RADITEK

RADLINK
4xE1 or 4xT1

Point to Point Radio Family
2.4 /5.8GHz, PDH/ Ethernet Convergent System
4xE1 or 4xT1

Order Examples: . RADLINK-P2P-2.4 or 5.85-PDH-4E1 or 4T1-a9
Description: (2.4 or 5.85GHz, Ethernet Convergent System, 4E1 or 4T1)

Our PDH/ Ethernet Convergent System 4xE1 or 4xT1 series delivers up to 54Mbps air rate for 4 ports E1 (T1) traffic and Ethernet (Up to 3 Mbps Throughput) (Net throughput>23Mbps).
The system operates in 2.4 GHz ISM Band or 5.8 UNII Band.

It employs Time Division Duplex (TDD) transmission. This technology simplifies the installation and configuration procedure. There is no need to plan and to allocate separate channels for the uplink and downlink data streams. Operation over 2.4GHz and 5.x GHz UNII bands provide stable operation in hard weather conditions (rain, snow, ice, dust, and etc).

Our PDH/ Ethernet Convergent System 4xE1 or T1 series system offers more than just an attractive
price, but provides excellent performances; easy installation and alignment, along with smart management capabilities that make setup and configuration a snap.

Features and Benefits

- High quality Voice/ Data/ Video Transmission
- Cost effective Alternative to traditional E1(T1) devices
- 4 Ports of E1(T1) supported
- High Reliability of radio link provides excellent BER
- Operate on 2.4GHz ISM band and/or 5GHz UNI bands with OFDM Technology
- Employs Time Division Duplex (TDD) transmission
- End to end transmission of multiple user services over packet switched networks

- Transparent Ethernet forwarding
- Support SNMP for remote monitor & management
- Enhanced Security and access control
- Power over Ethernet to ODU
- Rapid installation and easy configuration for deploying the link
- Flexible and simple structure for upgrading
- Windows based utility program provides user friendly interface to configure the IDU/ODU

Applications

- Cellular Backhaul
- Telephony Extension
- Extension to MMDS and 3G last mile networks
- Interconnecting Multiple Legacy Services over packet networks

- Lossless Backhaul for Hot Spots
- Emergency Services and Temporary Deployment
- Wireless Backup

RADLINK-P2P-2.4 or 5.85-PDH-4xE1 or 4xT1-a9   Specifications may be subject to change   **10/15/12**

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Basic Hardware Installation
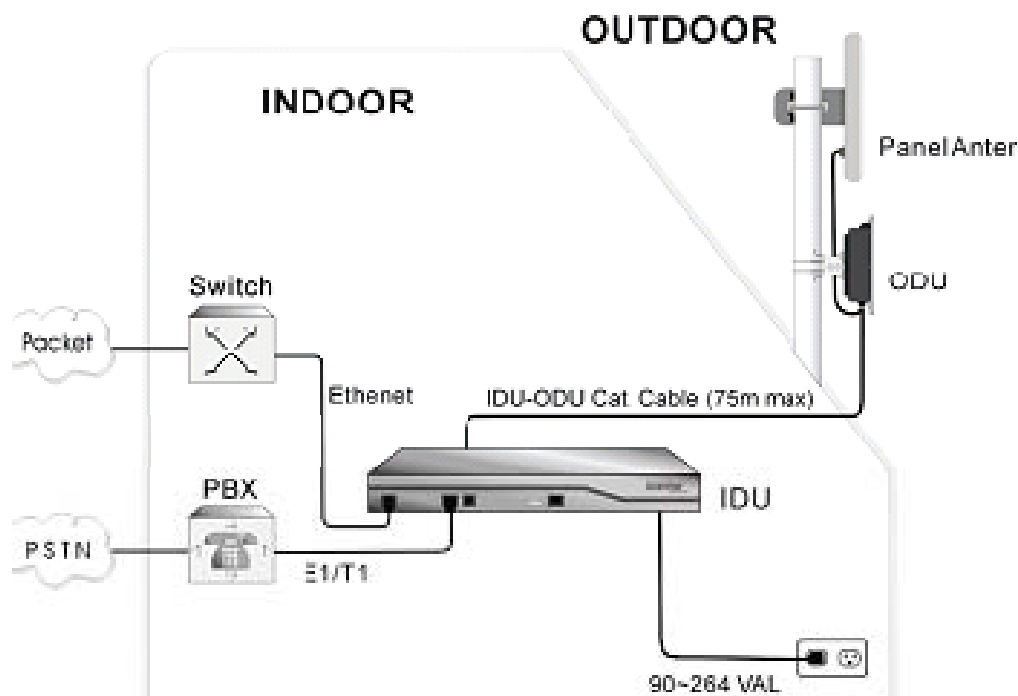
Applications

Telephone Services Extension to Remote/ Rural Locations

In many parts of the developing world where infrastructure is lacking, operators are establishing public call centers to provide basic telephony services.

The PDH/ Ethernet Convergent System 4xE1/T1 series enables service providers to extend voice circuits to remote/rural sites.

Telephone Services Extension to Remote / Rural Locations

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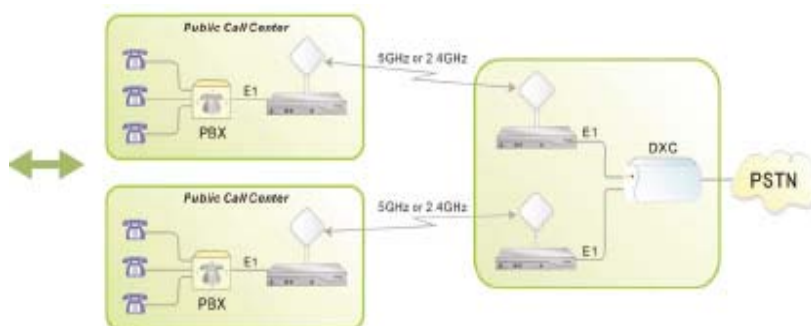WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
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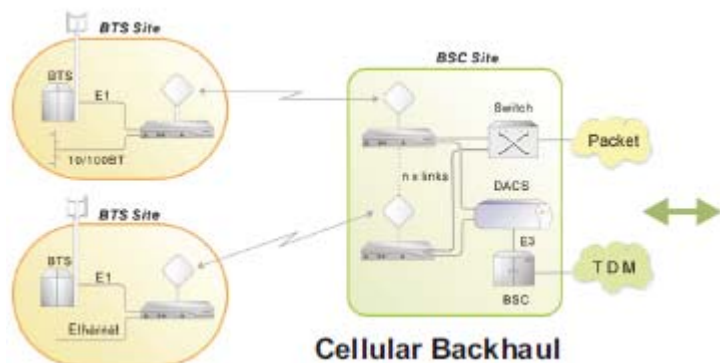
Cellular Backhaul

Cellular Backhaul

The PDH/ Ethernet Convergent System together with the DXC, supports integration of cellular, monitoring and management traffic.

Several Ares 2000-2s can be co-located at the BSC to handle incoming traffic from various remote sites and the DXC can aggregate the multiple E1/T1s for transport over E3/3 or STM-1/OC-S circuits.

Emergency Services and Temporary Deployment

Establishing temporary communications links during an emergency situation is a classic wireless application.

Simple setup, configuration and antenna alignment ensure rapid deployment of multiple services.

Emergency Services and Temporary Deployment

Telephony Extension
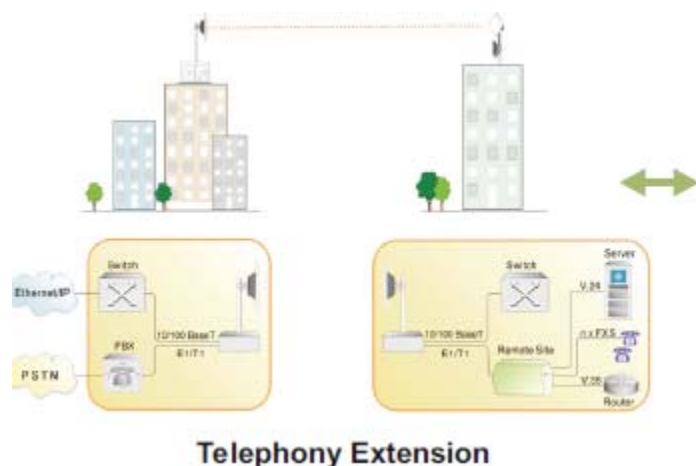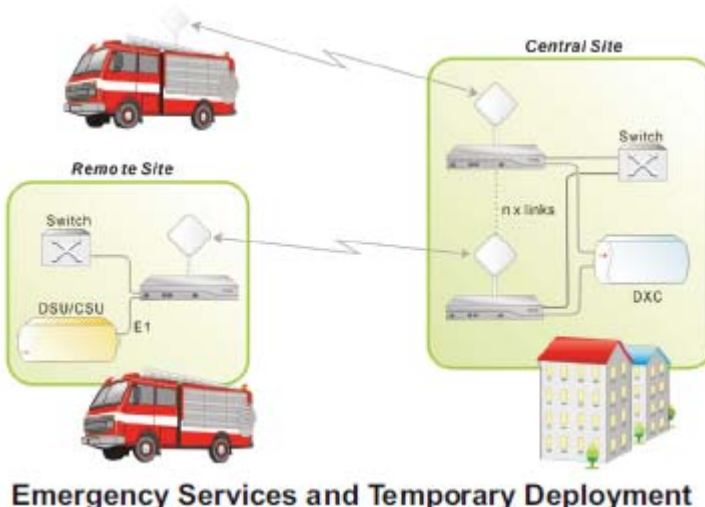
Telephony Extension

The PDH/ Ethernet Convergent System offers a cost-effective solution for extending an E1(T1) Voice circuit up to 10 kilometers in a point-to-point application.

The system is uniquely designed to handle all voice and data traffic while being virtually maintenance-free.

The solution seamlessly connect the telephony and computer networking systems in one building to those in another building, thus creating one physical private network over the airwaves.

The PBX's are interconnected via E1 interface ant the routers are interconnected via Ethernet Interface.

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Specifications

Configuration	
Architecture	**IDU**: Indoor Unit: Multiplex Architecture XxE1/T1+Ethernet, Includes 24VDC PoE **ODU**: Outdoor Unit: TDD Ethernet Radio
IDU to ODU Interface	Outdoor CAT-5 cable: Maximum cable length: 90m w/24VDC

Radio			
Frequency bands	2.4 GHz	2.400 – 2.4835 GHz	Customized to meet local regulatory requirements
	5.X GHz	5.150 – 5.850 GHz	
Data Rate	Software configurable		
E1/T1 Capacity	Up to 4 x E1/T1		
Ethernet Throughput	Up to 3 Mbps		
RF Channel Bandwidth	20 MHz		
Duplex Technique	TDD		
Modulation	OFDM-64QAM, BPSK, QPSK, 16QAM,		
Transmit Power	23dBm (all RF bands)		
Received Dynamic Range	> 60dB		

Ethernet Interface	
Type	10/100Base T Interface with Auto-negotiation
Number of Ethernet Ports	1 (LAN Traffic Bandwidth Control), Up to 3 Mbps Throughput
Framing / Coding	IEEE 802.3, IEEE 802.3u
Bridging	Self-learning up to 2047 MAC addresses IEEE 802.1Q
Traffic Handling	MAC layer bridging, self-learning
Line Impedance	100 Ω
VLAN Support	Transparent
Connector	RJ-45

E1/T1 Interface	
Framing	Unframed (transparent)
Number of E1(T1)	0, 1, 2, 3 or 4 E1/T1
Standard Compliance	G.703, G.826
Timing	Independent Tx and Rx timing
Line Code	E1: HDB3@ 2.048 Mbps; T1: B8ZS/AMI @ 1.544Mbps
Impedance	E1-120 Ω, Balanced; T1 - 100 Ω, Balanced
Connector	RJ-45
Jitter & Wander	According to G.823, G.824

Network Management	
Local Management	CLI / RS232, SNMP
Remote Management	SNMP
SNMP Agent	MIB II, Private MIB

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Security	
Data Encryption	WEP 64.128/152 bits, AES-128 bit encryption
	WPA-PSK, WPA
Authorization	MAC Address Access Filter
Other Features	Disable broadcasting SSID, Client Isolation (layer 2 Isolation), Regatta mode
Power and Mounting	
Power Input	100/240 VAC (+24VDC PoE): Pwr Consumption = 21W/2.4G, 18W/5.8G
Mounting	Pole or Wall for ODU, 19 in Rack (1Mtg Sp) or Desktop for IDU
Mechanics	
5.X GHz ODU Dimensions (includes 23 dBi integral antenna)	335 (L) × 335 (W) × 81 (H) ; mm; (13.1(L) x 13.2(W) x 3.2(H) inches) Weight 2.9 Kg (6.4lb)
2.4 GHz ODU Dimensions (includes 18 dBi integral antenna)	330 (L) × 295 (W) × 91 (H) ; mm; (13.0(L) x 11.6(W) x 3.6(H) inches) Weight 2.9 Kg (6.4lb)
ODU Dimensions for External Antenna	259 (L) x 250 (W) x 75 (H); mm; (10.2(L) x 9.8(W) x 3.0(H) inches) Weight: 1.8kg; (4.0 lb)
IDU Dimensions	425 (L) x 256 (W) x 44.5 (H); mm; (16.8(L) x 10.1(W) x 1.75(H) inches) Weight: 2.9 Kg; (6.4 lb)

Integral Antenna	5.X	2.4
Frequency Range	5150 – 5875 MHz	2400-24835 MHz
Gain	23 dBi	18 dBi
Beam Width	10°	10°
Polarization	Linear or Vertical	Linear or Vertical

Environmental	
Outdoor Unit Enclosure	IP-68 rated weather-proof enclosure
ODU Operating Temperature Range	-30°C to +60°C; (-4°F~140°F)
IDU Operating Temperature Range	-5.0°C to +55°C; (23°F~131°F)
Storage Temperature Range	30°C to +70°C, (-22°F~158°F)
Humidity	Up to 90% non-condensing

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Models

2.4 GHz ODU with 18dBi Integral Antenna

ODU for External Antenna (5 and 2.4 GHz)

5X GHz ODU with 23 dBi Integral Antenna

IDU for 4 xE1/T1 +Ethernet

ORDERING INFORMATION	
RADLINK-P2P-2.4G-2357-I18	2.4GHz ISM band, 4xE1+1xEthernet Term. with 18 dBi Integral Ant, EIRP=41dBm
RADLINK-P2P-2.4G-2359-I18	2.4GHz ISM band, 4xT1+1xEthernet Term. with 18 dBi Integral Ant, EIRP=41dBm
RADLINK-P2P-5.85G-2357-I23	5GHz UNII band, 4xE1+1x Ethernet Term. with 23 dBi Integral Ant, EIRP=46dBm
RADLINK-P2P-5.85G-2359-I23	5GHz UNII band, 4XT1+1x Ethernet Term. with 23 dBi Integral Ant, EIRP=46dBm
RADLINK-P2P-2.4G-2357-EXT	2.4GHz ISM band, 4xE1, 1x Ethernet Terminal (ODU + IDU) for External Antenna
RADLINK-P2P-2.4G -2359-EXT	2.4GHz ISM band, 4xT1, 1xEthernet Terminal (ODU + IDU) for External Antenna
RADLINK-P2P-5.85G-2357-EXT	5GHz UNII band, 4xE1, 1x Ethernet Terminal (ODU + IDU) for External Antenna
RADLINK-P2P-5.85G-2359-EXT	5GHz UNII band, 4xT1, 1x Ethernet Terminal (ODU + IDU) for External Antenna

Note:
For 75 ohm Unbalanced E1 requires external impedance matching transformer.

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