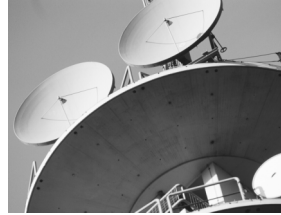


*Optimum Multi-service Access and Convergent Platform*

## **Unitrans ZXMP S330**

**STM-1/4/16 Optical Transmission System**



**The ZXMP S330, one of the next generation transmission products in the ZTE optical portfolio, satisfies multi-service access and minimum convergent requirements.**

In recent years, the data service is undergoing a dramatically development. The network traffic trend is evolving from voice to multi-service. Data service drives abundant bandwidth requirements, this makes network traffic become even heavier than ever before, even on access network, the traffic may be over STM-4. Under such circumstance, the ZXMP S330 with data service interface becomes the optimum choice for the access and convergent layer transmission.

The ZXMP S330, a multi-service-access oriented, and a new generation optical transmission equipment in a compact size (10U high). It inherits all characteristic of the traditional SDH and is suitable for data service access and convergence.

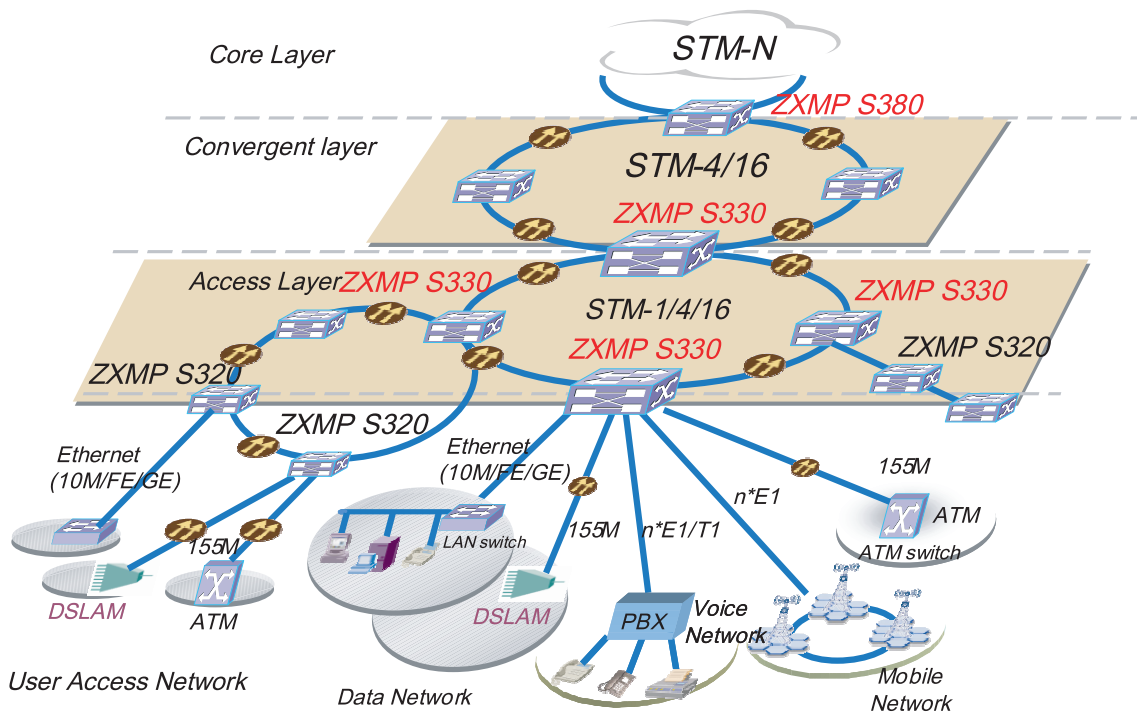
The ZXMP S330 can integrates TDM, Ethernet and ATM access in an unified system platform, maximizes the customers investment protection and high cost-performance ratio.

Among the ZTE optical transport product family, the ZXMP S330 is positioned between the ZXMP 320 and ZXMP 380, providing a smooth linkage between access layer and convergent layer.



## Key Advantages

- > Integrated design for TDM, Ethernet and ATM service
- > Maximized investment protection evolving to SDH networks
- > Point-to-point and multipoint-to-multipoint data service applications
- > Carrier-class availability and reliability
- > PPP/LAPS/GFP for flexible and efficient mapping of Ethernet into SDH VCs
- > Virtual concatenation for high utilization of network bandwidth
- > LCAS for reliable multi-path transmission and flexible bandwidth adjustment in service
- > RPR function for the requirements of strict QoS/SLA of Data Traffic
- > Unique Tributary 1:N protection (E1/T1, E3/T3, STM-1e, Fast Ethernet)



## Applications

The ZXMP S330 is a new generation STM-1/4/16 synchronous multiplexing equipment. It allows you access the TDM, Ethernet and ATM service in the same time. For TDM service, it can be equipped with 168 x E1/T1 (balanced or unbalanced) or 33 x E3/T3 or 22 x STM-1e. For Ethernet, it supports up to 44 Ethernet interfaces. For ATM service, it provides 44 x ATM 155M interfaces. It can function as STM-1/4/16 ADM/TM/REG.

Diversified features are available for the ZXMP S330, such as point-to-point and multipoint applications, as well as various functions like Ethernet Private Line (EPL), Ethernet Private LAN service (EPLAN), Ethernet Virtual Private Line (EVPL) service, and Ethernet Virtual Private LAN service (EVPLAN).

It supports ATM VP Ring, ATM services at classes of CBR, rt-VBR, nrt-VBR and UBR.

## Features

### TDM service

- > E1/T1 (balanced and unbalanced) and E3/T3(DS3) for tributary, STM-1(O/E), STM-4, STM-16. It provides 1:N protection function for electrical tributary card.

### Ethernet Service

- > 10 Base-T, 100Base-Tx, 100 BASE-FX and 1000 Base-SX/LX Ethernet interface

### ATM Service

- > 155 M optical interface

### Packet over SDH

- > VC-4-4C, VC-4-8C

### RPR Over SDH

- > VC-3-Xv (x=1-24)/VC-4-Xv (x=1-8) configurable
- > Traffic segregation via IEEE802.1Q VLAN tagging, maximum 4096 VLANs and Q-in-Q extended VLAN tagging
- > Ethernet multicast with IGMP interception and Broadcast restriction
- > Service grade: Data associated service grades such as A0, A1, B and C
- > Ring BW limitation: Supports input rate limitation for the service carried on the RPR ring, allocated BW for CIR, EIR, and the BW granularity and step length is 20Kb/s
- > RPR Management: Unified SDH EMS

### Ethernet over SDH

- > The Ethernet over SDH scheme save infrastructure investment on routers and LAN switches
- > The ZXMP S330 provides Ethernet over SDH scheme via GFP/LAPS/PPP mapping method to transport the Ethernet frames transparently across SDH network and Ethernet statistics function. GFP can interwork with equipment of different manufacturers.

### Efficient Bandwidth Usage

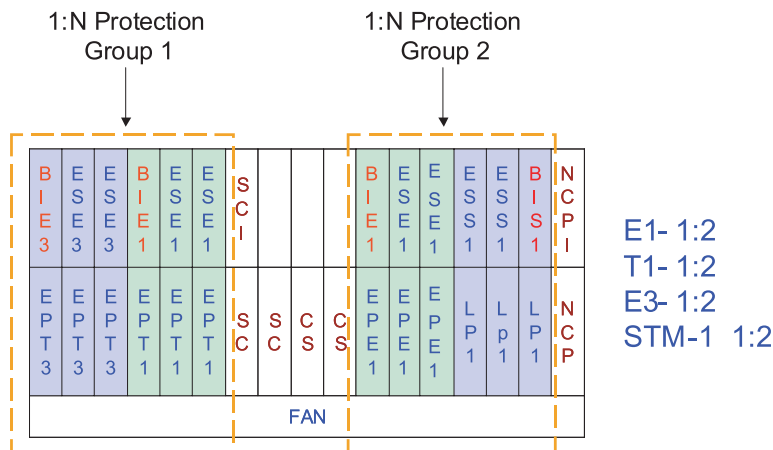
> The ZXMP S330 transports Ethernet traffic of each card over 252 x VC12 paths providing configurable bandwidth via virtual concatenation, increases and decreases the links in service via LCAS. Virtual concatenation allows multi-path transportation and has the ability to diversely route traffic. LCAS ensures the performance of virtual concatenation and service availability.

### Easy Installation

> The ZXMP S330 can be installed economically without any special skills required. desktop-mounted and rack-mounted modes are optional.

### Unique Tributary 1:N protection

> The system supports E1/T1, E3/T3, STM-1e, Fast Ethernet 1:N (N≤5) protection, it can provide 2 groups of protection and up to 4 kinds of interfaces can be protected in the same time.



## Technical Specifications

### General

The equipment is designed in compliance with the ITU-T Recommendations G.664, G.703, G.707, G.708, G.709, G.773, G.774, G.781, G.782, G.783, G.784, G.957, G.958, G.813, G.823, G.824, G.825, G.826, G.828, G.831, G.841, G.842, and G.843.

### Ethernet Over SDH Scheme:

GFP-G.7041, LCAS-G.7042, LAPS, PPP and IEEE 802.3

**RPR Over SDH:** IEEE 802.17 Draft 3.3

### Cross-connection Capacity

> Version A: 104 x 104VC4/1008 x 1008 VC12 (HO/LO)

> Version B: 120 x 120VC4/2016 x 2016VC12 (HO/LO)

### Interface

> 4 x STM-16/ 8 x STM-4/ 24 x STM-1 optical interfaces

> 8 x GE interfaces with SFP optical module

- > 168 x E1/T1 (balanced and unbalanced) interfaces (1:N), 27 x E3/T3 interfaces (1:N)
- > 36 x Ethernet interfaces (1:N); 44 x 155M ATM interfaces
- > 4-input and 2-output clock interfaces (2 Mbit/s or 2 MHz)
- > Auxiliary interfaces: 1 x OW (RJ11), 1 x Qx(RJ45), 1 x f (RJ45) and 1 x F1(DB15)
- > External alarm interfaces: 4-input and 2-output

### Connectors

|          |          |              |                |
|----------|----------|--------------|----------------|
| STM-N(o) | E1/T1    | E3/T3/STM-1e |                |
| SC/PC    | SCI/ CC4 | CC4          |                |
| Ethernet | ATM      | Clock        | Alarm (IN/OUT) |
| RJ45/LC  | SC/PC    | CC4/DB9      | DB15/DB9       |

### Power Supply Requirements

- > -48 VDC, working voltage range is -40V ~ -57V

### Dimensions

- > Shelf: 443.7 mm x 482.6 mm x 270 mm (depth x W x D)

### Environment

#### Grounding Requirements

- > Work ground resistance:  $\leq 1 \Omega$
- > Protection ground resistance:  $\leq 4 \Omega$
- > Joint ground resistance of the local service provider:  $\leq 1 \Omega$  Working Environment Requirements
- > Transportation and storage temperature:  $-20 \text{ }^\circ\text{C} \sim +60 \text{ }^\circ\text{C}$
- > Requirements on temperature and humidity

|   |          |
|---|----------|
| Temperature ( $^\circ\text{C}$ )                            | RH (%)   |
| $+5 \text{ }^\circ\text{C} \sim +55 \text{ }^\circ\text{C}$ | 5% ~ 95% |

### Electromagnetic Compatibility

- > Electromagnetic interference meets the CUSPR22 (EN55022) type A standard: ETSI EN 300 386
- > Anti-interference performance meets the IEC1000-4 standard series.

### CE Certified.

- > Environmental Standard: ETS 300 019 (T/TR02-12)
- > Safety Standard: IEC950 (EN60950)

### Network Management

The Unitrans ZXONM Network Management System, developed by ZTE CORPORATION, is designed according to the ITU-T and TMN concepts. This is an optical transmission network management system by adopting multiple advanced network management technologies. The ZXONM optical network management series products include the ZXONM E300 and the ZXONM N100.

The ZXMP S390 is managed by both the ZXONM E300 and the ZXONM N100.

The ZXONM E300 system is an element management system (EMS) with the GUI interface and management functionalities of Fault, Configuration, Alarm, Performance and Security.

The ZXONM N100 is a network management system (NMS) that provides network connection management, which also can interwork with the ZXONM E300 seamlessly.