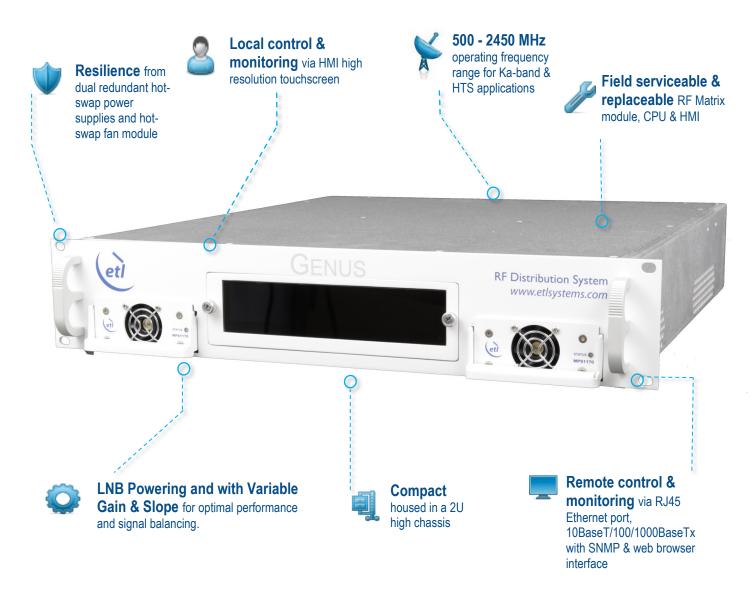# Hawk Series 8 x 32 Distributive Extended L-Band Matrix For Downlink applications

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

8x32 Distributive extended L-Band Matrix with variable gain / slope / RF detection and LNB power. 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 module, CPU & HMI

**LNB Powering and with 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

## RF Parameters

| | | |
|---|---|---|
| Frequency Range | | 500 to 2450 MHz  (Extended L-band) |
| Capacity | | 8 x 32 Distributive |
| Switching Time | | < 50 ms (From receipt of a command to implementation of path change) |
| LNB Power | | 13/18 Vdc up to 400 mA, 0/22kHz tone |
| RF Input Power Sensing Range | | 0 to –50 dBm |
| 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) | Max | 15±1 dB |
| | Min | -10±1 dB |
| Gain Step Resolution | | 0.5±0.25 dB |
| Slope Control | | 0-6 dBin 1dB steps |
| Gain Flatness | | ±1.5 dB |
| Any 36MHz | | ±0.25 dB |
| Input Return Loss | | Typical: 18 dB, Minimum 2GHz: 14 dB, Minimum 2.45GHz: 12dB |
| Output Return Loss | | Typical: 18 dB, Minimum 2GHz: 14 dB, Minimum 2.45GHz: 12dB |
| 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: 30dB, Unity gain: 20 dB, Max gain: 10 dB (Typical, with one input routed to one output and 0dB slope setting) |
| 1dB GCP (1dB Gain Compression point, output power @ 0dB slope setting) | Min gain | -3 dBm |
| | Unity gain | 0 dBm |
| | Max gain | 0 dBm |
| OIP3 (3rd order intercept point @ 0dB slope setting ) | Min gain | Typical 14 dBm, Minimum 12 dBm |
| | Unity gain | Typical 18 dBm, Minimum 16 dBm |
| | Max gain | Typical 18 dBm, Minimum 16 dBm |
| Group Delay | | <1.0 ns across operational bandwidth |
| Spurious | | <80 dBm (In-band) |
| 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 Capacitive Touch Screen |
| 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 Matrix Card CPU | >250,000 >250,000 >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.

RoHS COMPLIANT

Pb-Free