



Hawk Series

4 x 4 Extended L-band Matrix

For Uplink & 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) – 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.

Typical applications:

- Ka/HTS gateway terminals
- LEO gateways
- Small teleports
- Uplink and downlink applications
- Oil & Gas
- Deployable VSAT terminals

Compact housed in a 1U high chassis

Local control & monitoring via front panel capacitive HMI touchscreen.

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

Resilience from dual redundant power supplies

Image for indication only— Chassis may vary depending upon requirements.

Flexible Module Configurations providing routing solutions with 4 x 4 distribution modules, 4 x 4 combining modules or a combination of distributive and combining modules

Capacity up to 4 matrix modules in a 1U high chassis

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

Field serviceable & replaceable RF Matrix modules





RF Parameters		
Routing	Distributive	
Frequency Range	500 to 3150 MHz (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)	850-2450 MHz	±0.75
	500-3150 MHz	±2.0
Any 36 MHz	850-2450 MHz	±0.15
	500-3150 MHz	±0.25
Input Return Loss (dB)	Typ.	14
	Min	10
Output Return Loss (dB)	Typ.	14
	Min	10
Isolation (dB) Min. between any two ports	Input-Input	55 dB
	Output-Output	55 dB
	Input-Output	50 dB
Noise Figure (dB)	850-2450 MHz	Typ. 7 dB, with one input routed to one output
	500-3150 MHz	Typ. 9 dB, with one input routed to one output
1dB GCP (dBm) Output power, Typical.	850-2450 MHz	+0 dBm
	500-3150 MHz	-3 dBm
OIP3 (dBm), Typical.	850-2450 MHz	+ 15 dBm
	500-3150 MHz	+12dBm
OIP2 (dBm) , Typical.		+ 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 & Environment		
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) Above Mean Sea Level	
Spec Version	1.1	

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.



RF Parameters		
Routing	Combining	
Frequency Range	500 to 3150 MHz (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)	850-2450 MHz	±1.0
	500-3150 MHz	±2.5
Any 36 MHz	< 2150 MHz	±0.15
	> 2150 MHz	±0.25
Input Return Loss (dB)	Typ.	14
	Min	10
Output Return Loss (dB)	Typ.	14
	Min	10
Isolation (dB) Min. between any two ports	Input-Input	55 dB
	Output-Output	55 dB
	Input-Output	50 dB
Noise Figure (dB)	850-2450 MHz	Typ. 22 dB, with one input routed to one output
	500-3150 MHz	Typ. 25 dB, with one input routed to one output
1dB GCP (dBm) Output power, Typical.	850-2450 MHz	+15 dBm
	500-3150 MHz	+12 dBm
OIP3 (dBm), Typical.	850-2450 MHz	+ 30 dBm
	500-3150 MHz	+ 25 dBm
OIP2 (dBm), Typical.	+ 40 dBm	
Group Delay	<1.0 ns	
PSU Redundancy	Dual redundant and alarmed Diode OR.	
Matrix Module	Combining: 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 & Environment		
Dimensions	4 x Genus 1U Module 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) Above Mean Sea Level	
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