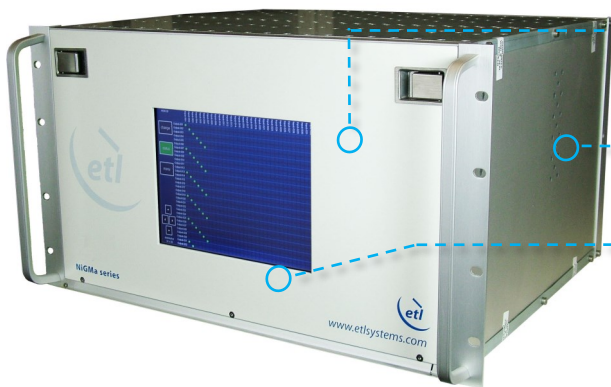




32 x 32 Enigma IF Combining Switch Matrix / Router

Typical applications:

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



50 - 200 MHz
operating frequency range



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



Local control & monitoring via front panel VGA touchscreen



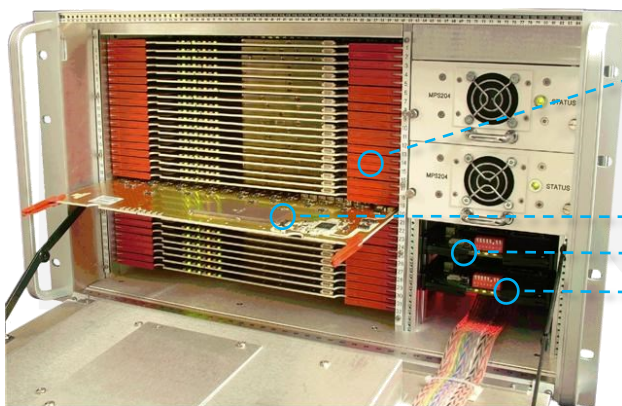
Self diagnostics with continuous monitoring of amplifiers, CPU's & PSU's



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



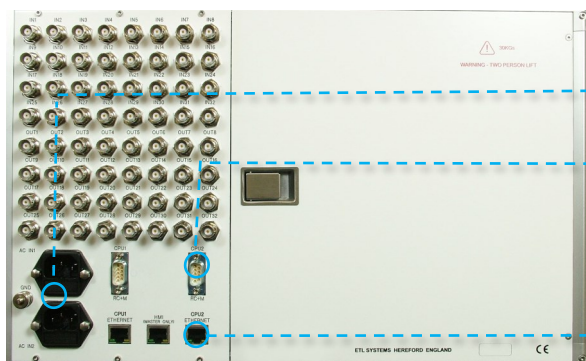
64 x 64 Enigma system with splitters & combiners



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



Resilience from dual redundant power supplies & CPU modules



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



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





Technical specifications and operating parameters

RF Parameters					
Capacity	32 inputs x 32 outputs				
Routing	Combining	Any input can be connected to any number of outputs			
Frequency	50 to 200MHz				
Connectors & Impedances	50Ω SMA	50 Ω BNC	75Ω BNC	75 Ω F-type	
Gain	Maximum	0 ± 1 dB nominal, mean across band			
Gain Flatness	Full band	±1.0 dB	±1.0 dB	±1.0 dB	±1.2 dB
	Any 36MHz	±0.25 dB	±0.25 dB	±0.25 dB	±0.5 dB
Input Return Loss	Typical	20 dB	20 dB	12 dB	12 dB
	Minimum	18 dB	16 dB	10 dB	10 dB
Output Return Loss	Typical	20 dB	20 dB	12 dB	12 dB
	Minimum	18 dB	16 dB	10 dB	10 dB
Isolation	I/P—O/P	80 dB			
	I/P—I/P	80 dB			
	O/P—O/P	80 dB			
Noise Figure	20 dBm typical				
1dB Gain Compression Point	+5 dBm				
OIP3	+15 dBm typical				
Group Delay	<5ns	Across operational bandwidth			

Physical	
Dimensions	6U high x 450mm deep x 19" wide
Weight	29 kg
Colour	RAL9003 White semi-matte

System Control	
Local Control	Touchscreen & VGA Display
Remote Connection	Via RS232/485 serial port and RJ45 Ethernet
Alarms	Dry contact (D-type) & Ethernet (RJ45) for PSU & Amp. status
SNMP Traps	For alarms & monitoring
Comms / Power Failure	Retains settings
Remote Control Software	Available

Power		
AC input	85-264Vac 50/60Hz Fused 2A	
PSU	Dual redundant and Diode OR	
Hot-swap PSU	Yes	
Input RF Power	+20 dBm Absolute Maximum	
AC Consumption	100W (max. consumption at steady state)	
MTBF (hours)	Chassis	170,740
	Switch Card	270,297
	Combiner Card	317,227

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

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.