

Multi-Service Access Platform

Overview

OPCOM3500E is carrier-class Multi-Service Access Platform, and designed to enable establishment of service-integrated for Last Mile. The carrier-class compact design, the powerful interfacing capabilities and the rich mounting options open up a whole new area of application for OPCOM3500E. It can deliver a mix of voice and high-speed data service. OPCOM3500E can extend user LAN services in the Last Mile by working opposite dedicated customer located equipment such as Raisecom's SDH CPE, PDH Multiplexer, Fiber Modem, Interface Converter, Inverse Multiplexer, Ethernet Demarcation, Ethernet Switch and Media Converter, and all the remote device could be aggregated to SDH directly.

OPCOM3500E is a rack with room for 12 modules with an aggregate capacity of up to 622Mbps, and tributary capacities down to 2Mbps. The flexibility provided by offering mapping of data traffic into a number of VC12. Next-generation SDH technology, GFP, VCG and LCAS is used for Ethernet service over SDH. OPCOM3500E is an ideal product for carriers to groom and consolidate traffic from various source in a Metro network.



OPCOM3500E Feature

- Provide four STM-1 or two STM-4 for aggregation units
- Provide no-block cross connection of 16x16 VC4 or 1008x1008 VC12
- Provide VC12 cross connection between all tributary units and aggregate unit
- OPCOM3500E chassis provides 15 slots, including 2 slots of power supply, 1 slot of network management, the left 12 slots are design for aggregation units and tributary units
- Provide 2Mbit clock timing input and output
- Protection of aggregation boards and tributary boards

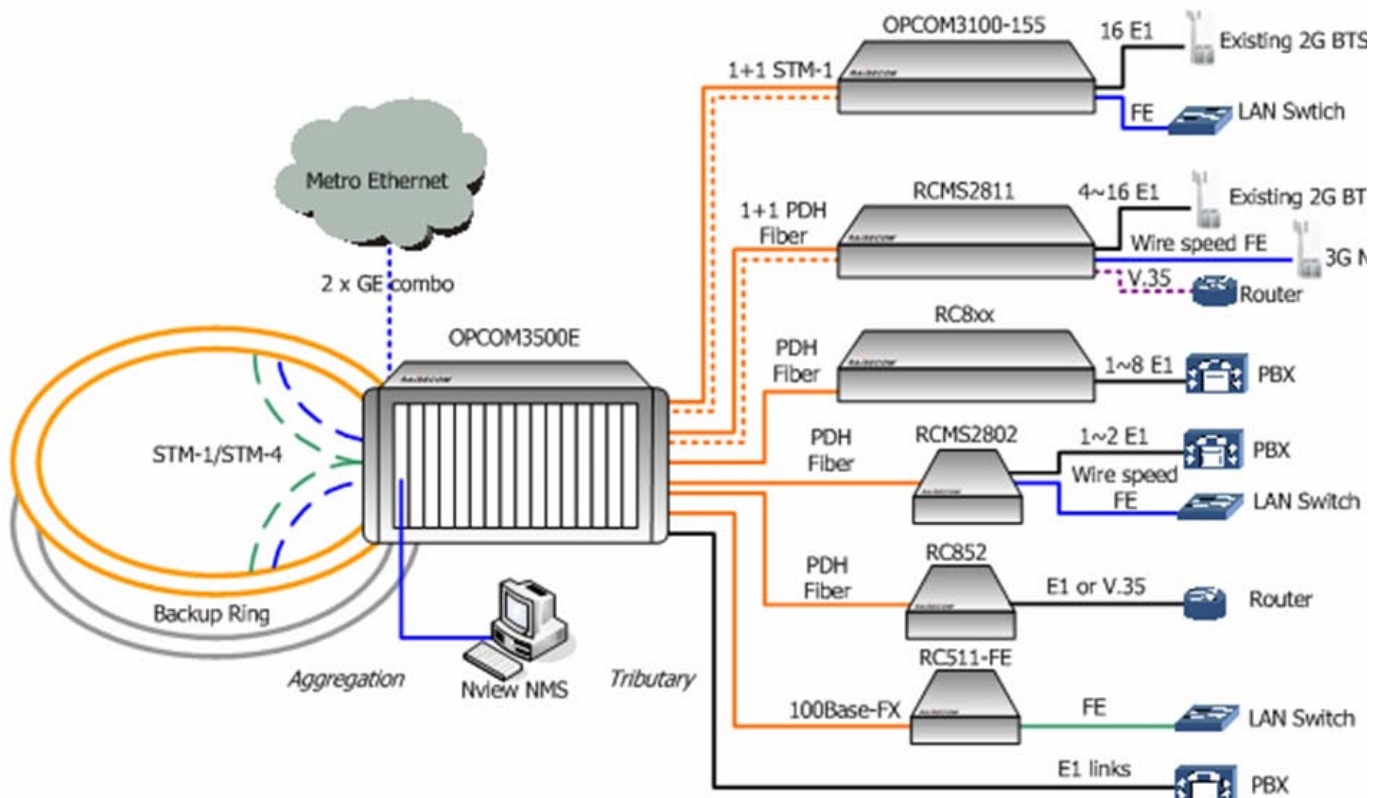
Introduction

OPCOM3500E adopts rack design, including chassis, fans board, plug board and power supply board.

For the plug board, including following parts:

- Network management board: NMS board should be in slot 0
- Aggregation ports: STM-1, STM-4 boards should be in slot 6,7
- Tributary ports: STM-1, E1, E1-fiber, PDH fiber, Multi-service PDH fiber (wire-speed Ethernet and several E1), Ethernet fiber optical and electrical (EoS/EoP), G.SHDSL boards should be in slot 1,2,3,4,5,8,9,10,11,12

OPCOM3500E MSAP Typical Application



Feature of OPCOM3500E-NMS

NMS Unit



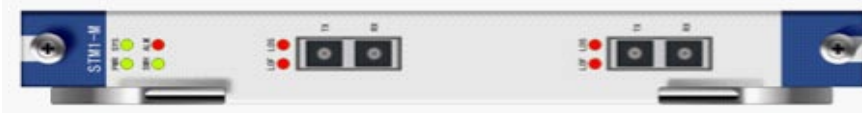
- OPCOM3500E-NMS is network management module of OPCOM3500E system in slot 0 only
- It communicates with network management software of upper layer and accepts management of upper layer.
- It can manage OPCOM3500E equipment, and corresponding remote equipment.
- Provide clock for whole OPCOM3500E system.
- Keep running service without NMS card
- Support on-line upgrade of system and tributary board.

Specification of OPCOM3500E-NMS

Console Interface:	SNMP and NM-EXT Interface:
Connector type: RJ45	Connector type: RJ45
Standard: complies with RS232 standard	Standard: 10/100Base-T
Bit rate: 9600bps	10/100Mbps Auto-negotiation
2Mbit/s Synchronous Clock Interface:	RS232 Interface for User:
Bit rate: 2048Kb/s±50ppm	Connector type: RJ45
Code: HDB3	Standard: complies with RS232 standard
Impedance of interface:75Ω (unbalanced)	Bit rate: 9600bps
Electrical characteristics: complies with ITU-T G.703	
Frame structure: complies with ITU-T G.704	
Jitter tolerance: complies with ITU-T G.823	
Power Consumption: <10W	
Working Ambience: -5~50 centigrade	
Dimension: 211.13mm(H)×220mm(D)×2mm(W)	

Feature of OPCOM3500E-STM1-M

Aggregation Unit



- OPCOM3500E-STM1-M module is aggregate unit of OPCOM3500E system in slot 6 and 7
- Provide two STM-1 optical interfaces, with options of either two individual path or 1+1 path protection
- Embedded cross module of 16x16 VC4, supports TU12, TU3 and VC4 cross connection capability
- Support software on-line up-grade of local and remote equipment

Specification of OPCOM3500E-STM1-M

Specification STM-1 Optical Interface:	Power Consumption: <10W
Bit rate: 155.520Mb/s	Working Ambience: -5~50 centigrade
Line code: NRZ	Dimension: 211.13mm(H)×220mm(D)×2mm(W)
Multiplexing structure : complies with ITU-T G.707	
Clock characteristics: complies with ITU-T G.813	
Electrical characteristics:complies with ITU-T G.957	
Jitter tolerance: complies with ITU-T G.823, G.825	
Optical interface type: SC connector	

Feature of OPCOM3500E-STM1-S

Tributary Unit



OPCOM3500E-STM1-S is a SDH tributary unit of OPCOM3500E in slot 1~5,8~12.

Provides 2 STM1 optical interfaces for 1+1 protection, which can connect with remote OPCOM3100 series SDH device to realize point-to-point, daisy chain modes.

Each service timeslot can access SDH network through the SDH aggregate unit of OPCOM3500E.

Totally 63 VC12 capability

Provide self-contained alarm and performance monitorSingle module

Power consumption is less than 7W, hot-swappable and good reliability

Specification of OPCOM3500E-STM1-S

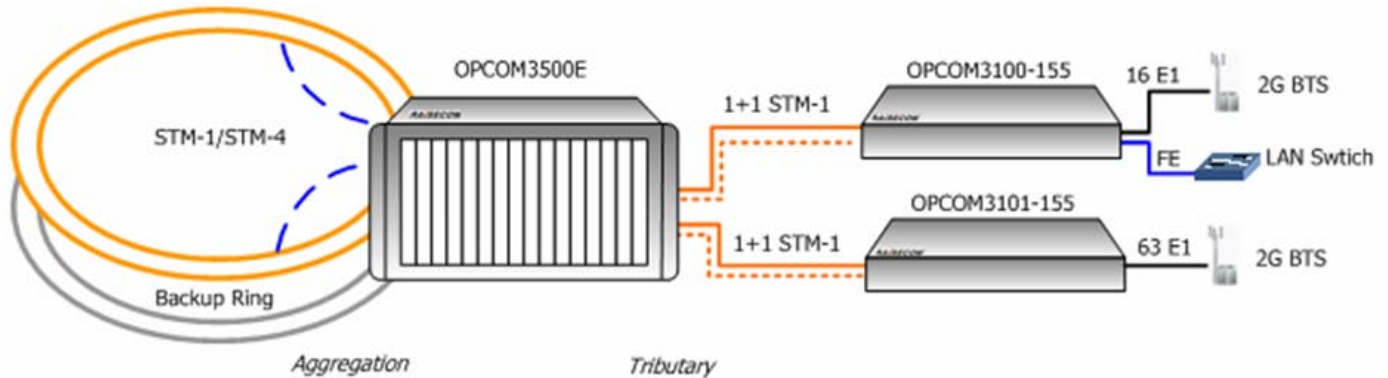
Specification of Optical Interface:

Bit rate: 155.52Mbps

Optical interface type: SC connector

Line Code: NRZ

Application of OPCOM3500E-STM1-S



Feature of OPCOM3500E-16E1(-BL)

Tributary Unit



OPCOM3500E-16E1(-BL) is E1 service unit of OPCOM3500E, it can provide 16 unbalanced (or balanced) E1 interfaces, and it can be mapped in SDH frame through aggregate unit of OPCOM3500E
Provide complete alarm, performance monitor

Specification of OPCOM3500E-16E1(-BL)

Specification of E1 Interface:

Bit rate: 2048Kb/s±50ppm

Power Consumption: <10W

Impedance of interface: 75Ω (unbalanced) or 120 Ω (balanced)

Dimension: 211.13mm(H)×220mm(D)×2mm(W)

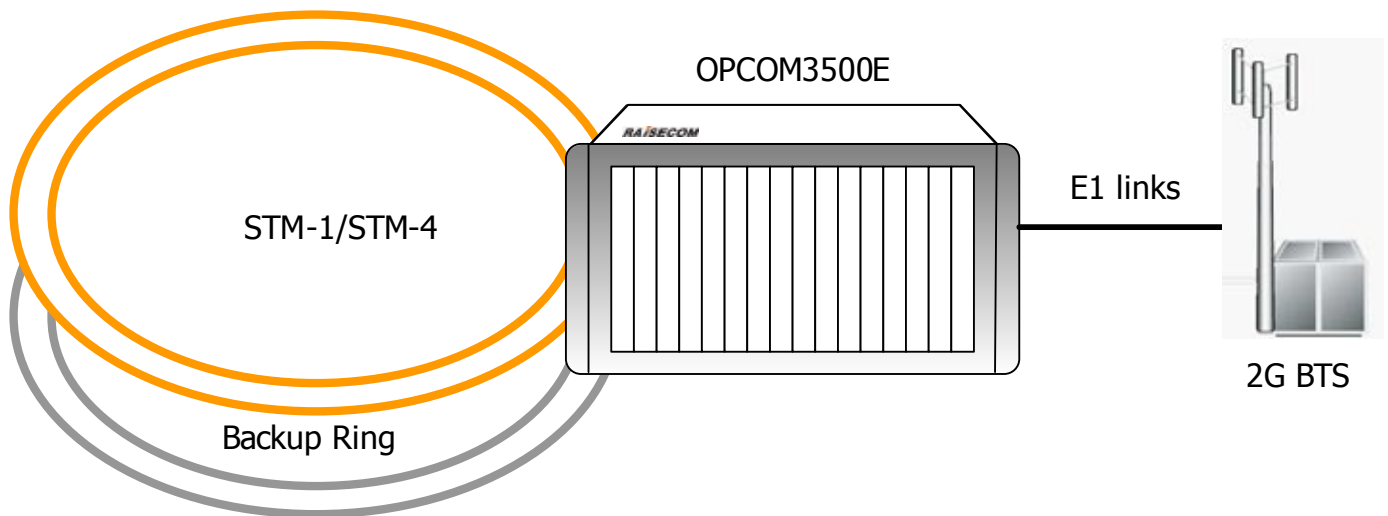
Electrical characteristics: complies with ITU-T G.703

Jitter tolerance: complies with ITU-T G.823

Interface code: HDB3

Working Ambience: -5~50 centigrade

Application of OPCOM3500E-16E1(-BL)



Feature of OPCOM3500E-30x8

Tributary Unit



OPCOM3500E-30x8 is Fiber Modem tributary unit, which includes 8 links. There are 8 independent E1 PDH modules with single link in OPCOM3500E-30x8. OPCOM3500E-30x8 provides 8 PDH optical interfaces, to connect remote Fiber Modem or PCM equipment. OPCOM3500E-30x8 enables E1 signal of remote Fiber Modem or PCM equipment to map into SDH signal, realizing aggregation from branches to SDH.

There are 8 independent PDH modules with 8 independent PDH optical interfaces.

Support Automatic Laser Shutdown (ALS) function.

Provide fiber alarm indicator of local and remote equipment.

Support local and remote loop-back function, it is convenient for maintenance.

Specification of OPCOM3500E-30x8

Specification of Optical Interface:

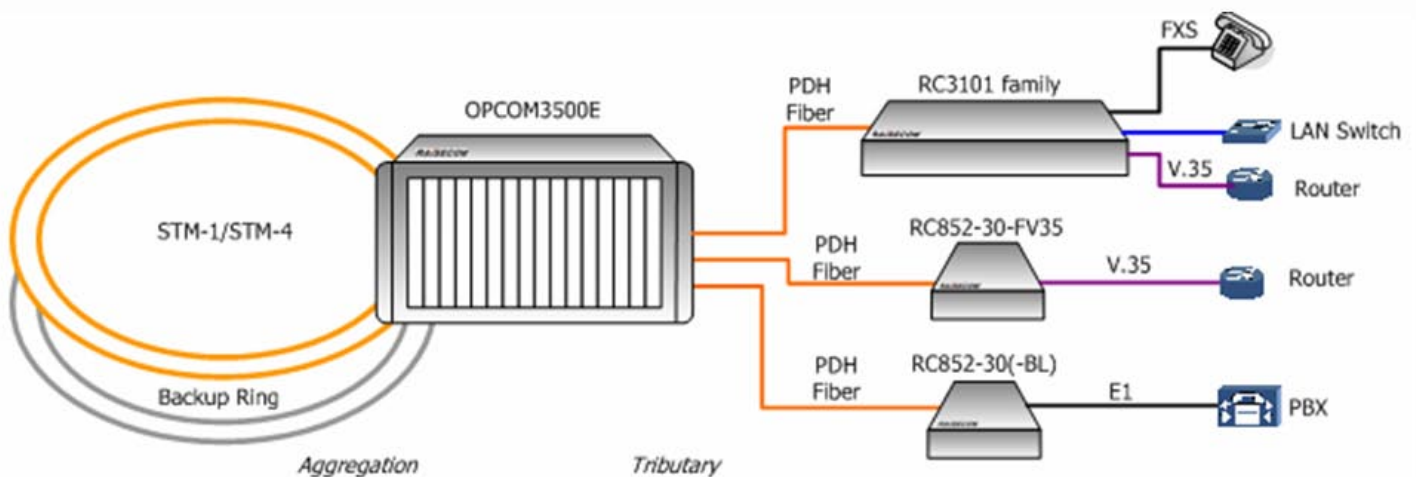
Optical interface type: SFP module

Notes:

OPCOM3500E-30x8 can support following remote equipment:

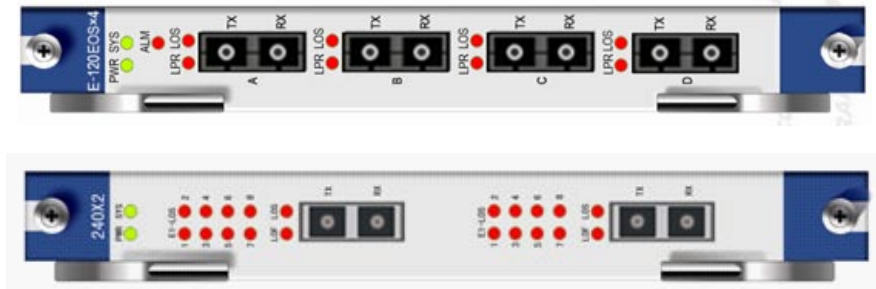
- RC852-30
- RC852-30-BL
- RC852-30-FV35
- RC851-30-FV35
- RC3101/2 optical interface PCM equipment

Application of OPCOM3500E-30x8



Feature of OPCOM3500E-120x4, OPCOM3500E-240x2

Tributary Units



OPCOM3500E-120x4 is tributary unit of PDH Mux, it's embedded 4 individual PDH mux part, it can communicate with remote PDH equipment through 4 PDH optical link. Each part has 4 E1 transmission capability.

OPCOM3500E-240x2 is tributary unit of PDH Mux, it's embedded 2 individual PDH mux part, it can communicate with remote PDH equipment through 2 PDH optical link. Each part has 8 E1 transmission capability.

PDH optical interface supports ALS function.

Provide local and remote loop-back function of E1

Indicator can indicate local and remote alarm

Support on-line software up-grade

Specification of OPCOM3500E-120x4, OPCOM3500E-240x2

Specification of Optical Interface:

Bit rate: 100Mbps

Optical interface type: SC connector

Notes:

OPCOM3500E-120x4, 240x2 can support following remote equipment::

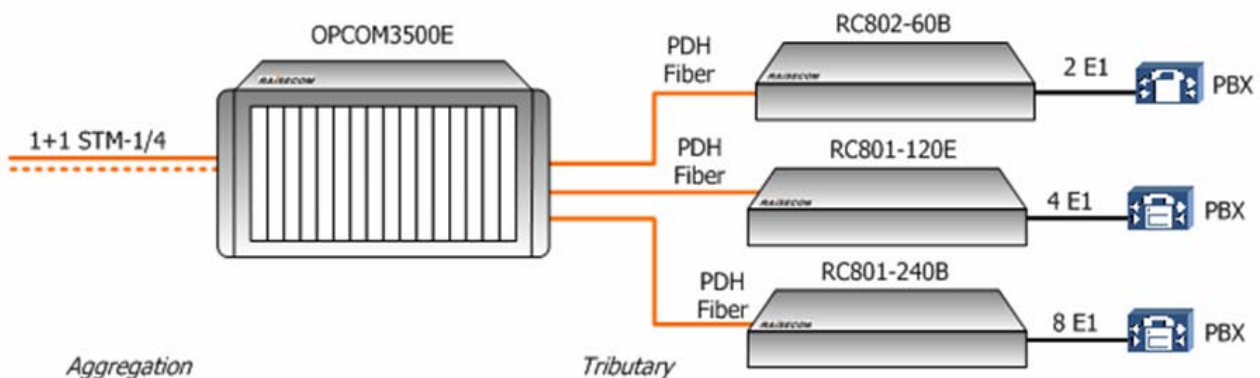
RC801-30B-FV35/60B-FV35/120B/240B/480B (REV.M)

RC801-30B-FV35/60B-FV35(REV.N)

RC802-30B/60B(REV.M)

RC805-120B/240B/480B (REV.M)

Application of OPCOM3500E-120x4, OPCOM3500E-240x2



Feature of OPCOM3500E-120EOSx4, OPCOM3500E-120FEx4-GE

Tributary Units



OPCOM3500E-120EOSx4 is tributary unit of Multi-Service PDH Mux, it's embedded 4 individual PDH mux part, it can communicate with remote RCMS PDH equipment through 4 optical link. Each part has 4 E1+100M FE transmission capability

Ethernet data in 120EOSx4 fiber will be mapped to VC12 by EOS function, GFP and LAPS available

Ethernet data in 120FEx4-GE fiber will be aggregated to GE port on front panel or to backboard for GE aggregations switch board

E1 data will be mapped to VC12

PDH optical interface supports ALS function.

Provide local and remote loop-back function of E1

Indicator can indicate local and remote alarm

Dying Gasp: LED indicator or software indication of remote Power Down

Support on-line software up-grade

Specification of OPCOM3500E-120EOSx4, OPCOM3500E-120FEx4-GE

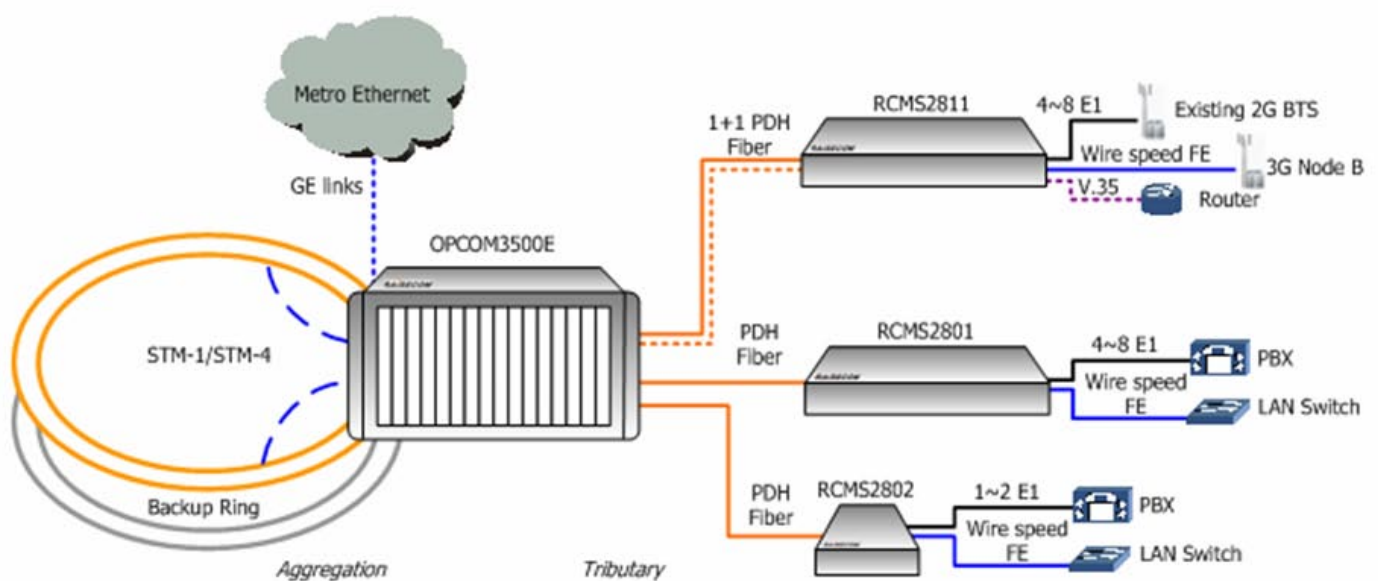
Specification of Optical Interface:

Bit rate: 150Mbps

Optical interface type: SC connector

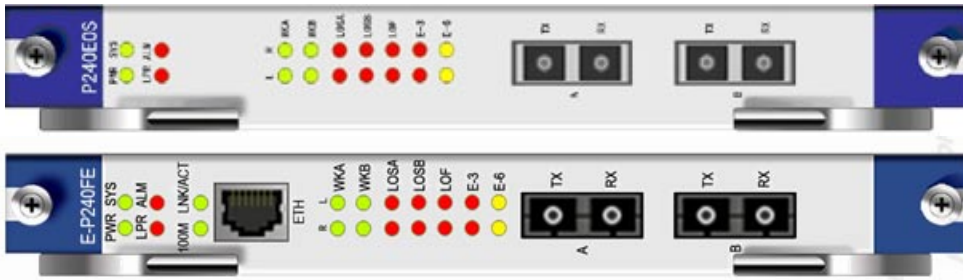
Notes: OPCOM3500E-120EOSx4 can support following remote equipment:
RCMS28xx series except RCMS2802-60GE and RCMS2802-240GE

Application of OPCOM3500E-120EOSx4, OPCOM3500E-120FEx4-GE



Feature of OPCOM3500E-P240EOS, OPCOM3500E-P240FE

Tributary Units



This is a service card of OPCOM3500E, it is deployed point-to-point application with remote PDH MUX RCMS2811. OPCOM3500E-P240EOS can take out 8 links E1 and one link Ethernet service, which accessing remote PDH MUX, and map them into SDH network respectively with VC12 step. In practical application, OPCOM3500E can contain many P240EOS cards, P240EOS card can connect to RCMS2811, to realize cost-effective solution. Provide 2 PDH optical ports with 1+1 switching protection function, and priority of the two optical ports can be set. Switching condition is LOS and LOF of optical port.

8 links E1 and one link of 100M Ethernet data can be mixed multiplexing. Completed alarm indicators, local and remote alarms can be displayed at the same time.

The Ethernet data in P240EOS will be mapped to VC12 through EoS function, GFP and LAPS available

The Ethernet data in P240FE will be aggregated to Fast-Ethernet port on front panel

Using overhead of optical fiber can transmit network management information, to realize remote network management of RCMS2811.

Support local and remote loop-back function, it is convenient for maintenance.

Dying Gasp: LED indicator or software indication of remote Power Down

Specification of OPCOM3500E-P240EOS, OPCOM3500E-P240FE

Specification of Optical Interface:

Bit rate: 150 Mbps

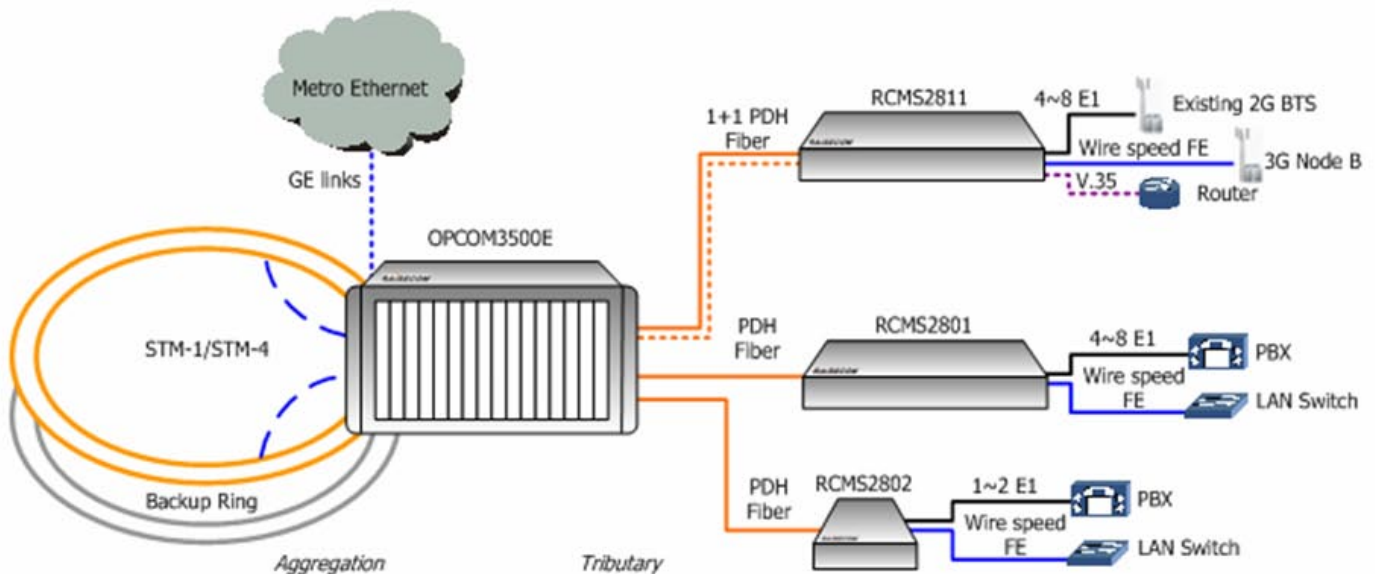
Optical interface type: SC connector

Notes:

OPCOM3500E-P240EOS can support following remote equipment:

RCMS28xx series, could have 1+1 port based protection or 1+1 board based protection while connect to RCMS2811 series

Application of OPCOM3500E-P240EOS, OPCOM3500E-P240FE



Feature of OPCOM3500E-EOSE-8FX

Tributary Units



OPCOM3500E-EOSE-8FX is tributary unit of OPCOM3500E system. It receives customer Ethernet electrical interface service, which is accessed by 100M Media Converter or receives customer 100M optical interface service directly. Ethernet signal is encapsulated by GFP/LAPS protocol and mapped into SDH network with N*VC12 step.

8 Ethernet optical interfaces of all SFP modules.

Remote manage Raisecom Media Converters RC51x, RC6xx series

VLAN tag configurable and changable

8 Fast Ethernet optical ports, each port data will be mapped into an individual VCG

Adopt SFP optical interface, plug and play

8 links Ethernet service have rate limiting function with N*VC12 step, and they can share 63 VC12

Provide GFP and LAPS encapsulation, and it supports LCAS function

Remote equipment can be network managed, if it is Raisecom's 100M Media Converter

Support on-line software up-grade of local equipment

Power Consumption <10 W

Specification of OPCOM3500E-EOSE-8FX

Specification of Interface:

Optical Module: SFP

Optical Connector: LC

Standard: IEEE 802.3u 100Base-Fx

Rate: 100Mbps

Duplex Mode: full-duplex

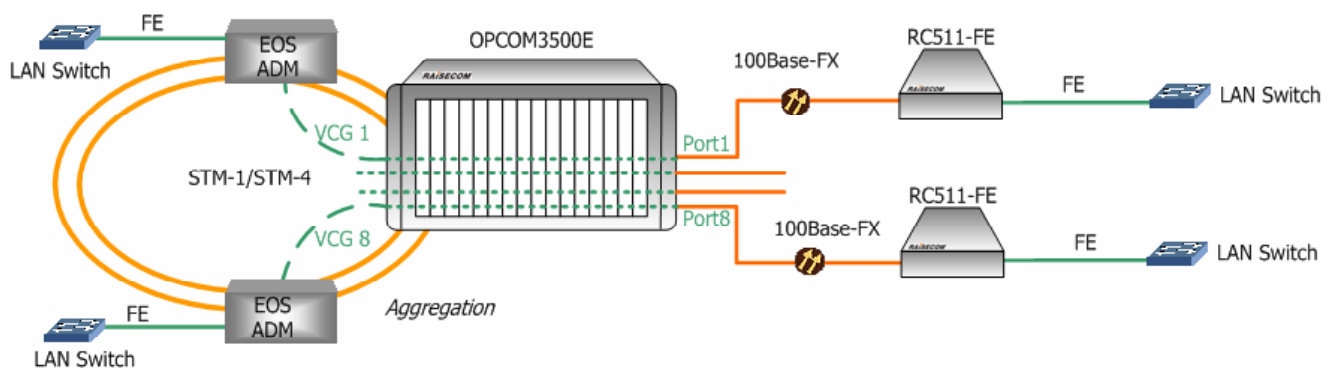
Data Frame: >9600 bytes

Flow control: Support

Notes: OPCOM3500E-EOSE-8FX can support following remote equipment:

- RC601-FE-REV-C
- RC601-FE-REV-ERC
- 501-FE-REV-C
- RC511-FE-REV-A
- RC511-FE-C-REV-A
- RC511-4FE

Application of OPCOM3500E-EOSE-8FX



Feature of OPCOM3500E-EOS-8FE

Tributary Units



OPCOM3500E-EOS-8FE is tributary unit of OPCOM3500E system. Ethernet signal is encapsulated by GFP/LAPS protocol and mapped into SDH network with N*VC12 step.

8 Ethernet electrical interfaces of all RJ45.

8 Fast Ethernet optical ports, each port will be mapped into an individual VCG

8 links Ethernet service have rate limiting function with N*VC12 step, and they can share 63 VC12

Provide GFP and LAPS encapsulation, and it supports LCAS function

Support on-line software up-grade of local equipment

Power Consumption <10 W

Specification of OPCOM3500E-EOS-8FE

Specification of Interface:

10/100Base-T

Connector: RJ45

Standard: IEEE802.3 and IEEE 802.3u

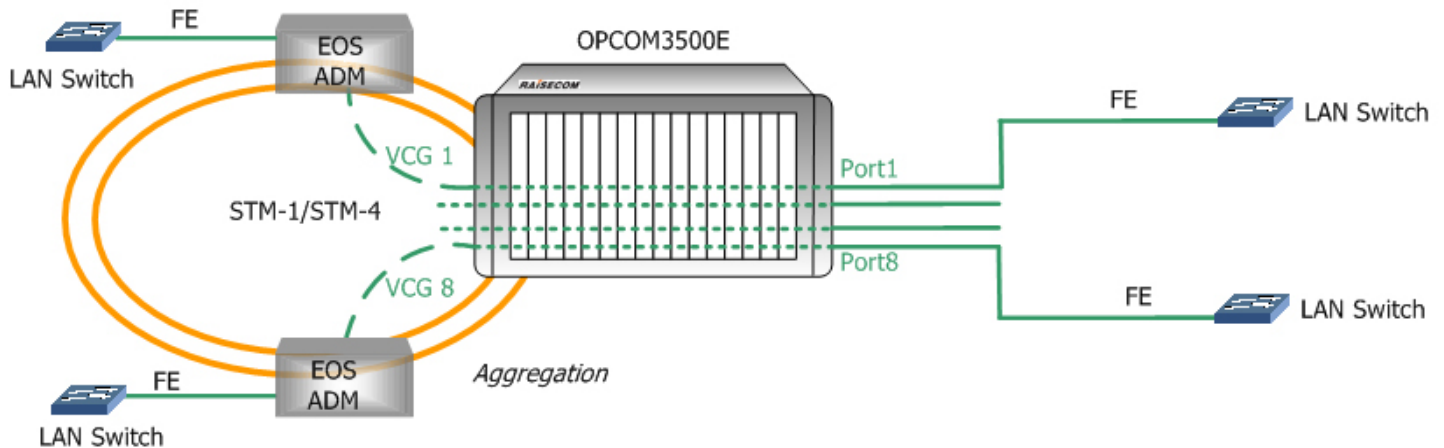
Speed: 10/100Mbps

Duplex Mode: Half Duplex / Full Duplex Auto-Negotiation

MTU: 9600 bytes

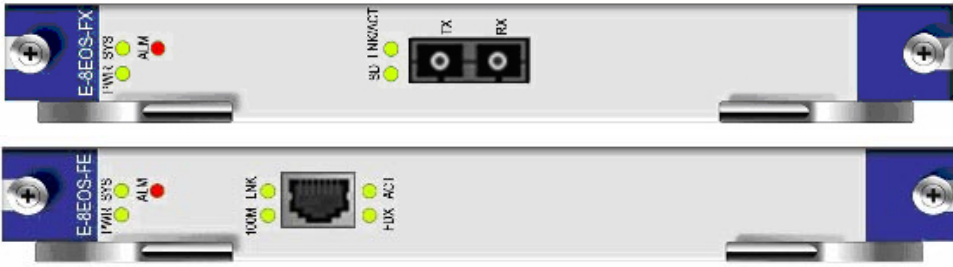
Flow control: IEEE802.3x in FDX and Backpress in HDX

Application of OPCOM3500E-EOS-8FE



Feature of OPCOM3500E-8EOS-FX, OPCOM3500E-8EOS-FE

Tributary Units



OPCOM3500E-8EOS-FE and OPCOM3500E-8EOS-FX are EOS tributary unit of OPCOM3500E system. It receives customer Ethernet electrical interface service, which is accessed by 100M Media Converter or receives customer 100M optical interface service directly. Ethernet signal is encapsulated by GFP/LAPS protocol and mapped into SDH network with N*VC12 step.

Remote manage Raisecom Media Converters RC51x, RC6xx series

Aggregate 1~8 VCG to single Fast-Ethernet aggregation trunk

The Ethernet aggregation trunk port is on front panel or connect to GE aggregation board through backboard

Optional fiber optical Ethernet interface or Electrical Ethernet interface

Provide GFP and LAPS encapsulation, and it supports VCAT, LCAS function

Maximum 8K MAC address, and 4096 VLAN ID

Power Consumption <10 W

IEEE802.1q VLAN and Port VLAN, Q-in-Q double tag

4 output priority Queues

MTU up to 1632 bytes

On-line software up-grade of local equipment

Specification of OPCOM3500E-8EOS-FX OPCOM3500E-8EOS-FE

Specification of Optical Interface:

Optical Connector: SC

Standard: IEEE 802.3u 100Base-Fx

Speed: 100Mbps

Duplex Mode: full-duplex

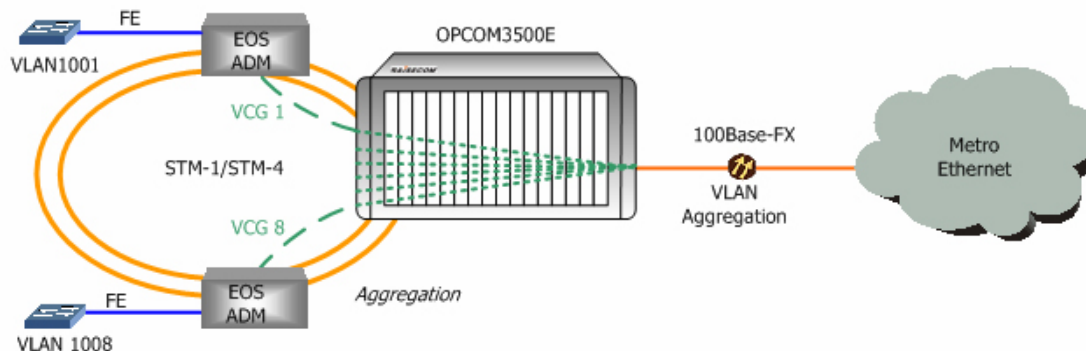
Flow control: IEEE 802.3x

Notes:

OPCOM3500E-8EOS-FX can support following remote equipment:

- RC601-FE-REV-C
- RC601-FE-REV-ERC
- 501-FE-REV-C
- RC511-FE-REV-A
- RC511-FE-C-REV-A
- RC511-4FE

Application of OPCOM3500E-8EOS-FX



Feature of OPCOM3500E-EOP-FXE1x8

Tributary Units



There are build-in 8 independent converters from Ethernet to E1 in OPCOM3500E-EOP-FXE1x8. OPCOM3500E-EOP-FXE1x8 has 8 100M Ethernet optical interfaces with SFP design, they can be connected remote Media Converters. Through EoPDH conversion, 8 links of Ethernet FX signal is encapsulated in E1 signal, and mapped into Telcom Bus to connect to back board. Cross-connection function of aggregation unit enables these signal to map into SDH signal.

8 100FX interfaces (SFP/LC) at front panel, independent 8 links E1 in board.

Provide completed alarm, performance monitor, it is convenient for maintenance.

E1 interface supports framed and unframed mode, it can be configured through software.

Local and remote loop-back of E1 link

Support selection of clock mode, local clock or line clock

Support optional Bit Error Tester function of E1 link

Statistic transmitting, receiving, packet flow and error packets of every E1 interface

Single tributary unit +5V powering, power consumption < 7.5 W, hot-swapped

Specification of OPCOM3500E-EOP-FXE1x8

100FX Interface Specification:

Standard: IEEE 802.3u 100Base-FX

Code: 4B/5B block code, NRZI line code

Fixed 100Mbps, full-duplex

Transmission distance, wavelength and Tx power is optional

Specification of inner board E1 channel:

Rate: 2048Kb/s±50ppm Rate

Frame Structure: Complies with ITU-T G.704

Notes: OPCOM3500E-EOP-FXE1x8 can support following remote equipment:

RC601-FE-REV-C

RC601-FE-REV-E

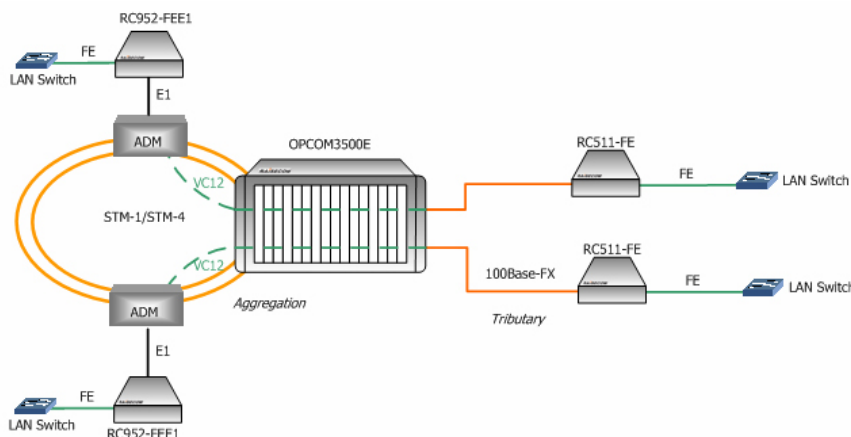
RC511-FE-REV-A

RC511-FE-C-REV-A

RC511-4FE

RC952-FXE1-REV-A

Application of OPCOM3500E-EOP-FXE1x8



Feature of OPCOM3500E-EOP-FE8E1

Tributary Units



- OPCOM3500E-EOP-FEE1 is a tributary unit board in OPCOM3500E Multi-service Access Platform, and Ethernet over 1~8 E1 Inverse Multiplexer inside.
- The transmission bandwidth of Ethernet is maximum 16Mbps
- 10/100Mbps Auto-Negotiation Fast-Ethernet port
- 8 E1 are mapped into VC12 channels to Aggregation Unit
- Privately HDLC encapsulation with EoPDH Technology inside, it should be working in pair with Raiescom EoPDH inverse multiplexer in the remote site.
- Local and remote loop-back of E1 link
- Build-in Bit Error Tester of E1 link test
- Statistic transmitting, receiving, packet flow and error packets of every E1 interface
- On-line software up-grade of local equipment

Specification of OPCOM3500E-EOP-FE8E1

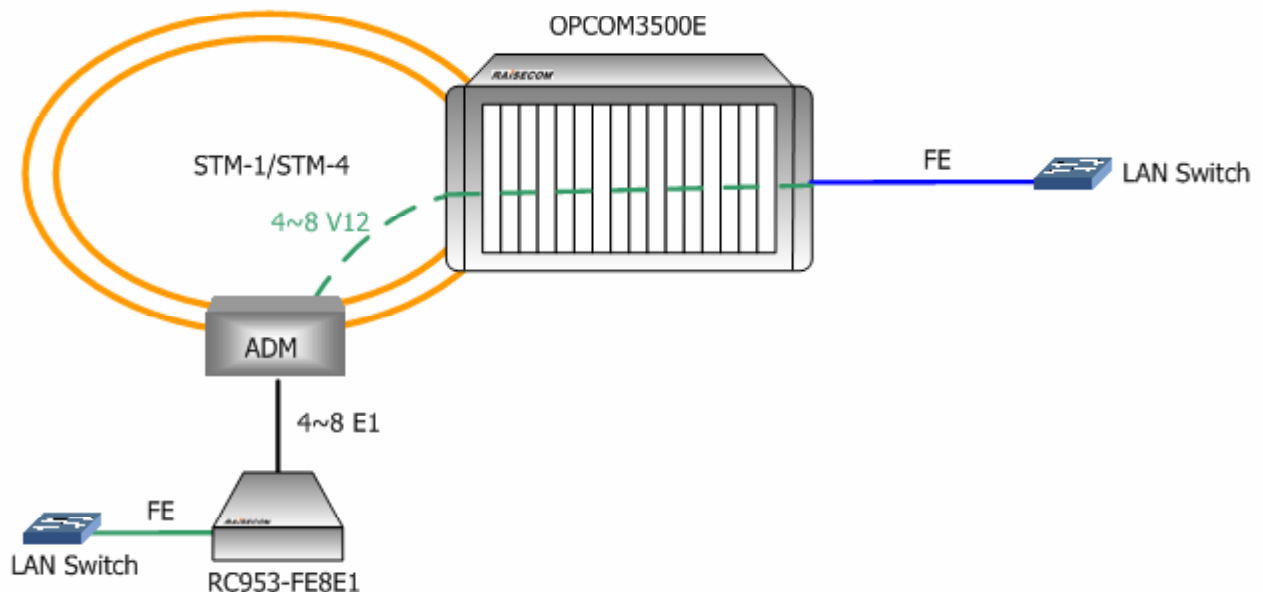
100FX Interface Specification:

Standard: IEEE 802.3 / 802.3u 10/100Base-T Speed: 10/100Mbps auto-negotiation or Manually
Duplex: Full duplex / Half duplex auto-negotiation or manually

Specification of inner board E1 channel:

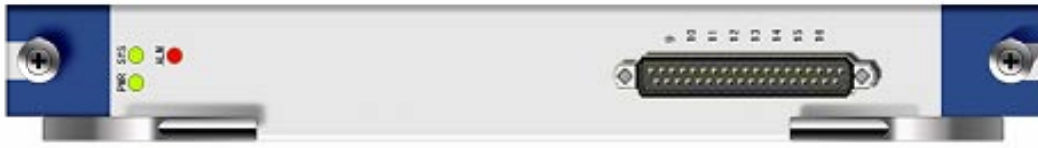
Rate: 2048Kb/s±50ppm Rate Frame Structure: Complies with ITU-T G.704

Application of OPCOM3500E-EOP-FE8E1



Feature of OPCOM3500E-EOPS-8E1

Tributary Units



OPCOM3500E-EOPS-8E1 is a tributary unit board in OPCOM3500E Multi-service Access Platform, and bridging EoPDH and EoS. The E1 ports could connect Ethernet over PDH interface converter, inverse multiplexer for the remote branch connection, and all the Ethernet data will be forwarded by Ethernet over SDH to STM-1 or STM-4.

8 E1 electrical port on front panel are used for connect to RC95x series interface converter or inverse multiplexer only

Convert E1 signals from front panel interface to Fast-Ethernet single by EOP technology, and then convert the Fast-Ethernet signal to N*VC12 by EOS technology

GFP, LAPS available

LCAS, N-LCAS function

Specification of OPCOM3500E-EOPS-8E1

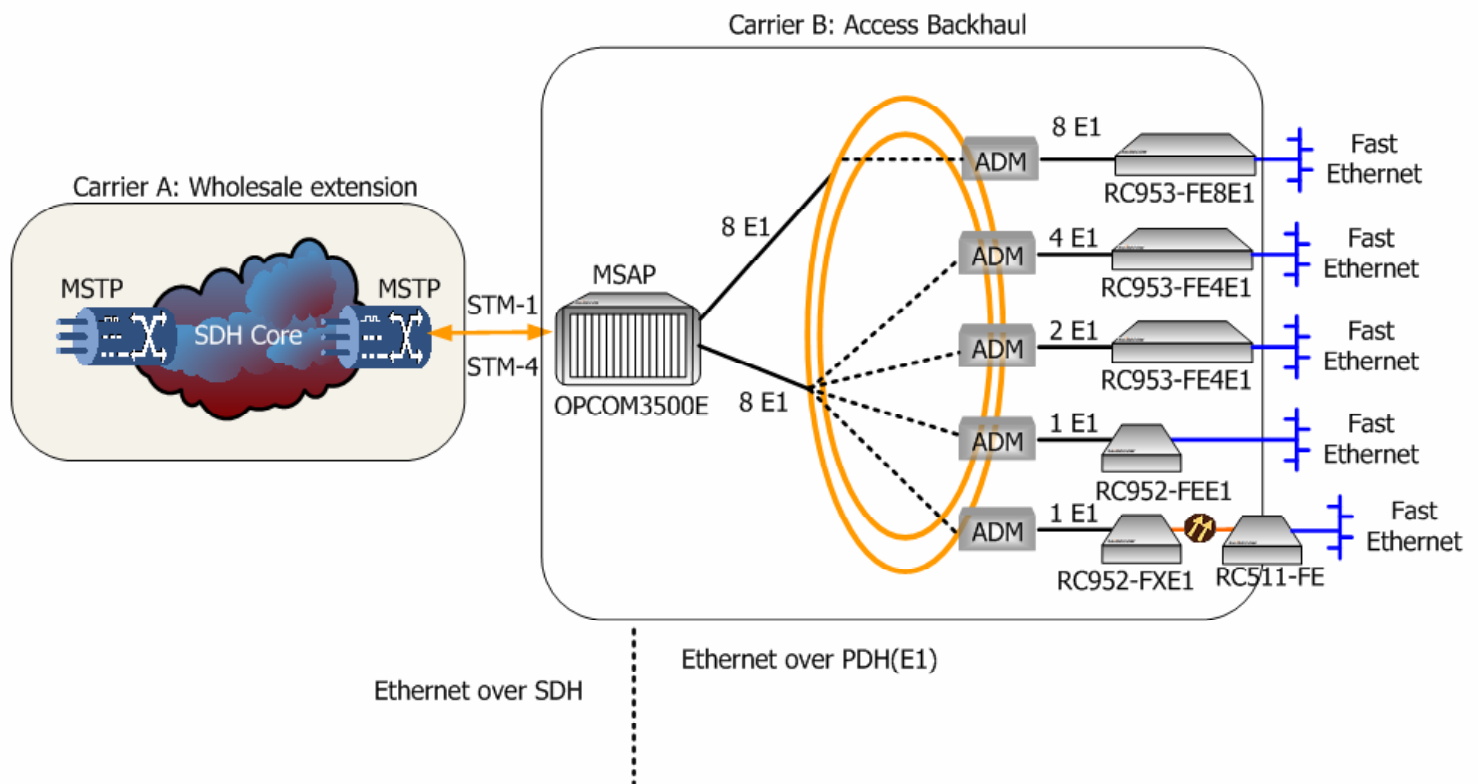
E1 electrical ports

Impedance: 75 ohm unbalanced or 120 ohm balanced

Speed: 2048Kb/s±50ppm Rate

Frame Structure: Complies with ITU-T G.704 and CRC4 available

Application of OPCOM3500E-EOPS-8E1



Ordering Information

OPCOM3500E SDH MSAP	
OPCOM3500E-12	OPCOM3500E chassis with back board
SUB-POWER-AC	220V/AC power supply module in OPCOM3500E-12 or RC006-12 chassis, AC input connector is located on front panel of module
SUB-POWER-DC-B	-48V/DC power supply module in OPCOM3500E-12 or RC006-12 chassis, DC input connector is located on rear panel of chassis
RC006-FANS1	The external fans upon OPCOM3500E-12 or RC006-12 chassis, 19 inch width, 1 unit high
OPCOM3500E-NMS	Network management module
OPCOM3500E-STM4-M-X	SDH STM-4 aggregation unit, one STM-4 optical interface
OPCOM3500E-STM1-M-X	SDH STM-1 aggregation unit, two STM-1 optical interfaces
OPCOM3500E-STM1-S-X	SDH STM-1 tributary unit, two STM-1 optical interfaces for 1+1 protection
OPCOM3500E-16E1	E1 tributary unit, it provides 16 E1 (75Ω unbalanced DB37) interfaces
OPCOM3500E-16E1-BL	E1 tributary unit, it provides 16 E1 (120Ω balanced DB37) interfaces
OPCOM3500E-30x8	PDH tributary unit with 8 SFP slots (not include SFP module), it supports 8 links optical PDH, it can access V.35 Fiber Modem and PCM equipment, SFP module should be ordered according to application
OPCOM3500E-120x4-X	PDH optic tributary unit, four optical SC interfaces, each interface has 4 E1 capability
OPCOM3500E-240x2-X	PDH optic tributary unit, two optical interfaces, each interface has 8 E1 capability
OPCOM3500E-120EOSx4-X	Multi-Service PDH optic tributary unit, four optical interfaces, each interface has 4 E1 and wire-speed 100M Ethernet capability, Ethernet data will be mapped to VC12 by EOS function
OPCOM3500E-120FEx4-GE-X	Multi-Service PDH optic tributary unit, four optical interfaces, each interface has 4 E1 and wire-speed 100M Ethernet capability, Ethernet data will be aggregated into GE on front panel or connect to GE aggregation unit through backboard
OPCOM3500E-P240EOS-X	PDH tributary unit, two optical interfaces with 1+1 protection function, it supports 8 links E1 and one link Fast Ethernet, Fast Ethernet supports EOS function, it can access RCMS2811 series PDH Mux
OPCOM3500E-P240FE-X	PDH tributary unit, two optical interfaces with 1+1 protection function, it supports 8 links E1 and one link Fast Ethernet, Fast Ethernet port is located on front panel for connect to Ethernet Switch or could be aggregated to GE aggregation unit
OPCOM3500E-EOSE-8FX-X	EoSDH tributary unit, the 8 fiber optical ports Ethernet signal are encapsulated by GFP/LAPS protocol and mapped into SDH network with N*VC12 step individually, and the VLAN tag is configurable.
OPCOM3500E-EOS-8FE	EoSDH tributary unit, the 8 electrical ports Ethernet signal are encapsulated by GFP/LAPS protocol and mapped into SDH network with N*VC12 step individually.
OPCOM3500E-8EOS-FX-X	EOS tributary unit, could aggregate 8 VCG to single Ethernet fiber optical port on front panel
OPCOM3500E-EOP-FXE1x8	EoPDH tributary unit, build-in 8 independent converters from Ethernet to E1 in OPCOM3500E-EOP-FXE1x8. OPCOM3500E-EOP-FXE1x8 has 8 100M Ethernet optical interfaces with SFP design, they can be connected remote Media Converters. Through EoPDH conversion, 8 links of Ethernet FX signal is encapsulated in E1 signal, and mapped into Telcom Bus to connect to back board. Cross-connection function of aggregation unit enables these signal to map into SDH signal.
OPCOM3500E-EOP-FE8E1	EoPDH tributary unit, Ethernet over 1~8 E1 Inverse Multiplexer inside. The transmission bandwidth of Ethernet is maximum 16Mbps
OPCOM3500E-EOPS-8E1	EoPDH and EoSDH tributary unit, bridges EoPDH and EoSDH. The E1 ports could connect Ethernet over PDH interface converter, inverse multiplexer for the remote branch connection, and all the Ethernet data will be forwarded by Ethernet over SDH to STM-1 or STM-4.
Accessory CableS for OPCOM3500E-16E1, OPCOM3500E-16E1-BL, OPCOM3500E-EOPS-8E1	
CBL-E1-DB37F/16BNM	E1 interface cable, it is designed for OPCOM3500E-16E1 and it supports 8 E1 interfaces with 16 male BNC connectors, the length can be customized and default length is 2.5m
CBL-E1-DB37F/16BNCF	E1 interface cable, it is designed for OPCOM3500E-16E1 and it supports 8 E1 interfaces with 16 female BNC connectors, the length can be customized and default length is 2.5m
CBL-E1-DB37F/8RJ45	E1 interface cable, it is designed for OPCOM3500E-16E1-BL and it supports 8 E1 interfaces with 8 RJ45 connectors, the length can be customized and default length is 2.5m
SFP Optical Module for OPCOM3500E, it can be used for OPCOM3500E-EOP-FXE1x8, OPCOM3500E-EOS-8FX and OPCOM3500E-30x8	
USFP-03/X	SFP module, 155Mbps
Accessorial Parts of OPCOM3500E	
RC006-12 CABLE HOLDER	Cable Holder of OPCOM3500E-12 and RC006-12
Notes:	
Suffix X means S1, S2, S3, SS1(upper optical port is 1310nmTx, 1550Rx, lower optical port is 1550nmTx, 1310nmRx), SS2 (upper optical port is 1310nmTx, 1550Rx, lower optical port is 1550nmTx, 1310nmRx), please see Table 1 to find detailed information	

Specification of Optical Interface

Including OPCOM3500E boards 120*4, 240*2, 120EOS*4, 120FE*4-GE, P240EOS, P240FE, 8EOS-FX, have 7 types module.
OPCOM3500E-STM1-S and STM1-M have S1,S2,S3,SS1,SS2 5 types module. SS1 includes SS13 & SS15. SS2 includes SS23 & SS25.

Part Number	Connector Type	Wavelength(nm)	Power(dBm)	Receiver Sensitivity(dBm)	Typical Range(km)	Attenuation(dB/km)
-S1	DSC	1310	-15~-8	<-34	0~25	0.5
-S2	DSC	1310	-5~0	<-34	10~60	0.5
-S3	DSC	1550	-5~0(DFB)	<-36	15~120	0.25
-SS13	SC/PC	1310	-12~-3	<-30	0~25	0.5
-SS15	SC/PC	1550	-12~-3	<-30	0~25	0.5
-SS23	SC/PC	1310	-5~0	<-32	10~50	0.5
-SS25	SC/PC	1550	-5~0	<-32	10~50	0.5