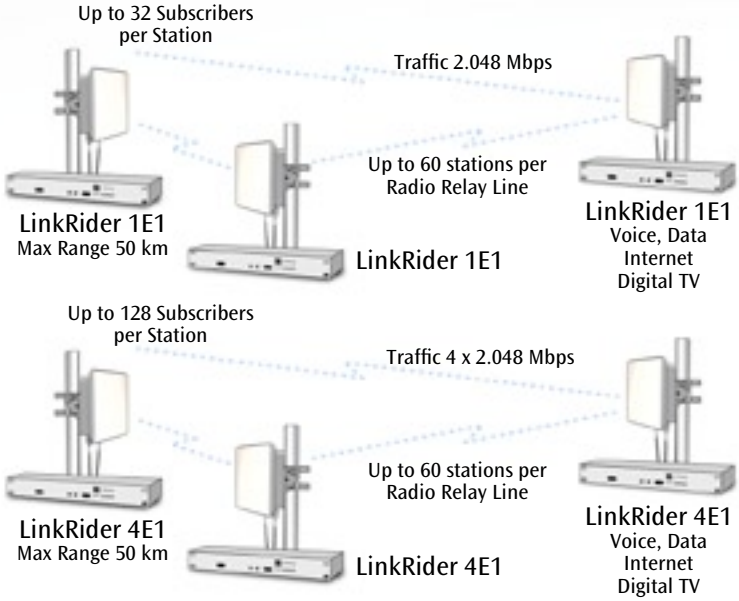
LinkRider

Radio Relay Line
1E1 / 4E1 / 16E1

The Linkrider is a Radio Relay Line (RRL) application which is built on Noise-Like Signals that utilizes a Radio Relay Line Station to execute transparent transmission of E1 stream via the radio interface. Where there is a difficulty in obtaining phone lines, such as in remote or coastal areas, the Linkrider is a true convenience in keeping dispersed and distant communities connected. The Linkrider is a point-to-point solution that can be implemented in a variety of forms such as the public, private and mobile communication networks. The solution comprises of a RF unit, antenna with rake receiver (for outdoor use), noise-like-signals digital modem (for indoor use) and power supply.



LinkRider GENERAL TECHNICAL DATA

	LinkRider1E1	LinkRider4E1
Frequency Range (GHz)	3.4 – 3.6, 5.1 – 5.9	3.4 – 3.6, 5.1 – 5.9
Technology	CDMA	DSSS
Modulation	Noise-like Signals	QPSK
Spectrum Width (MHz)	5	20
Duplex	FDD	FDD
Maximum Output Power (dBm)	20 - 30	20 - 30
Max Range (km)	50 (max)	50 (max)
Processing Gain (dB)	Not less than 21	Not less than 12
Traffic (Mbps)	2.048 Mbps	8.192 Mbps
Digital interface	E1(G703) or Ethernet 10 MBit	4xE1(G703) or Ethernet 100 MBit
Max Incoming Signal (dBm)	-30	-30
Receiver's Dynamic Range (dB)	80	80
Receiver's Sensitivity (dBm)	-96	-96
Transmission Delay (ms)	3	7
MONITORING & CONTROL		
Via Radiochannel	Yes	Yes
Via Service Channel	Yes	Yes
Via Local Stub	Yes	Yes
MODEM CONFIGURATION		
With PC	Yes	Yes
Manually	Yes	Yes
FRONT PANEL'S INDICATORS		
Channel's State	Yes	Yes
Transmit/Receive State	No	No
OPERATING CONDITION LIMITS FOR INDOOR UNIT		
Temperature (°C)	from 0 to +55	from 0 to +55
Humidity (%)	from 0 to 85	from 0 to 85
OPERATING CONDITION LIMITS FOR OUTDOOR UNIT		
Temperature (°C)	from -40 to 80	from -40 to 80
Humidity (%)	Up to 100	Up to 100

Channels' function of independent transmission

The system can be propagated to a maximum of 60 units on a point-to-point basis to a maximum distance of 1500km. The entire system allows data streams' splitting which allows substantial cost efficiency. As any Ethernet-device can act as a channel setting unit, this eliminates the need to purchase customized interfaces.

Channel scrambling and interleaving

Linkrider allows high data integrity from its noise-like-signal modulation without sacrificing quality of transmission. Extra noise immunity facilitates stations to be installed at a distance of 50km from one another, which eliminates the need to place extra stations to increase quality of transmission, which is ultimately cost efficient.

Low power transmission

The system utilizes minimal power consumption without sacrificing quality of transmission, which also results in cost efficiency.

RS-232 Interface

Gives additional 16kBit channel to subscriber, this channel can be utilized for voice service as well as remote monitoring of the line.

Narrow bandwidth

Narrow band allows efficient cost management and maintenance of system.

Advanced Interface

The system is an intelligent application that permits functional monitoring and control to:

- Switch on/off random channels of E1 stream
- Initialize multipath mode (RAKE Receiver)
- Analyze telemetry parameters for every unit from remote unit

Full transparency of E1 stream transmission 32 parallel channels with 64kBit each)

Service information does not occupy any time-slot and allows the user to connect to any type of PBX or E1 modem, which is a key and unique feature of the RRL system. From here it is coherent that the systems is ideal for Internet and Digital TV transmission, where the user need not invest in additional or costly router for wireless facilities.