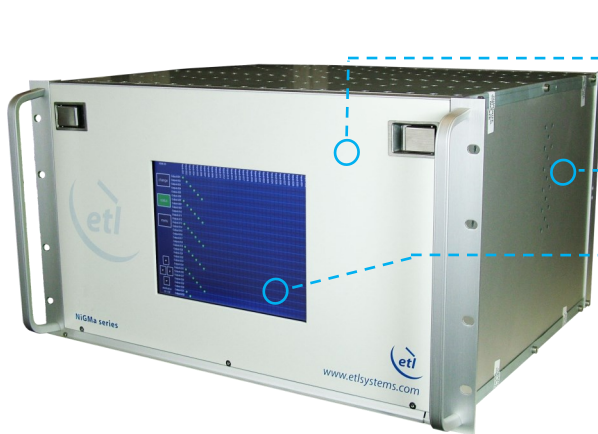




32 x 32 Broadband Distributive Enigma Switch Matrix / Router with high linearity

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



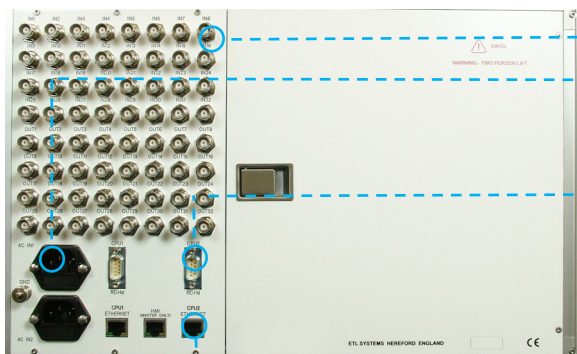
Resilience from dual redundant power supplies & CPU modules



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



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





ETL Systems

Excelling in RF Engineering

Model Number: NGM-28-xxxx

32 x 32 Enigma L-band Distributive Switch Matrix / Router
with high linearity

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)			

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.

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

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