Hawk Series 8x32 Extended L-band Distributive Matrix

for Downlink applications

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 & field replaceable CPU & HMI

Field serviceable & replaceable
RF Matrix module, CPU & HMI

500 - 2450 MHz
operating frequency range for Ka-band & HTS applications



Compact
housed in a 2U high chassis

Local control & monitoring
via HMI high resolution touchscreen

LNB Powering and with Variable Gain & Slope
for optimal performance and signal balancing

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

Chassis Specification	
Dimensions/Weight/Colour	2U high x 550mm deep x 19" wide / <10kg / RAL9003 - white (semi-matte)
Capacity	17 module slots. Note: Actual modules may require >1 slot. Refer to required module spec table.
Temperature	Operating: 0˚C to +45˚C Storage: -20˚C to +75˚C
Location/Humidity/Altitude	Indoor use only / 20 to 90% non-condensing / 10,000 feet AMSL (Operational) 30,000 feet AMSL (Storage)
Control & Monitoring	Local: HMI, capacitive touch screen Remote: Ethernet via RJ45, 10BaseT/100 BaseTx. ETL TCP/IP, SNMPv2/3, HTTPS & built-in web server. HMI and 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.
AC Input/Consumption	85-264Vac 50/60Hz / 275W max. consumption at steady state
PSU Redundancy	Dual redundant and alarmed. Diode OR. Hot swappable.
Input & Output Ports	Dependant upon module fitted

RF Parameters		
Frequency Range		500 to 2450 MHz (Extended L-band)
Capacity		8 x 32 Distributive
Switching Time		< 50ms (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
AC Input / AC Consumption		85-264Vac 50/60Hz / 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
Slope Control		0-6 dBin 1dB steps
Gain Flatness	850-2150MHZ	±1.5 dB
	500-2450MHz	±2.5 dB
	Any 36MHz	±0.25 dB
Gain Step Resolution		0.5±0.25 dB
Gain Variation vs Temperature		0.05dB/°C
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 Min. 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

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.