ETL Systems
New technologies
in RF distribution

Model Number:
HWK-G1S-15-C44/
HWK-G1S-15-D44

Hawk Series
4 x 4 Extended L-Band Matrix Module For Uplink & Downlink

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

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.

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

Field serviceable & replaceable RF Matrix modules

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

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Model Number: HWK-G1S-15-D44

RF Parameters					
Routing		**Distributive Module**			
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)			
RF Connectors		50 Ω SMA	50 Ω BNC	75 Ω BNC	75 Ω F-type
Gain (dB) Typ, mean across band		0±1	0±1	0±1	0±1
Gain Flatness (dB)	850-2450 MHz	±0.75	±0.75	±1.0	±1.0
	500-3150 MHz	±2.0	±2.0	±2.5	±2.5
Any 36 MHz	< 2150 MHz	±0.15	±0.15	±0.3	±0.3
	> 2150 MHz	±0.25	±0.25	±0.5	±0.5
Input Return Loss (dB)	Typ.	14	14	12	12
	Min	10	10	8	8
Output Return Loss (dB)	Typ.	14	14	12	12
	Min	10	10	8	8
Isolation (dB) Min. between any two ports	Input-Input	55 dB			
	Output-Output	55 dB			
	Input-Output	50dB			
Noise Figure (dB)	850-2450 MHz	7 dB with one input routed to one output			
	500-3150 MHz	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	+ 12 dBm			
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/100/1000BaseTx. ETL TCP/IP, SNMP & Web browser interface. Via parent chassis

Physical & Environment	
Dimensions	4 x Genus 1U Module Slots (4 modules max per GENUS 1U chassis, see separate Genus 1U chassis datasheet for chassis specifications).
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	1.0

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Model Number: HWK-G1S-15-C44

RF Parameters					
Routing		**Combining Module**			
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)			
RF Connectors		50 Ω SMA	50 Ω BNC	75 Ω BNC	75 Ω F-type
Gain (dB) Typ, mean across band		0±1	0±1	0±1	0±1
Gain Flatness (dB)	850-2450 MHz	±1.0	±1.0	±1.25	±1.25
	500-3150 MHz	±2.5	±2.5	±3.0	±3.0
Any 36 MHz	< 2150 MHz	±0.15	±0.15	±0.3	±0.3
	> 2150 MHz	±0.25	±0.25	±0.5	±0.5
Input Return Loss (dB)	Typ.	14	14	12	12
	Min	10	10	8	8
Output Return Loss (dB)	Typ.	14	14	12	12
	Min	10	10	8	8
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	22 dB with one input routed to one output			
	500-3150 MHz	25 dB with one input routed to one output			
1dB GCP (dBm) Output power, Typical.	850-2450 MHz	+15 dBm			
	500-3150 MHz	+ 12dBm			
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/100/1000BaseTx. ETL TCP/IP, SNMP & Web browser interface. Via parent chassis

Physical & Environment	
Dimensions	4 x Genus 1U Module Slots (4 modules max per GENUS 1U chassis, see separate Genus 1U chassis datasheet for chassis specifications).
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	1.0

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.

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