



Hawk Series

8 x 16 Extended L-band Matrix Fan-out for downlink applications.

Typical applications:

- Small Ka/HTS gateway terminals
- LEO gateways
- Oil & Gas
- Deployable VSAT terminals

The 1U Hawk Matrix has capacity for up to two 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 or dual 8x8 fan-out or fan-in, and single 16x8 fan-in 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 & HMI.

Flexible Module Configurations providing routing solutions with single 8x16 or 16x8, single or dual 8x8 distribution modules, single or dual 8x8 combining modules or a combination of distributive and combining modules.

Compact housed in a 1U high chassis

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





Technical specifications and operating parameters

RF Parameters		
Routing	HWK-10 - Distributive Any input can be connected to any number of outputs	
Frequency Range	500 to 2450 MHz (Extended L-band)	
Capacity	8 x Input and 16 x Output.	
Switching Time	< 50ms (From receipt of a command to implementation of path change)	
Input & Output Ports	50Ω SMA (All ports DC Blocked)	
Gain	0±1 dB typical, mean across band	
Gain Flatness	±1.5 dB	
Any 36MHz	±0.25 dB	
Input Return Loss	Typical: 20 dB, Minimum: 18 dB	
Output Return Loss	Typical: 18 dB, Minimum: 12 dB	
Isolation Minimum between any 2 ports	Input-Input	60 dB
	Output-Output	60 dB
	Input-Output	55 dB <2150MHz, 50 dB >2150MHz
Noise Figure	14 dB typical, 16dB maximum, with one input routed to one output.	
1dB GCP Gain Compression Point, output power	<850 MHz	+2 dBm
	<1500 MHz	+3 dBm
	>1500 MHz	+5 dBm
OIP3 3rd order intercept point	<1500MHz	Typical 18 dBm, Minimum 16 dBm
	>1500MHz	Typical 20 dBm, Minimum 17 dBm
Group Delay	<1.0 ns across operational bandwidth	
AC Input / AC Consumption	AC Input: 85-264Vac 50/60Hz AC Consumption: 150W	
Input RF Power	+20 dBm Absolute Maximum.	
Spec Version	1.4	
System Control & Reliability		
Local Control	HMI capacitive touch screen: Field replaceable	
Remote Control & Monitoring	Ethernet via RJ45, 10BaseT/100/1000BaseTx. ETL TCP/IP, SNMP & Web browser interface.	
PSU Redundancy	Dual redundant and alarmed Diode OR. Hot swappable	
Matrix Card	Field replaceable	
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	2,000m AMSL (Operational) 8,000m 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.

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