

CONVERGENCE 32XX Series PDH / Ethernet Convergent System

CONVERGENCE32XX_SS_ENB01W

Features and Benefits

- High quality Voice / Data / Video transmission
- Cost-effective alternative to traditional E1(T1) devices
- Up to 4 ports E1(T1) supported
- High reliability of radio link provides excellent BER
- Operate on 2.4GHz ISM band and 5GHz UNII bands with OFDM technology
- Employs Time Division Duplex (TDD) transmission, no need to plan and to allocate separate channels for the uplink and downlink data streams
- End to end transmission of multiple user services over packet switched networks
- Transparent Ethernet forwarding
- Support SNMP for remote monitor and management
- Window based utility provides user friendly interface to configure the IDU/ODU
- Rapid installation and easy configuration for deploying the link
- Enhanced Security and access control
- Power over Ethernet to ODU
- IP-68 rated weather-proof housing for ODU



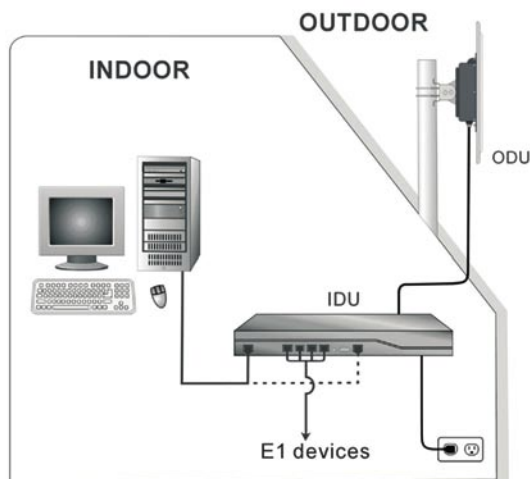
CONVERGENCE 32XX Series PDH / Ethernet Convergent System

CONVERGENCE 32XX Series delivers up to 23Mbps air rate for Ethernet and up to 4 ports E1 (T1) traffic. The system supports a variety of spectrum bands.

CONVERGENCE 32XX Series 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 ISM band and 5.x GHz UNII bands is not affected by harsh weather conditions, such as fog, heavy rain etc.

The CONVERGENCE 32XX Series system offers more than just an attractive price-point per link and powerful performance characteristics. Easy of installation and alignment along with smart management capabilities make setup and configuration a snap.



Basic Hardware Installation Figure

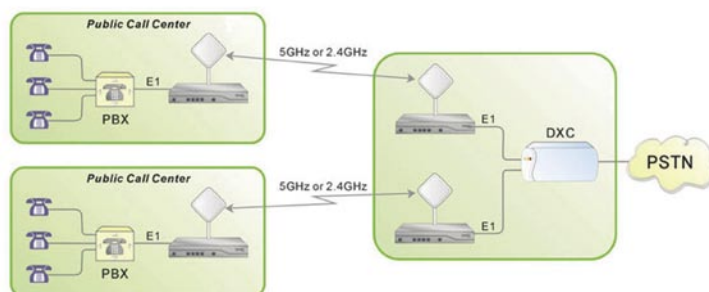
A APPLICATIONS

- Wireless Backup
- Emergency Services and Temporary Deployment
- Cellular Backhaul
- Telephony Extension
- Lossless Backhaul for Hot Spots
- Interconnecting Multiple Legacy Services over Packet Networks
- Extension to MMDS and 3G last mile networks

1 Telephone Services Extension to Remote / Rural Locations.

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

The CONVERGENCE 32XX Series enables service providers to extend voice circuits to remote / rural sites.



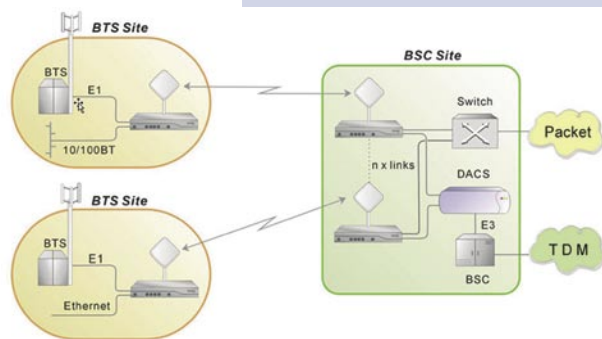
Telephone Services Extension to Remote / Rural Locations

2 Cellular Backhaul

CONVERGENCE 32XX Series, together with the DXC, supports integration of cellular, monitoring and management traffic.

Several CONVERGENCE 32XX Series 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/T3 or STM-1/OC-S circuits.

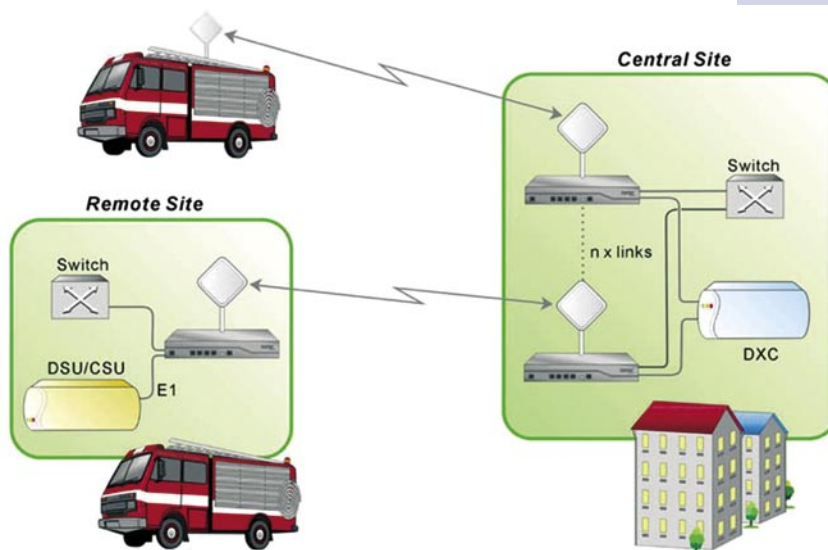
* DACS = Digital Access Cross Connect Switch



Cellular Backhaul

3 Emergency Services and Temporary Deployment

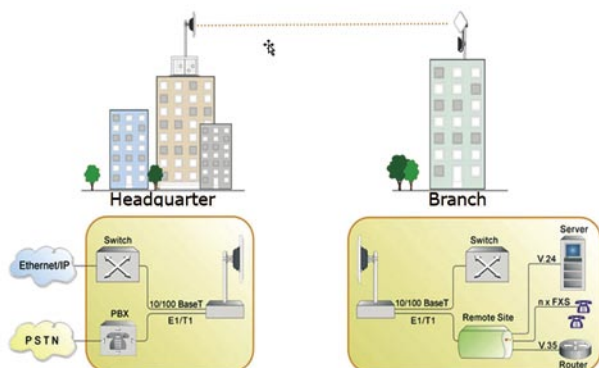
Establishing temporary communications links during an emergency situation is a classic wireless application. Simple setup, configuration and antenna alignment ensure rapid deployment of multiple services.



Emergency Services and Temporary Deployment

* DXC = Digital Cross Connect

4 Telephony Extension



Telephony Extension

CONVERGENCE 32XX Series offers a cost-effective solution for extending an E1 (T1) voice circuit up to 10 kilometers in a point-to-point application.

CONVERGENCE 32XX is uniquely designed to handle all voice and data traffic while being virtually maintenance-free. The solution seamlessly connects the telephony and computer networking systems in one building to those in another building, thus creating one physical private network over the airwaves.

The PBXs are interconnected via E1 interface and the routers are interconnected via Ethernet interface.

B Specifications**Configuration**

Architecture	IDU: Indoor Unit
	ODU: Outdoor Unit
IDU to ODU Interface	Outdoor CAT-5 cable: Maximum cable length: 75m

Radio

Frequency bands	LP-32ETXX	2.400 – 2.4835 GHz		
	LP-31ETXX	5.150 – 5.250 GHz		
		5.250 – 5.350 GHz		
		5.470 – 5.725 GHz (includes DFS / TPC)		
		5.725 – 5.850 GHz		
Data Rate	Configurable up to 23 Mbps (bi-directional)			
Channel Bandwidth	20 MHz			
Duplex Technique	TDD			
Modulation	OFDM-BPSK, QPSK, 16QAM, 64QAM			
Transmit Power	23dBm max.			
Rx Sensitivity @ Packet Error Rate: 10%	54Mbps	36Mbps	18Mbps	6Mbps
LP-32ETXX	-72dBm	-77dBm	-84dBm	-89dBm
LP-31ETXX	-70dBm	-75dBm	-82dBm	-87dBm
Received Dynamic Range	> 60dB			

Ethernet Interface

Type	10/100Base T Interface with Auto-negotiation (IEEE 802.3)
Number of Ethernet Ports	1 (LAN Traffic Bandwidth Control)
Framing / Coding	IEEE 802.3/U
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, 4
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

Management	
Local Management	CLI / RS232, SNMP
Remote Management	SNMP
SNMP Agent	MIB II, Private MIB
Security	User log on, MAC Access control list, WEP Encryption 40,128,152 bit
Power and Mounting	
Power Feeding	100/240 VAC
Mounting	Pole and Wall
Mechanics	
ODU (integrated antenna not included)	259 (L) x 250 (W) x 75 (H); mm. Weight: 1.8kg
IDU Dimensions	425 (L) x 256 (W) x 44.5 (H); mm. Weight: 2.9 Kg
Environmental	
Outdoor Unit Enclosure	IP-68 rated weather-proof enclosure
ODU Operating Temperatures	-20°C ~ 60°C
IDU Operating Temperatures	-5°C - 55°C
Humidity	Up to 90% non-condensing

C How to Order

- **LP-31ET21** 2.4GHz ISM band, 1xE1, 1xEthernet IDU/ antenna-integrated ODU
- **LP-31ET11** 5GHz UNII band, 1xE1, 1x Ethernet IDU/ antenna-integrated ODU
- **LP-32ET21** 2.4GHz ISM band, 1xE1, 1xEthernet IDU/ antenna detachable ODU
- **LP-32ET11** 5GHz UNII band, 1xE1, 1x Ethernet IDU/ antenna detachable ODU
- **LP-31ET22** 2.4GHz ISM band, 2xE1, 1xEthernet IDU/ antenna-integrated ODU
- **LP-31ET12** 5GHz UNII band, 2xE1, 1x Ethernet IDU/ antenna-integrated ODU
- **LP-32ET22** 2.4GHz ISM band, 2xE1, 1xEthernet IDU/ antenna detachable ODU
- **LP-32ET12** 5GHz UNII band, 2xE1, 1x Ethernet IDU/ antenna detachable ODU
- **LP-31ET24** 2.4GHz ISM band, 4xE1, 1xEthernet IDU/ antenna-integrated ODU
- **LP-31ET14** 5GHz UNII band, 4xE1, 1x Ethernet IDU/ antenna-integrated ODU
- **LP-32ET24** 2.4GHz ISM band, 4xE1, 1xEthernet IDU/ antenna detachable ODU
- **LP-32ET14** 5GHz UNII band, 4xE1, 1x Ethernet IDU/ antenna detachable ODU