



32 x 32 L-band Distributive Enigma Switch Matrix / Router with 10 dB gain, low noise & high linearity

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



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

Resilience from dual redundant power supplies & CPU modules

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



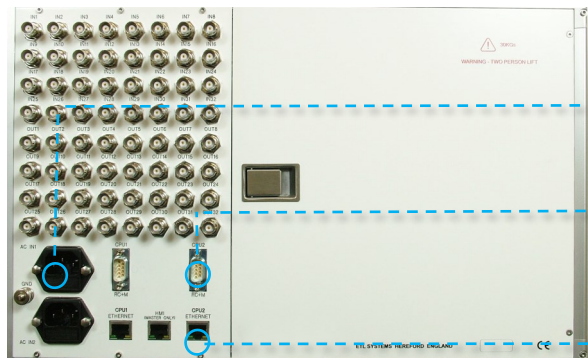
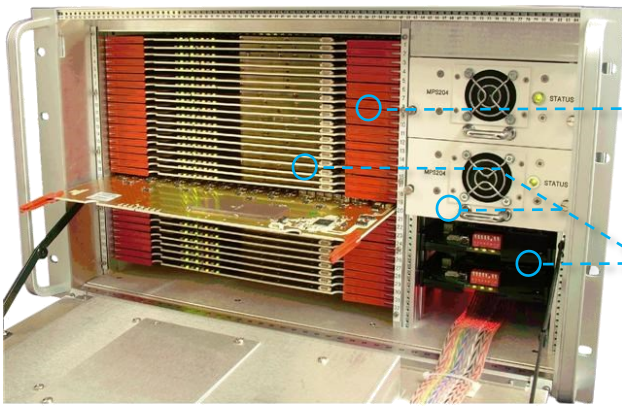
850 - 2450 MHz operating frequency range



Low Noise



High Linearity & 10 dB Gain ensures overall RF gain signal performance is optimised



64 x 64 Enigma system with splitters & combiners



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





Technical specifications and operating parameters

RF Parameters					
Capacity	32 inputs x 32 outputs, fully populated				
Routing	Distributive (fan-out), non-blocking	Any input can be connected to any number of outputs			
Frequency Range	850-2450 MHz (Extended L-band)				
Impedances & RF connector	50Ω SMA	50Ω BNC	75Ω BNC	75Ω F-type	
Gain	Minimum	0±1 dB			
	Maximum	10±1 dB			
Flatness	Full band	±1.5 dB	±1.5 dB	±1.75 dB	±1.75 dB
	850-2150MHz	±1.0 dB	±1.0 dB	±1.5 dB	±1.5 dB
	Any 36MHz	±0.25 dB	±0.25 dB	±0.5 dB	±0.5 dB
Input Return Loss	Typical	20 dB	20 dB	14 dB	12 dB
	Minimum	14 dB	14 dB	10 dB	8 dB
Output Return Loss	Typical	20 dB	20 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	55 dB			
Noise Figure	14 dB Typical, 1 input routed to 1 output				
Gain Steps	1dB				
1dB GCP	Minimum Gain	0 dBm		1dB Gain Compression point, output power, typical	
	Maximum Gain	+10 dBm			
OIP3	Minimum Gain	+15 dBm		3rd order intercept point, output power	
	Maximum Gain	+21 dBm			
Group Delay	<1 ns across operational bandwidth				
Switching Time	<50 ms from receipt of a command to implementation of path change				
Input RF Power	+ 20 dBm Absolute maximum				

System Control	
Local Control & Monitoring	Touchscreen & VGA Display
Remote Control & Monitoring	Via RS232 or RS422/485 serial port and RJ45 Ethernet on rear panel
Alarms	Dry contact (D-type) & Ethernet (RJ45)
SNMP Traps	For alarms & monitoring
Comms / Power Failure	Retains settings
Remote Control Software	Available

Power		
AC input	85-264Vac 50-60Hz	Fused 2A
AC Consumption	100W	Max. consumption at steady state
LNB Power	None	
PSU	Dual redundant & alarmed	Diode OR
Hot-swap PSU	Yes	
CPU	Dual redundant	Hot swappable
MTBF	Chassis	271,444 hours
	Switch card	270,297 hours
	Divider card	317,227 hours
		Chassis excludes HMI & RF cards

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

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

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.

