

# Hawk Series 4x4 Extended L-band Matrix

for Downlink applications

The 1U Genus chassis has capacity for up to 4 off 4x4 Hawk matrix modules – which can be combining (fan-in) or distributive (fan-out) or FIFO (fan-in, fan-out) or FIFO (fan-in, fan-out) – for uplink and downlink applications. The Genus chassis can be fitted with any combination of modules depending on application, but is ideally suited for smaller LEO gateways with small number of modems, where modem redundancy is required, smaller number of modems and antennas and remotely accessed teleports. Other module types from the Genus range such as Frequency Converters or RF over Fibre can also be fitted into the chassis.

**Compact**  
Housed in a 1U chassis

**Local control & monitoring**  
Front panel capacitive HMI touchscreen

**500 - 3150MHz**  
Operating frequency range for Ka-band & HTS applications

**Resilience**  
Dual redundant power supplies

**Configurable**  
Craft routing solutions with 4x4 combining or distributive modules, or a combination thereof

**Capacity**  
Up to 4 matrix modules in a 1U chassis

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

**Easy maintenance**  
Field serviceable & replaceable modules

RF Parameters		
Routing	Distributive	
Frequency Range	500 to 3150MHz (Extended L-band)	
Capacity	Up to 4 matrix modules in 1U parent chassis – each 4 x Input and 4 x Output.	
Switching Time	< 50ms (From receipt of a command to implementation of path change)	
Power Consumption	<5W	
RF Connectors	50 Ω SMA	
Gain (dB) Typ., mean across band	0±1	
Gain Flatness (dB)	850 - 2450MHz	±0.75
	500 - 3150MHz	±2.5
Any 36MHz	850 - 2450MHz	±0.15
	500 - 3150MHz	±0.25
Input Return Loss (db)	Typ.	14
	Min.	10
Output Return Loss (dB)	Typ.	14
	Min.	10
Isolation (dB) Min. between any 2 ports	Input-Input	55 dB
	Output-Output	55 dB
	Input-Output	50 dB
Noise Figure (dB)	850 - 2450MHz	Typ. 7 dB, with one input routed to one output
	500 - 3150MHz	Typ. 9 dB, with one input routed to one output
1dB GCP (dBm) Output power, Typ.	850 - 2450MHz	+0 dBm
	500 - 3150MHz	-3 dBm
OIP3 (dBm), Typ.	850 - 2450MHz	+15 dBm
	500 - 3150MHz	+12 dBm
OIP2 (dBm), Typ.		+22 dBm
Group Delay	<1.0 ns	
PSU Redundancy	Dual redundant and alarmed. Diode OR.	
Matrix Module	Distributive: Field replaceable	
System Control		
Remote Control & Monitoring	Ethernet via RJ45 with HTTPS & SNMPv3, 10BaseT/100 Base Tx. ETL TCP/IP, SNMP & Web browser interface. Via parent chassis.	
Physical & Environmental		
Dimensions	4 x Genus 1U slots	
Weight/Colour	<0.5 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	2,000 feet AMSL (Operational) 8,000 feet AMSL (Storage) <i>Above Mean Sea Level</i>	
Spec. Version	1.2	

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.