

HAWK Rural Radio Telephone Link

- Single or dual telephone circuit on 25kHz radio channel
- Hawk replaces standard copper pairs
- Digital Signal Processing (DSP) for superior audio performance
- Remote diagnostics minimises maintenance costs
- Interfaces to phone, fax modem, payphone, EFTPOS
- Low power consumption for solar powered sites
- High speed data capability – up to 28.8 Kbit/s

The Hawk provides one or two telephone circuits to subscribers, isolated from the Public Switched Telephone Network. Hawk replaces copper pairs with reliable, full CCITT standard radio telephone connections using DSP technology supporting payphone, fax, data and electronic fund transfer at point of sale (EFTPOS). Hawk's powerful diagnostics provides flexible configuration, setup and maintenance facilities ensuring minimum downtime.

Features:

- Integral local and remote system monitoring
- Locally programmable system parameters
- Rack or wall mount
- Upgrades modularity
- Decadic or DTMF dialing
- Secondary lightning protection
- 2-wire, 4-wire + E & M operation
- Integral digital speech privacy with DSP
- Discrete subscriber codes eliminate false start
- Internal audio fault tones on Hawk terminals

Options:

- 110/250 VAC or 22-70 VDC supply
- Full duplex repeater
- Solar power kits
- Handheld service terminal
- Weatherproof enclosures
- Payphone interface for 12/16 kHz or line reversal signalling

System

Frequency Bands (MHz)			
VHF	68 – 78 138 – 148	72 – 82 148 – 162	78 – 88 159 – 174
UHF	335 – 356 410 – 430 470 – 490	380 – 403 430 – 450 480 – 500	403 – 423 450 – 470 490 – 512
Channel Spacings	12.5 kHz, 25 kHz, 50 kHz		
Modulation Type	11K8F9WWF, 12.5 kHz 16K8F9WWF, 25kHz 25K0F9WWF, dual channel		
Duplex Spacing	68 – 88 MHz 4 – 6 MHz 138 – 174 MHz 4.5 – 10 MHz 335 – 512 MHz 5 – 10 MHz		
Frequency Selection	Synthesiser, switch selectable 5 or 6.25 kHz steps		
Power Supply Voltage	10.8 to 15.5 DC Nominal 13.8 VDC Negative Earth		
Subscriber Ident. Codes	10 unique codes		
Max. System Deviation	± 5 kHz (± 2.5 kHz for 12.5 kHz single chan.)		
Distortion (Full Link)	<3% (<5%, 12.5 kHz)		
Frequency Response (Full Link)	Meets CCITT recommendation G.232, Graph B		
Group Delay Distortion	CCITT M102		
Signal to Noise Ratio	(@ -70dBm Rx Input) (Allows full 10dB fade margin)		
Chan. A	85dBrOp, 5dBrnCO (typ.)		
Chan. B	77dBrOp, 13dBrnCO (typ.)		
Unintelligible Crosstalk	60dBrOp, 30dBrnCO (typ.)		

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- Line Interface**

2-wire	600 Ω , maximum DC loop resistance 1500 Ω
	50VDC supply
4-wire	600 Ω \pm M-WIRE
Line Receive/Send Levels	-18 to + 4dBm
Ring Generator	75Vrms, 18Hz \pm 10%
Inband Alarm Tones	Battery < 11.5VDC
	VSWR > 3:1
	Low receive level

- System**

Power Supply Voltage	10.8 to 15.5VDC
	Nominal 13.8VDC Negative earth
Power Consumption	3.8A (Tx @ 10W)
	150mA Exch standby
	100mA Subs standby

- Transmitter**

Transmitter Power	1 – 14W (30-41.5 dBm) at antenna port (adjustable)
	1 – 12W (30-40.8 dBm) > 470 MHz
Frequency Stability	+/- 2.5 ppm (+/- 1.0 ppm optional)
Spurious Emissions	< 1 μ W (-30dBm)
Duty Cycle	100% at 55°C ambient (<3000m AMSL)
VSWR Protection	Withstands VSWR of 20:1 at any phase angle

- Receiver**

Sensitivity	> -116 dBm (0.35 μ V)
Intermodulation	>75 dB CEPT
Spurious Responses	UHF >70 dB CEPT
	VHF >80 dB CEPT
Selectivity	>75 dB CEPT

- Mechanical**

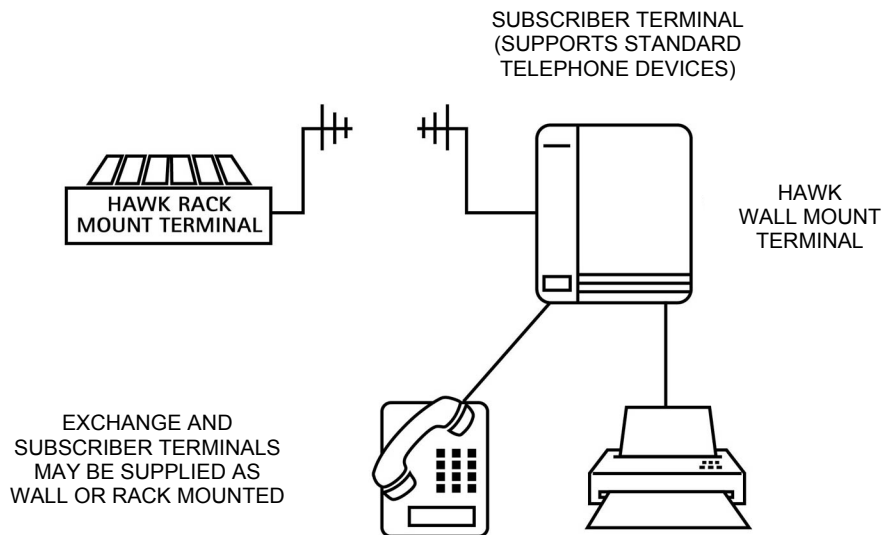
Size (mm)	
(rackmount)	135(h) x 483(w) x 435(d)
(wallmount)	390(h) x 380(w) x 125(d)
Weight (incl power supply)	
(rackmount)	12 kg per terminal (typ)
(wallmount)	7 kg per terminal (typ)

- Environmental**

Ambient Operating Temp	-30°C - +55°C
Humidity	Up to 95% RH
	0°C – 45°C (non-condensing)
Altitude	3000m without deteriorating

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• Typical Configuration



OTE: Exicom Technologies Limited is constantly seeking to improve quality and performance. Therefore specifications, configurations and process are subject to change without notice.

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