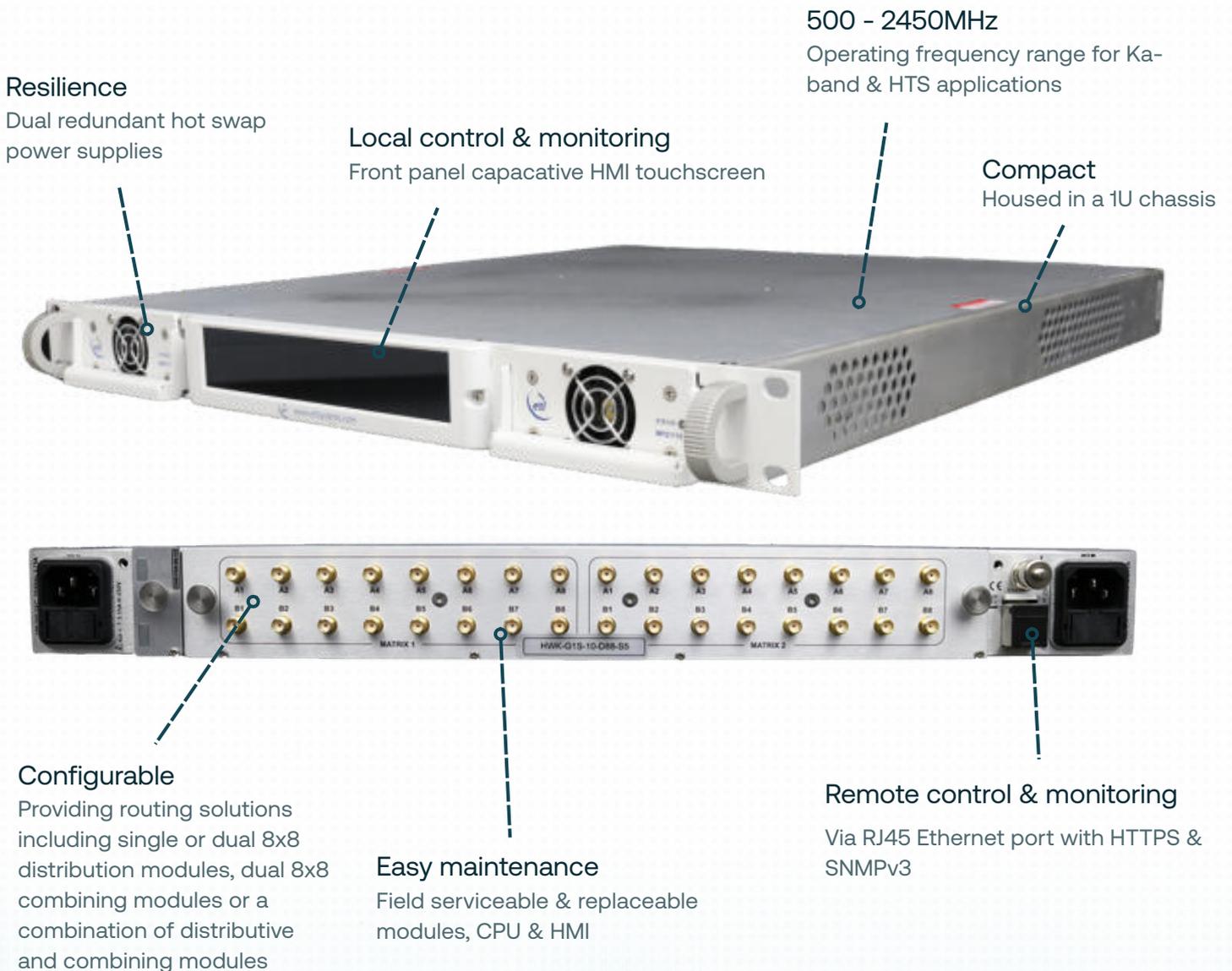# Hawk Series 16x8 Extended L-band Matrix

for Uplink applications

The 1U Hawk Matrix has capacity for 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 8x16 fan-out configurations are also available - please enquire.

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

Resilience
Dual redundant hot swap power supplies

Local control & monitoring
Front panel capacative HMI touchscreen

Compact
Housed in a 1U chassis

Configurable
Providing routing solutions including single or dual 8x8 distribution modules, dual 8x8 combining modules or a combination of distributive and combining modules

Easy maintenance
Field serviceable & replaceable modules, CPU & HMI

Remote control & monitoring
Via RJ45 Ethernet port with HTTPS & SNMPv3

RF Parameters		
Routing / Capacity		Combining / 16 x input and 8 x output
Frequency Range		500 to 2450MHz (Extended L-band)
Switching Time		< 50ms (From receipt of a command to implementation of path change)
Input & Output Ports		50Ω SMA (All ports DC blocked)
Gain Typ., mean across band		0±1 dB
Gain Flatness	<2150MHz	±1.25 dB
	Full band	±2.00 dB
Any 36MHz	<2150MHz	±0.25 dB
	Full band	±0.50 dB
Input Return Loss		Typ. 18 dB Min. 12 dB
Output Return Loss		Typ. 18 dB Min. 16 dB
Isolation Min. between any 2 ports	Input-Input	60 dB
	Output-Output	60 dB
	Input-Output	<2150 MHz 55dB >2150 MHz 50dB
Noise Figure		24 typ. (one input routed to one output)
1dB GCP Gain compression point, output power	<850MHz	+12 dBm
	<2000MHz	+10 dBm
	>2000MHz	+6 dBm
OIP3, 3rd order intercept point	<1500 MHz	Typ. 28 dBm Min. 25dBm
	>1500 MHz	Typ. 25 dBm Min. 20dBm
Group Delay		<1.0 ns across operational bandwidth
AC Input / AC Consumption		AC Input: 85-264Vac 50/60Hz, AC Consumption: 150W
Input RF Power		+20dBm absolute maximum
System Control & Reliability		
Remote Control & Monitoring		Ethernet via RJ45 with HTTPS & SNMPv3, 10BaseT/100 Base Tx. ETL TCP/IP, SNMP & Web browser interface. Via parent chassis.
Local Control		HMI capacitive touch screen, field replaceable
PSU Redundancy		Dual redundant and alarmed. Diode OR. Hot swappable
Matrix Card & 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
Physical & Environmental		
Dimensions		1U high x 550mm 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 / Humidity		Indoor use only / 20 to 90% non-condensing
Altitude		2,000 feet AMSL (Operational) 8,000 feet AMSL (Storage) Above Mean Sea Level
Spec. Version		1.0

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.