



ETL Systems

New technologies
in RF distribution
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Model Number:
HWK-G1S-10 & HWK-G1S-10C

Hawk Series Dual 8 x 8 Extended L-band Matrix For Uplink & Downlink applications

Typical applications:

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

The 1U Hawk Matrix has capacity for two 8x8 field replaceable matrix cards – which can be the combining HWK-10C (fan-in) or distributive HWK-10 (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. Model number is dependant upon full matrix module configuration. Single 8x16 & 16x8 configurations are also available - please enquire.

Resilience from dual redundant hot-swap power supplies

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

Flexible Module Configurations providing routing solutions including single or dual 8 x 8 distribution modules, dual 8 x 8 combining modules or a combination of distributive and combining modules

Compact housed in a 1U high chassis

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





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| | | RF Parameters | |
|----------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Routing | | HWK-G1S-10 - Distributive | HWK-G1S-10C - Combining |
| Frequency Range | | 500 to 2450 MHz (Extended L-band) | |
| Capacity | | 2 Matrix Cards – each 8 x Input and 8 x Output. | |
| Configurations | | 2 x Distributive (D88D88) / 2 x Combining (C88C88) / 1 x Distributive & 1 x Combining (D88C88) / Single 8x8 Module (D88 or C88) | |
| Switching Time | | < 50ms (From receipt of a command to implementation of path change) | |
| Input & Output Ports | | 50Ω SMA (All ports DC Blocked) | |
| Gain | | 0±1 dB typical, mean across band | 0±1 dB typical, mean across band |
| Gain Flatness | | ±1.5 dB | ±1.5 dB |
| Any 36MHz | | ±0.25 dB | ±0.25 dB |
| Input Return Loss | | Typical: 18 dB, Minimum: 14 dB | Typical: 18 dB, Minimum: 14 dB |
| Output Return Loss | | Typical: 18 dB, Minimum: 14 dB | Typical: 18 dB, Minimum: 14 dB |
| Isolation Minimum between any 2 ports | Input-Input | 60 dB | 60 dB |
| | Output-Output | 60 dB | 60 dB |
| | Input-Output | 55 dB <2150MHz, 50 dB >2150MHz | 55 dB <2150MHz, 50 dB >2150MHz |
| Noise Figure | | 16 dB typical, with one input routed to one output | 24 dB typical, with one input routed to one output |
| 1dB GCP Gain Compression Point, output power | <850 MHz | +0 dBm | +12 dBm |
| | <1500 MHz | +3 dBm | +10 dBm |
| | >1500 MHz | +5 dBm | +6 dBm |
| OIP3 3rd order intercept point | <1500 MHz | Typical 18 dBm, Minimum 16 dBm | Typical 28 dBm, Minimum 25 dBm |
| | >1500 MHz | Typical 22 dBm, Minimum 20 dBm | Typical 25 dBm, Minimum 20 dBm |
| Group Delay | | <1.0 ns across operational bandwidth | <1.0 ns across operational bandwidth |
| AC Input / AC Consumption | | AC Input: 85-264Vac 50/60Hz | AC Consumption: 150W |
| Input RF Power | | +20 dBm Absolute Maximum. | |
| Spec Version | | 1.1 | 1.1 |

| System Control & Reliability | |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Local Control | HMI capacitive touch screen: Field replaceable |
| Remote Control & Monitoring | Ethernet via RJ45, 10BaseT/100 Base Tx. ETL TCP/IP, SNMP & Web browser interface. |
| PSU Redundancy | Dual redundant and alarmed. Diode OR. Hot swappable |
| Matrix Card | Field replaceable |
| 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 |
| MTBF | Chassis, Switch Card & CPU (TBC) |

| Physical & Environment | |
|------------------------|----------------------------------------------------------------------|
| Dimensions | 1U high x 600mm 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 | Indoor use only |
| Humidity | 20 to 90% non-condensing |
| Altitude | 2,000m AMSL (Operational) 8,000m AMSL (Storage) Above Mean Sea Level |

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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