



## FBSDH155 Series STM-1 SDH

Standalone: 8/16/21/63E1, one Ethernet, Chassis: up to 6 optical ports, 232E1ports

### Overview

FBSDH155 is a STM-1 optical transmission system, whose technical performances are fully complied with ITU-T and SDH recommendations. This system is benefit of high integration, flexible construction and strong network adaptability, etc. FBSDH155 provides two 155.52Mb/s aggregate line interfaces of A and B, possessing the network elements timing function of ITU-T G.813 recommendation, and VC-3/VC-12 full-crossing connection and channel protection function.

FBSDH155 has the following usages: As an ADM, it can be inserted in STM-1 ring which provide 63 \* E1 tributaries; As a terminal, it can multiplex 63 \* E1 to a line port.

Network element management of FBSDH155 system is based on unified network management platform Fi-View-SDH. Fi-View-SDH is designed in accordance with related recommendations of ITU-T, so as to realize network resources, equipment configuration, alarm, performance and security management; it can support unified management of multiple optical-route non-interconnected sub-net, and support remote network monitoring by way of Internet.

### Features

- World leading design adopts independent Asics, with 1U single-board structure, compactness, high reliability, low power consumption;
- Provides 63 X 63 VC12 non-blocking cross-connect, supports tributaries Add/Drop of 1~ 63 E1, with capability of unidirectional and bi-directional multiplexing;
- Supports network of point to point, chain and ring, providing functions like tributaries 1+1 channel protection, etc.;
- Can realize independent service-assignment or mutual protection between two optical interfaces, and can build (connected with RSM-155C) various complex networks of STM-1 multi-ring, and multi-branch, etc.;
- Provides timing synchronous interface, implements switching of multiple timing sources like 2Mb/s, 2MHz, STM-1, etc., and output of 2Mb/s, 2MHz reference clock, supporting SSM function;
- Provides multiple service interfaces of E1, 10M Ethernet, RS232, etc.
- Provides Engineer Order Wire (EOW) interface (two-line model), with group call and dial functions;
- Provides D1-D3 ECC channel, network management adopting TCP/IP communication protocol;
- Provides F (Ethernet) and f (RS232) NMS interface, network management platform Fi-View-SDH can realize ITU-T recommendations five functions of resources, configuration, alarm, performance, and security, etc.;
- Network management platform Fi-View-SDH can realize software remote downloading, with software live-upgrading capability, being easy to maintain, can realize remote monitoring;
- Through replacing optical devices, supports ultra-long distance (< =80km), long distance (< =50km) and short distance (< =30km) optical transmission;
- Equipment adopts natural wind heat emission, with stable and reliable work.

#### **Below is only for Chassis**

- 6U height Chassis is made up of Management Card(DMU), Optical Card, E1 mapping Card and Ethernet mapping card

- 6-optical-port, STM-1 MADM or TM multiplexer;
- Support up to 231 E1-circuit add/drop;
- Provide Ethernet access of channelized E1 and DS3 shared ring;
- Support cross connection of all VC12 and VC3;

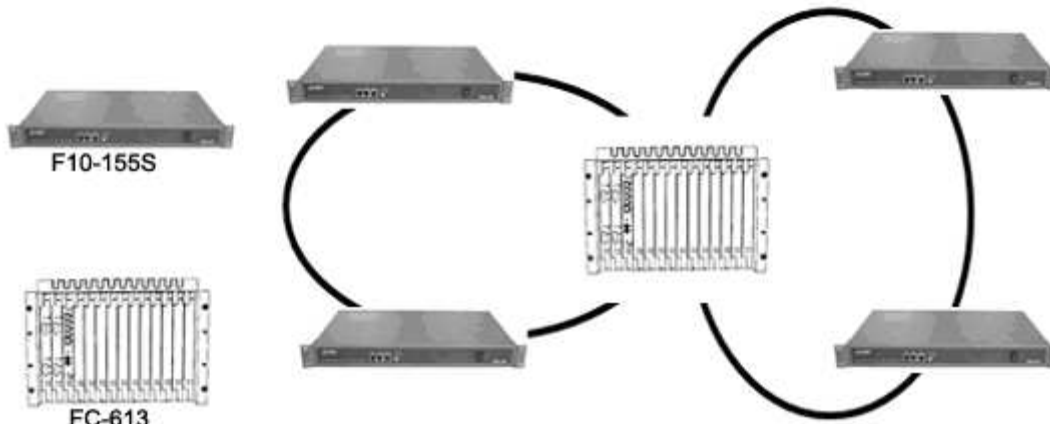
## Specifications

- Mechanical dimensions  
Dimensions: 481 (L) x 355 (W) x 44 (H)  
mm  
Weight: 4.0Kg
- Environmental requirements  
Power supply: -48 VDC+/-10%  
Fully equipment power consumption:  
12W+/-10%  
Operating temperature: 0oC~45oC  
Humidity: < = 90% (free from  
condensing)  
Atmospheric pressure: 70~106 Kappa  
Storage temperature: -20oC ~70oC
- STM-1 optical interface  
Bit Rate 155.520Mb/s+/-4.6ppm  
Standard ITU-T G.957/G.958  
wavelength 1310nm /1550nm  
Distance 50Km  
Sensitivity Better than -36dB  
Connector FC/SC
- E1 interface  
Bit Rate 2.048Mb/s+/-50ppm  
Encoding HDB3  
Standard ITU-T G.703  
Connector 2mm high density connector  
Impedance 75ohm/120ohm  
Jitter performance Comply ITU-T G. 823
- Ethernet interface  
Compatible with 10Base-T  
Line speed: 2Mbps  
Connector: RJ45
- External timing source interface (REF)  
Standard ITU-T G.813/783  
Input T1, T2, T3  
Output T4  
Working mode Support SSM, tracing,  
holding & free run  
Interface Micro-mini coaxial
- Engineer Order Wire (EOW) interface  
Bit Rate 64Kb/s  
Signal mode Dual tone multi-frequency  
dialing mode  
Ring frequency 450Hz  
Ring mode Loudspeaker  
NE address range 00~99
- Serial NMU (RS-232) interface  
Bit Rate 19200b/s  
Interface RJ-45
- Ethernet NMU (RJ-45) interface  
Bit Rate 10/100M  
Mode Full/half duplex auto-negotiation  
Interface RJ-45

## Application



*Chain Topology*



*Multi-Ring Topology*

**Order Information**

- F10-155-S042F0813A 8E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V
- F10-155-S042F0813D 8E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, DC-48V
- F10-155-S042F08A 8E1, none 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V
- F10-155-S042F1613A 16E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V
- F10-155-S042F1613D 16E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, DC-48V
- F10-155-S042F16A 16E1, none 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V
- F10-155-S042F2113A 21E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V
- F10-155-S042F2113D 21E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, DC-48V
- F10-155-S042F21A 21E1, none 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V
- F10-155-S042F6313A 63E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V
- F10-155-S042F6313D 63E1, one 10Mbps Ethernet, 40km, FC/PC, 1310nm, DC-48V
- F10-155-S042F63A 63E1, none 10Mbps Ethernet, 40km, FC/PC, 1310nm, AC220V

**Below only for Chassis**

- FC-613 SDH Chassis, 6U height
- FC-613-M Management Card (DMU)
- F10-155-S042FM-2 Optical Card, 2 optical ports (DO)
- F10-155M8 8E1 Mapping Card (2MM8)
- F10-155M21 21E1 Mapping Card (2MM21)
- F10-155M-8ET 8 Ethernet Mapping Card, 10Base-T (ETM2)