



# 32 x 32 Broadband Distributive Enigma Switch Matrix / Router with high linearity

**Typical applications:**

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



**50 - 1000 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



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



**High Linearity** ensures overall RF gain signal performance is optimised



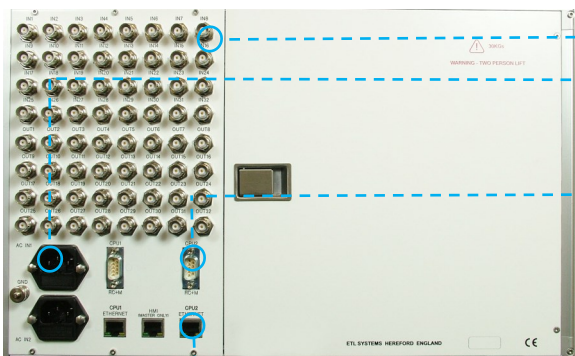
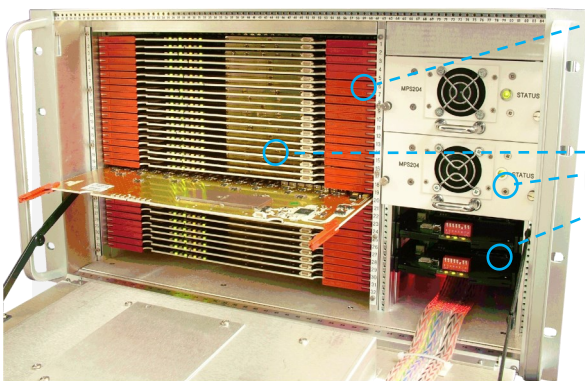
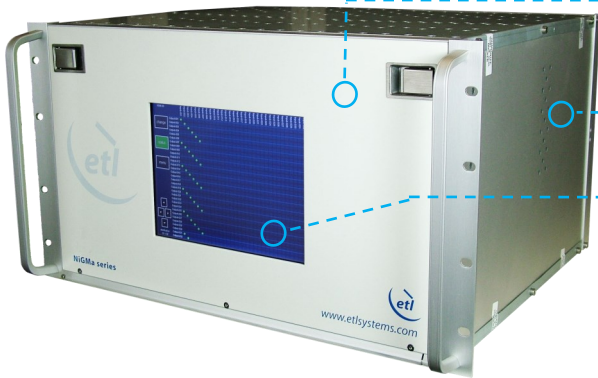
**Resilience** from dual redundant power supplies & CPU modules



**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	Distributive (fan-out), non-blocking	Any input can be connected to any number of outputs			
Frequency	50 to 1000MHz				
Connectors & Impedances	50Ω SMA	50Ω BNC	75Ω BNC	75Ω F-type	
Gain	0±1 dB	0±1 dB	0±1 dB	0±1 dB	
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	18 dB	10 dB	10 dB
Output Return Loss	Typical	18 dB	18 dB	12 dB	12 dB
	Minimum	16 dB	16 dB	10 dB	10 dB
Isolation	Input-output	65 dB			
	Input-input	75 dB			
	Output-output	75 dB			
Noise Figure	25 dB maximum				
1dB Gain Compression Point	+10 dBm (output power)				
OIP3	+20 dBm (3rd order intercept point, output power)				
Group Delay	<1ns (120MHz and above)				
Input RF Power	20 dBm (absolute maximum)				

System Control	
Local Control	Touchscreen & VGA Display
Remote Connection	Via RS232/485 serial port and RJ45 Ethernet port 10/100 Base T. TCP/IP, SNMP & Web browser interface.
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		
PSU Power	85-264Vac 50/60Hz Fused 2A	
PSU	Dual redundant	
Hot-swap PSU	Yes	
AC Consumption	100W (max. consumption at steady state)	
MTBF (hours)	Chassis	170,740
	Switch Card	270,297
	Splitter Card	317,227

Physical	
Dimensions	6U high x 450mm deep x 19" wide
Weight	35 kg Fully Populated as 32x32
Colour	White 00-E-55 semi-gloss

Environmental	
Operating temperature	0 to 45°C
Location	Indoor use only
Storage temperature	-20°C to +75°C
Humidity	20-90% non-condensing

**Preliminary specifications**

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.



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