

EXICOM

EX5100 Condor provides a highly reliable, cost effective, wireless link into standard telecommunications systems in areas isolated from a telephone network. A single audio circuit transfers full telephony services, audio, or modem data traffic, long distances over a single VHF or UHF radio channel.

COMPETITIVE ADVANTAGE

- ▶ Modular system - Low maintenance
- ▶ Respected by Telcos worldwide
- ▶ Comprehensive worldwide support

SUPERIOR RELIABILITY

- ▶ Dependable in extreme environments
- ▶ Proven technology
- ▶ Long service life



EX5100 CONDOR

SINGLE CHANNEL
WIRELESS TELECOMMUNICATIONS LINK

HIGH PERFORMANCE

- ▶ ITU specification line replacement
- ▶ Full telephony services
- ▶ 2 wire or 4 wire operation
- ▶ 70km transmission range (extendable with up to 3 repeaters).

LOW COST OF OWNERSHIP

- ▶ Copper line replacement
- ▶ Requires minimal infrastructure
- ▶ Solar power compatible
- ▶ Local diagnostics
- ▶ Very fast deployment



Features

- ◆ Single line telephone replacement (phone/fax/modem)
- ◆ Wall mount, modular construction
- ◆ Local system monitoring
- ◆ Decadic or DTMF dialling
- ◆ Secondary lightning protection
- ◆ Integral digital speech privacy
- ◆ Universal design (Exch or Subs operation on same card)

Options

- ◆ 12.5 kHz Narrow bandwidth variant available
- ◆ 110/250 VAC or 22-60 VDC supply modules
- ◆ Full duplex repeater
- ◆ Solar power kits
- ◆ 19" Rack mount shelf (for rack mounting of wall mount terminal)
- ◆ Weatherproof enclosures
- ◆ Payphone interface for 12/16 kHz and/or line reversal signalling
- ◆ Yagi antennas and feeder kits

System Parameters

Frequency bands (MHz)

VHF	68 – 78, 72 – 82, 78 – 88 138 – 148, 148 – 162, 159 – 174, 240 – 260
UHF	380 – 403, 403 – 423, 410 – 430, 430 – 450 450 – 470, 470 – 490, 480 – 500, 490 – 512

Channel Bandwidth	12.5 kHz (narrow band) or 25 kHz (wide band)
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Modulation Type	Direct Frequency Modulation
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Duplexer Spacing	68 – 88 MHz 138 – 174 MHz 240 – 512 MHz
	4.0 – 6.0 MHz 4.6 – 10.0 MHz 5.0 – 10.0 MHz

Frequency Selection	Synthesiser, switch selectable 5 or 6.25 kHz steps
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Subscriber Ident Codes	32 unique codes
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System Deviation	Typically ± 1.5 kHz (narrow band) Typically ± 2.5 kHz (wide band)
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Distortion (Full Link)*	<5% (narrow band) <3% (wide band)
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Frequency Response*	Meets ITU-T recommendation (Full Link) G.232, Graph B
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Group Delay Distortion	Meets ITU-T M102
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Signal to Noise Ratio	(for -70dBm Rx Input level) Better than 75dB _{BrOp} , (typical)
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*Distortion and frequency response figures may be affected when Condor is used in paths with more than 3 repeater-hops. Please contact Exicom for further information

Line Interface

2-wire	600 Ω , 900 Ω , BT3
Max DC loop resistance	1500 Ω
Line supply	Selectable 60/120 VDC (open circuit)

4-wire	600 Ω , Type I and V M-wire
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Line Receive/Send Levels	-18 to +4dBm
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Ring Generator

Voltage	75Vrms (200Vp-p)
Frequency	18Hz \pm 10%

Inband Alarm Tones	Low Battery < 11.5VDC VSWR > 3:1 Low receive level
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Receiver

Sensitivity	(at Rx input, for 12dB SINAD)
12.5kHz bandwidth	>-114 dBm (0.45 μ V)
25kHz bandwidth	>-116 dBm (0.35 μ V)

Intermodulation	>75 dB CEPT
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Spurious Responses	UHF >70 dB CEPT VHF >80 dB CEPT
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Selectivity	>75 dB CEPT
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Transmitter

Transmitter Power	(Adjustable, at duplexer antenna port)
<470MHz	1 - 10 W (30-40dBm)
>470MHz	1 - 8 W (30-39dBm)
Frequency Stability	± 1.0 ppm
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

Power

Power Supply Voltage	10.8 to 15.5VDC Nominal 13.8VDC Negative earth
Power Consumption (Tx output measured at duplexer antenna port)	10W, 13.8VDC in Max 50W, typically 40W
Standby mode	
Subscriber cycling	Typically 100mA
Exchange non-cycling	Typically 140mA

Mechanical

Size (mm)	
Rackmount	135(h) x 483(w) x 435(d)
Wallmount	390(h) x 380(w) x 125(d)
Weight	(including power supply)
Rackmount	8.6 kg per terminal (typical)
Wallmount	7 kg per terminal (typical)

Environmental

Ambient Operating Temp	-30°C to +55°C
Humidity	Up to 95% RH, at 0°C to 45°C non-condensing
Altitude	3000m AMSL without derating

Standards

RF	NZ RFS 25, 26, 36 AS4295 FCC Parts 15, 22, 90 RSS119
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Application Diagram

