ETL Systems
New technologies
in RF distribution

HWK-G2S-21C-S5S5

Hawk Series 32 x 8 Combining Extended L-Band Matrix For Uplink applications

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

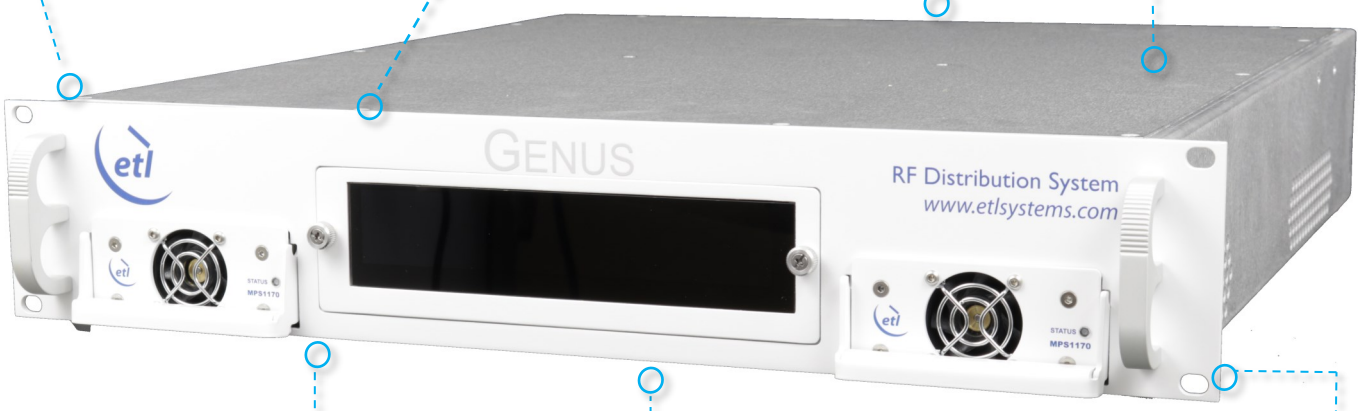
8x32 Combining extended L-Band Matrix with output variable gain/slope/RF detection. Ideally suited to for smaller to mid-size gateways with multiple modems and a smaller numbers of antennas, where modem redundancy is required, or remotely accessed teleports / gateways.

Resilience from dual redundant hot -swap power supplies and hot-swap fan module

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



Variable Gain & Slope for optimal performance and signal balancing.

Compact housed in a 2U high chassis

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

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RF Parameters		
Frequency Range		500 to 2450 MHz (Extended L-Band)
Capacity		32 x 8 Combining
Switching Time		< 50 ms (From receipt of a command to implementation of path change)
RF Power Sensing Range		0 to –50 dBm (At each output)
Switching Time		<50 ms
AC Input		85-264Vac 50/60Hz
AC Consumption		100W
Input & Output Ports		50Ω SMA (All ports DC Blocked)
Input RF Power (Absolute maximum)		+24 dBm
Gain (typical, mean across band, at each output)	Max	15±1 dB
	Min	-10±1 dB
Gain Step Resolution		0.5±0.25dB
Gain Flatness		±1.5 dB
Any 36MHz		±0.25 dB
Input Return Loss		Typical: 18 dB, Minimum 2GHz: 14 dB, Minimum 2.45GHz: 12 dB
Output Return Loss		Typical: 18 dB, Minimum 2GHz: 14 dB, Minimum 2.45GHz: 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		Min gain: 28 dB, Unity gain: 28 dB, Max gain: 28 dB
1dB GCP (1dB Gain Compression point, output power @ 0dB slope setting)	Min gain	-5 dBm
	Unity gain	+5 dBm
	Max gain	+15 dBm
OIP3 (3rd order intercept point @ 0dB slope setting)	Min gain	Typical 10 dBm, Minimum 7 dBm
	Unity gain	Typical 20 dBm, Minimum 17 dBm
	Max gain	Typical 30 dBm, Minimum 27 dBm
Spec Version		0.1

Redundancy & Hot Swap	
PSU Redundancy	Dual redundant and alarmed
CPU Redundancy	N/A
Matrix card	Field replaceable
Control & Monitoring	
Local Control & Monitoring	HMI
Remote Control & Monitoring	Ethernet via RJ45, 10BaseT/100 Base Tx. ETL TCP/IP protocol, SNMP, Built-in Web server
System Control & Reliability	
MTTR	20 minutes 15 minutes to retrieve spare part and 5 mins to replace.
MTBF (hours) Chassis	>250,000
MTBF (hours) Matrix Card	>250,000
MTBF (hours) CPU	>250,000
Environmental	
Operating Temperature	0 to 45°C
Gain Variation vs Temperature	0.05dB/°C
Storage Temperature	-20°C to +75°C
Location	Indoor use only
Humidity	20 to 90% non-condensing
Altitude (operational)	2,000m AMSL
Altitude (storage)	8,000m AMSL
Physical	
Weight	<10 kg
Dimensions	2U high x 550mm deep x 19" wide
Front Panel Colour	RAL9003 – White (Semi-Matte)

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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