

RuralConnect™ Point-to-Multipoint

Provides up to 128 subscriber lines via 64 CPE terminals over links up to 32mi / 50km from a single base site with T1 / E1 interfaces.

17.8 lbs / 8.1 kg
19 x 5.25 x 9.25 inches
48.26 x 13.34 x 23.5 centimeters



The RuralConnect™ Multipoint

Provides economical WLL for up to 128 subscribers (non-blocking) via 64 CPE terminals. GR-303/TRO8 compliant. Ranges up to 32mi/50km per link or longer with repeaters. Supports all Class features, fax, V.90 dial-up modem and Ethernet. Comes complete with remote access NMS.

TYPICAL APPLICATIONS:

- Rural WLL Telecommunications
- Inaccessible or Environmentally Sensitive Lands
- Retrofit for Exhausted Wireline Systems
- Internet Café or Calling Centers
- Oil Fields & Offshore Rigs
- Video or Security Monitoring

All RuralConnect™ models offer an unmatched set of features:

Flexible and Programmable

All RuralConnect™ models are bench or field programmable through local or remote access Network Management System (NMS). Supports all Class features, fax, and V.90 dial-up modems, with DSL equivalent connectivity.

Advantages Over Wireline

The multipoint base station linked with RuralConnect™ CPE terminals deliver voice, data or both using state-of-the-art digital electronics and wireless links up to 32mi / 50km. They provide network quality without the expense of right of way costs or wireline hard costs and solve those inaccessible or environmentally sensitive lands issues.

Plug-and-Play Simplicity & Reliability

All components, including digital radio cards, multiplexer, power supplies, CPU, and the T1-E1 network interface card are fully integrated into either the 3kg / 8lb waterproof field station or the base station card cage.

Easy Installation

CPE terminals mount on a 1"– 2.25" pipe or pole and uses an external antenna. The multipoint base station mounts into a standard 19" rack. Configure bandwidth for various combinations of voice and data lines and program with a GUI and your laptop to complete the job.

Rugged & Weatherproof

CPE terminals are housed in a NEMA 4X waterproof enclosure, built to last in tough climates. Mounts on most poles or pipes.

No License Required, yet Private and Secure

Uses the license-exempt (in most countries) 2.4 GHz or 5.8 GHz frequency bands, while providing fully encrypted, spread-spectrum CDMA modulations for your privacy.

Low Power Draw, Solar Powerable

Field stations draw low power and accept any DC Voltage from 12V to 24V. Solar powering kits available with up to 7 days of backup power.



Up to 8 POTS, 8 lbs/ 3 kg
13 x 11 x 6 inches/ 33 x 28 x 15 cm

RuralConnect™ Series – Designed and Built for Plug-and-Play

Specifications for RuralConnect™ Multipoint System

System Specifications

Product Description	Point to Multipoint Digital Microwave Radio with POTS, 10 BaseT / V.35 Port
Air Interface	Proprietary Time Division Duplexing with Direct Sequence Spread Spectrum CDMA
Overall Data Throughput Rate	64 - 512 kbps, selectable (Configuration GUI)
End-to-End System Latency	Between 8.8 and 4.4 ms
BASE STATION Card Cage Capacity	1 Network Interface Card (NIC), 2 Power Supply Cards (for redundancy) 16 Radio Cards, 1 Spare Radio Card
CPE TERMINAL Capacity	1 Radio Card, 1 Power Supply Card
Operating Power	BASE STATION: 9W (min) - 54W (max) CPE TERMINAL: 3W (idle) - 9W (max)
Supply Voltage	BASE STATION: -48V (-40 to -56V maximum range), Isolated Ground CPE TERMINAL: 12V - 24V (32V max), Protective Earth Ground Required AC Adapter Available (100 - 260VAC, 50-60Hz)

RF Performance

Frequency Range	2.400 to 2.4835 GHz
RF Channels	4 Non-overlapping Channels + 1 Administrative
Spreading Codes	4 Auto-selectable Orthogonal Codes
Modulation Type	Direct Sequence Spread Spectrum (DSSS) BPSK (256) or QPSK (512 kbps)
Transmitter Output Power	-20 to + 20dBm, auto set for CDMA operation
Max System ERP	45 dBm (20 dBm + 25 dBm Antenna)
Receiver Sensitivity (10-6 BER)	-93 dBm/256 kbps; -90 dBm/512 kbps
Antenna	BASE STATION: Various External Antennas CPE TERMINAL: Various External Antennas
EMC Compatibility	FCC Part 15.247

PSTN Digital Interface E1

Number of E1 Interfaces & Conformity	4; G.703
Frame Structure	ITU-T (CCITT) G.711
Bit Rate & Coding	2048 Kbps +/- 2.5 PPM; HDB3
Nominal Impedance	75/120 Ohm Balanced
Pulse Mask	ITU (CCITT) G.703
Output Jitter & Jitter Tolerance	<0.05 UI; ITU (CCITT) G.823
Permissible Attenuation	6 dB (1 MHz), >14 dB (2.048 to 3.072 MHz)
Supported Signaling	CAS, V5.1, V5.2

PSTN Digital Interface T1

Number of T1 Interfaces & Conformity	4; AT&T TR 62411, TR-TSY-000499
Frame Structure	Extended SuperFrame (ESF)
Bit Rate & Coding	1544 Kbps +/- 2 PPM; B8ZS
Nominal Impedance	100 Ohm Balanced
Pulse Mask	AT&T TR 62411
Output Jitter & Jitter Tolerance	AT&T TR 62411; AT&T TR 62411
Permissible Attenuation	6 dB (1 MHz), >14 dB (1.544 to 2.048 MHz)
Supported Signaling	Channelized D4, GR-303, TR08

FXS Specifications

DS-O Lines	2, 4, 6 or 8
Line & Balance Impedance	Both resistive and reactive can be factory set per country requirements
Open Loop Voltage	36 - 48 Volts
Loop Current	20 mA (min) - 24 mA (max)
Maximum Loop Length	1200 ohms including instrument
Ringing Voltage, Waveform, & Load	60 VAC rms, Balanced sinusoidal, 3 REN
TTX Generation	12 or 16 kHz, typically set to 200 mV rms
Payphone Compatibility	Soft loop reversal and optional 12/16 kHz Signal Pulse Metering (TTX)
Regulatory	LSSGR, TR57, ITU Q.552, and G.712

User Data Interface

Data Port Interface	10 BaseT Ethernet or V.35
Synchronous Data Rate	64-512 kbps, selectable from configuration GUI
Digital Latency, end to end	< 4.5 ms
Max Distance Cable (Baseband)	Up to 100m on 10BaseT Ethernet link

Maintenance Data Interface

Command Console Port	RS-232 (9600bps, N, 8, 1)
----------------------	---------------------------

Environmental Specifications

BASE STATION Card Cage Material	Aluminum
CPE TERMINAL Enclosure Material	GE Valox99® Polycarbonate w/ Neoprene Gasket, NEMA 4X, Rain, Wind, and Ice Protected
Shock and Vibration	Mil Standard 810 D
Mounting	25.4 - 57.15 mm (1 to 2.25") pipe/pole mount
Operating Temperature and Humidity	-30 - 60 degrees C; 0 - 90% Non-condensing
BASE STATION Unit Weight and Dimensions	17.8 lbs/ 8.1kg — 19 W (with Mount Flange) x 5.25 H (3 EIA Units) x 9.25 D inches
CPE TERMINAL Unit Weight and Dimensions	8 lbs. / 3.7 kg — 13 x 11 x 6 inches/ 33 x 28 x 15 centimeters
Mounting	BASE STATION: Rack Mount (19 inches x 3 EIA Units) CPE TERMINAL: Pipe/Pole Mount 25.4 - 57.15mm (1 - 2.25 inches)

Certifications	US, Canada, Brazil, Mexico, Philippines, Morocco
----------------	--

Warranty	1 Year Parts and Labor
----------	------------------------

AIRLINX Communications, Inc.
Box 253
Greenville, NH 03048
E-mail: sales@airlinx.com
Tel: (888) 224-6814
Fax: (603) 878-0530