

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 |

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|-------------------|---|
| 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

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|---------------|----------------|
| 68 – 88 MHz | 4.0 – 6.0 MHz |
| 138 – 174 MHz | 4.6 – 10.0 MHz |
| 240 – 512 MHz | 5.0 – 10.0 MHz |

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| 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

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

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| 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

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

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

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

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| 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

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| 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 |

Electrical

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| Input Voltage range | 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

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| 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

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| 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 |

Standard Compliance

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

