Hawk Series
Dual 8 x 8 Extended L-band
Matrix with gain control for Uplink & Downlink applications
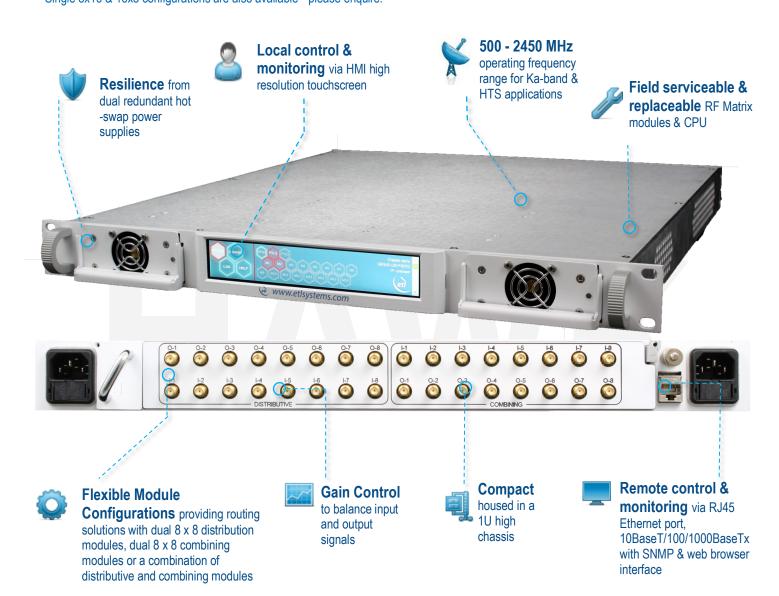
Typical applications:
- Small Ka/HTS gateway terminals
- LEO gateways
- Oil & Gas
- Deployable VSAT terminals

The 1U Hawk Matrix has capacity for two 8x8 field replaceable matrix cards – which can be combining (fan-in) or distributive (fan-out) – for uplink and downlink applications. The Hawk can be fitted with any combination of cards depending on application, but is ideally suited for smaller gateways with multiple modems and one or two antennas.
Single 8x16 & 16x8 configurations are also available - please enquire.

Resilience from dual redundant hot-swap power supplies

Local control & monitoring via HMI high resolution touchscreen

500 - 2450 MHz operating frequency range for Ka-band & HTS applications

Field serviceable & replaceable RF Matrix modules & CPU

Flexible Module Configurations providing routing solutions with dual 8 x 8 distribution modules, dual 8 x 8 combining modules or a combination of distributive and combining modules

Gain Control to balance input and output signals

Compact housed in a 1U high chassis

Remote control & monitoring via RJ45 Ethernet port, 10BaseT/100/1000BaseTx with SNMP & web browser interface

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Technical specifications and operating parameters

RF Parameters		
Routing	Distributive	Combining
Frequency Range	500 to 2450 MHz (Extended L-band)	
Capacity	2 Matrix Cards– each 8 x Input and 8 x Output.	
Configurations	2 x Distributive / 2 x Combining / 1 x Distributive & 1 x Combining	
Switching Time	< 50ms (From receipt of a command to implementation of path change)	
Gain (dB)	Min Gain 0±1 Max Gain 5±1	Min Gain 0±1 Max Gain 5±1
Gain Control Steps (dB)	0.5±0.15	0.5±0.15
Gain Flatness (dB)	±1.5	±1.0
Any 36MHz	±0.25	±0.25
Input Return Loss Typ. (dB) Min	20 18	18 16
Output Return Loss Typ. (dB) Min	20 18	18 16
Isolation Input-Input Output-Output (dB) Input-Output	60 60 55<2150MHz 50>2150MHz	60 60 55<2150MHz 50>2150MHz
Input RF Power	+20dBm. Absolute Maximum.	
Input & Output ports	50Ω SMA (All ports DC Blocked)	
Noise Figure (dB)	Typ. 16	Typ. 24
1dB GCP (dBm) <850MHz <1500MHz >1500MHz	<850MHz +0 <1500MHz +3 >1500MHz+5	<850MHz +12 <2000MHz +10 >2000MHz +6
OIP3 (dBm) <1500MHz >1500MHz	Typ. 18dBm, Min 16dBm Typ. 22dBm, Min 20dBm	Typ. 28dBm, Min 25dBm Typ. 25dBm, Min 20dBm
Group Delay	<1.0ns	<1.0ns
AC Input	85-264Vac 50/60Hz	
AC Consumption	150W	
PSU Redundancy	Dual redundant and alarmed Diode OR. Hot swappable	
Matrix Card	Distributive & Combining: Field replaceable	
System Control		
Local Control	HMI touch screen: Field replaceable	
Remote Control & Monitoring	Ethernet via RJ45, 10BaseT/100/1000BaseTx. ETL TCP/IP, SNMP & Web browser interface.	
CPU	Field replaceable	
MTTR	20 minutes (15 minutes to retrieve spare part and 5 mins to replace) Applies to LRUs only and assumed in house stock	
MTBF	Chassis, Switch Card & CPU: >250,000	
Physical & Environment		
Dimensions	1U high x 600mm deep x 19" wide	
Weight / Colour	<10 kg / RAL9003—White (Semi-matte)	
Temperature	Operating: 0 to 45˚C / Storage: -20˚C to +75˚C	
Location	Indoor use only	
Humidity	20 to 90% non-condensing	
Altitude	10,000 feet AMSL (Operational) 30,000 feet AMSL (Storage) *Above Mean Sea Level*	

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.

RoHS COMPLIANT

Pb-Free