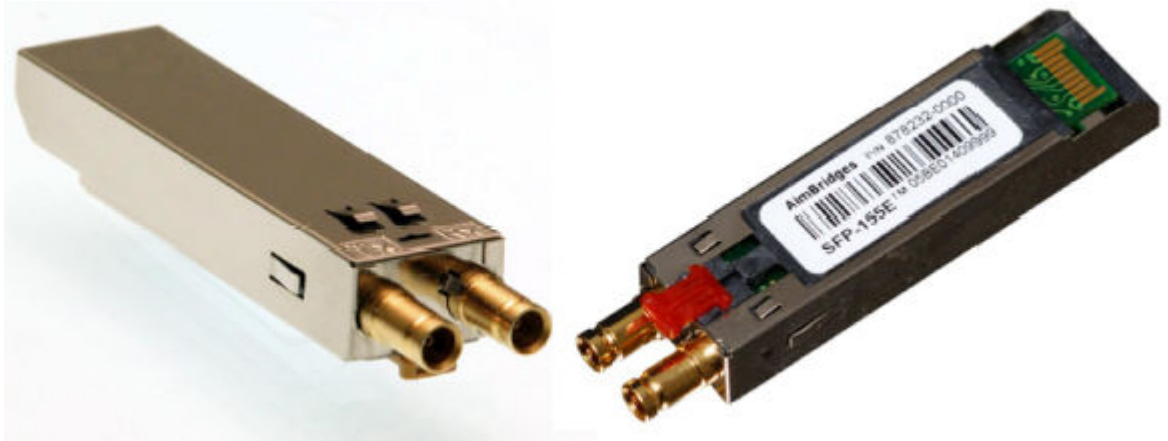


## SFP-155E



### Overview

The SFP-155E electrical transceiver offers full duplex STM-1 electrical (155 Mb/s) SDH transport over coaxial cables. The interface is fully compliant to ITU-T G.703 (ES1) signal specification. The module is compatible with the SFP MSA Multi Source Agreement standard.

Typical applications include SDH Multiplexer systems or ATM-switch and IP-router equipment supporting SDH physical interfaces. The SFP-155E™ module is fully interchangeable with STM-1 or OC-3 optical SFP modules and provides system developers an easy migration to STM-1 electrical interfaces. With the availability of the SFP-155E™ module, any system that already supports STM-1 optical SFP, can now also support STM-1 electrical. The development effort is minimized and a quick time-to-market solution is guaranteed. A single card design can support optical and electrical STM-1 interfaces, resulting in increased flexibility for the equipment user and reduced inventory and spare counts. Changing between optical and electrical STM-1 interfaces can be done in the field to optimize the system port-types to the application, while the system is in operation. The SFP-155E™ can be used with industry standard coaxial cables and connectors, provided there is 2 mm spacing between adjacent modules.

### Features

- Designed for Industry-Standard MSA-Compliant, Small Form Factor Pluggable (SFP) ports
- STM-1 Electrical interface compatible with G.703, ES1, CMI encoded signal
- Standard coaxial cable connectors, impedance 75 Ohm
- Low power, high performance CMI encoder/decoder integrated in module
- Serial Identification (EEPROM) according SFP MSA. Two options: STM-1e programmed or STM-1o programmed (allows immediate application in systems already employing STM-1o SFPs)
- Single +3.3 V power supply operation
- Jitter specification exceeds ITU-T G.825 and ETSI EN 300 462-4-1
- Fully interchangeable with STM-1 optical SFP modules

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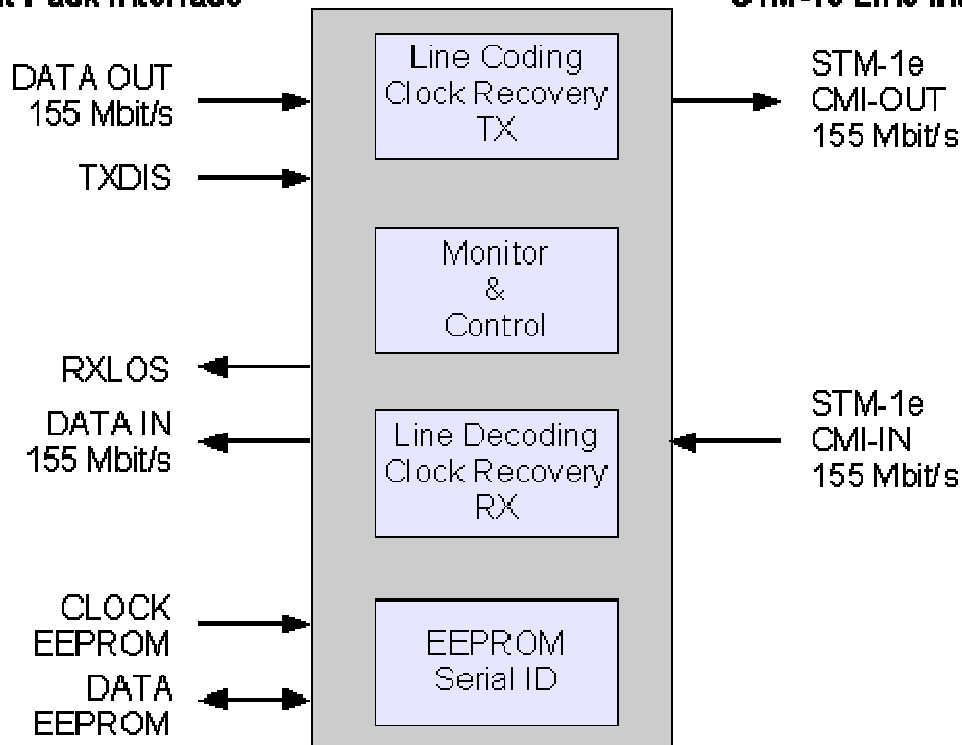


## Specifications

- STM-1 electrical interfaces at 155 Mb/s
- Small Form Factor Pluggable (SFP) according SFP MSA (SFF INF-8074i)
- Case and circuit ground are internally connected (optimized for "mesh-ground" designs)
- CMI input and output compliant with ITU-T G.703-15 (ES1) and G.825 (jitter)
- Hot pluggable
- Operating Case Temperature: -40 to +85 °C
- Single Power Supply: +3.3 V
- Low Power Consumption: 650 mW max.
- Connector Type: DIN 1.0/2.3 75 Ohm according to CECC 22230 or DIN 47279
- Typical cable length: 100 meter (attenuation at 78 MHz must be less than 13.7 dB)

### Circuit Pack Interface

### STM-1e Line Interface



*SFP-155E™ Functional Block Diagram*

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## Applications

- STM-1 electrical interfaces for SDH Add/Drop Multiplexers, Edge Systems, Multi-Service Equipment and Switching Systems
- Easy migration between optical and electrical STM-1 interfaces
- System Cost Reduction: fewer tributary card types required, high density STM-1 electrical and optical
- Operational Cost Reduction: fewer spare card types, easy migration and mixing of interface types

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