HFBR-0534 Evaluation Kit

for Diagnostic Monitoring Interface (DMI)
Small Form Pluggable (SFP) Transceivers

Product Brief

Description

For bench top evaluation, the HFBR-0534 is the recommended tool for Avago Technologies new Small-Form-Pluggable (SFP) transceivers with the Diagnostic Monitoring Interface (DMI). The HFBR-0534 includes the necessary two-wire serial interface to communicate with the Diagnostic Monitoring Interface and provides a standard 9 pin serial interface to connect to a PC.

A Window's based Graphical User Interface (GUI) provides the user an easy, straightforward way to communicate to SFP transceivers. The interface software is customized to allow quick verification of the feature sets defined in the SFF-8472 MSA. The HFBR-0534 requires only one input DC supply voltage (9 V to 12 V) to power all board components, including the micro-controller, and both the receiver and transmitter sections of the SFP transceiver. Just plug in the DMI SFP and your ready to go. Using Avago Technologies custom PC software (included as part HFBR-0534 evaluation board kit), the user can then read specific bytes from the SFP's memory pages (decoding into ASCII or HEX), access and log the internal measurements of the transceiver (temperature, supply voltage, transmitter bias current, transmitter output power, and received optical power) as well as program the device EEPROM.

Using a Bit-Error-Ratio Tester (BERT) and a Digital Communication Analyzer (DCA), the HFBR-0534 is also suitable for evaluating the optical characteristics, including the eye diagram, jitter, and rise/fall time and the electrical characteristics, including the receiver electrical eye diagram, jitter, and rise/fall time.

Features

- Included in the HFBR-0534 Evaluation Kit:
  - An evaluation board
  - Software
  - 9 pin serial cable
  - 110 V/220 V power supply
- On board potentiometer to adjust the voltage to the SFP for 2.64 to 3.65 V
- Test points for easy probing of Mod_Def signals, TX_Fault and LOS signals.
- On-board hardware switch for toggling of TX_Disable control signal
- Onboard LEDS to monitor the status of :
  - LOS LED - turns on when LOS hard-signal is asserted by SFP module
  - Mod_Def(0) LED – turns on when a module is present
  - TX_Fault LED – turns on when TX_Fault is asserted by module
  - TX_disable LED – on when TX is enabled, turns off when TX is disabled
- GUI software allows easy decoding of 0xA0 and 0xA2 page byte contents (per SFF-8472 MSA)
- GUI sub-window enables quick execution of byte write operations; delay between write operations is adjustable
- Supports two-wire serial interface @ 100 kHz
- Operating Temperature Range:
  0 °C to +50 °C

Applications

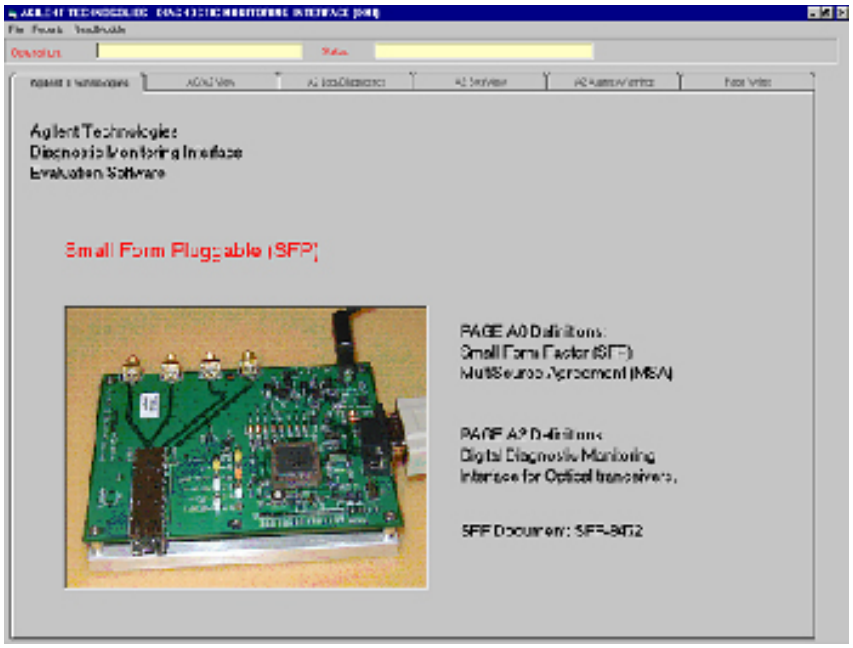
- Bench top evaluation of Avago's SFP with DMI modules
- Logging and Recording of Monitoring Values
- Printable Reports of SFP content and decoded information
- Reading and writing to on-board SFP memory
- Optical / Electrical testing of all Avago SFP modules

Additional Equipment Recommended

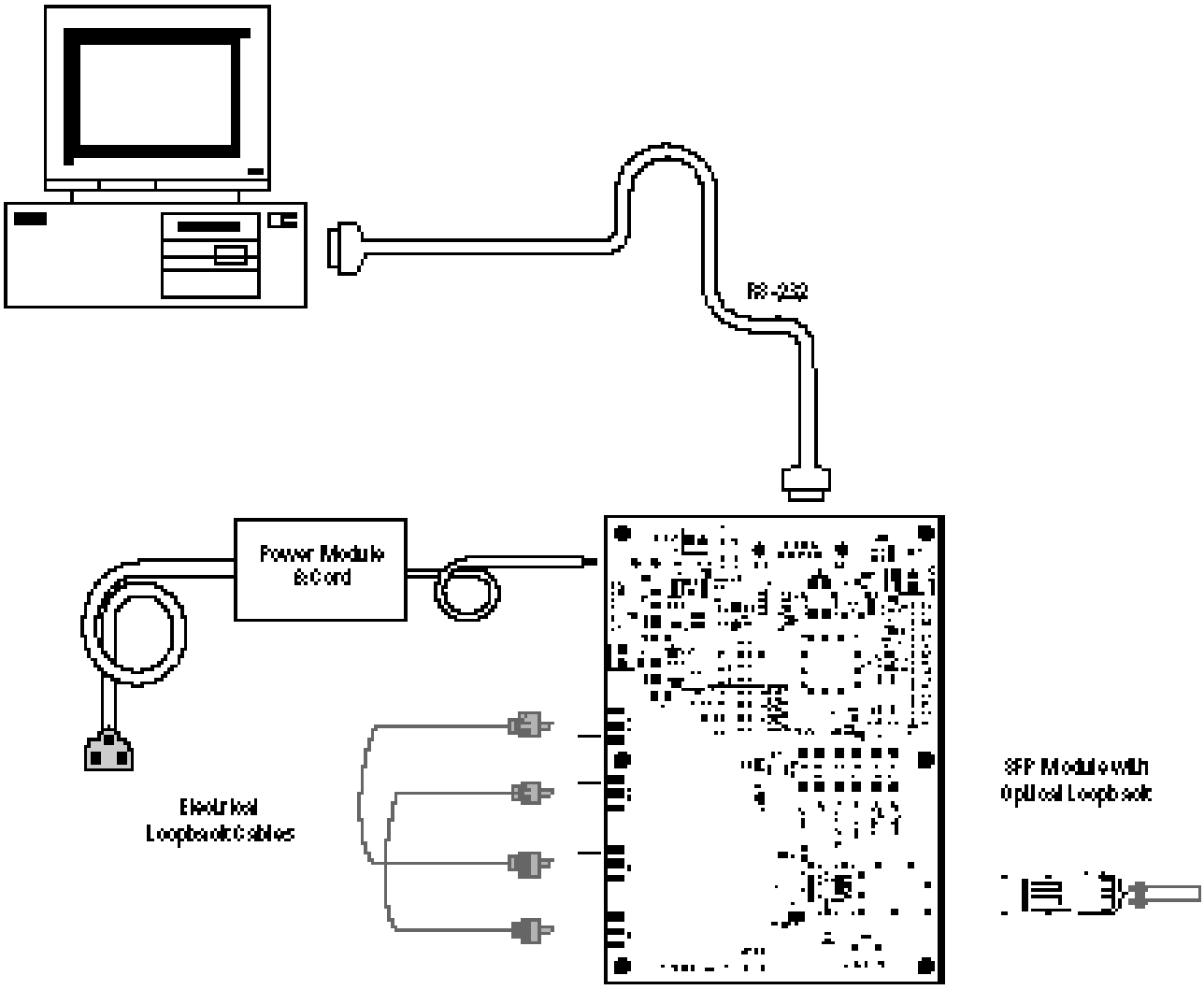
- Fiber optic cables
  - LC to SC (1 M and 50/125 µm or 62.5/125 µm, 9/125 µm)
  - LC to LC Loopback (<1M and 50/125 µm or 62.5/125 µm, 9/125 µm)
- 86100A Agilent Digital Communications Analyzer (DCA)
- Agilent Optical/Electrical DCA Plug-In Module 86101A Option H41 or H21 (2125 FC)
- 86130A Agilent BitAlyzer 3 Gb/s Bit Error Rate Tester(BERT) or any pattern generator, error detector/ analyzer
- Fiber Optic Attenuator (optional)
- PC
- Windows 95, 98, NT4, 2000 with minimum display size of 1024x768

Ordering Information

Please contact your local field sales engineer or one of Avago Technologies franchised distributors for ordering information. For technical information, please visit Avago's web page at www.avagotech.com or contact Avago.



Block Diagram



Note:
The electrical loop back and optical loop back cable (shown in this diagram) provides an emulated signal in the absence of a signal generator for basic verification of RX and TX Monitoring.

For product information and a complete list of distributors, please go to our web site: **www.avagotech.com**

5988-9573EN - February 23, 2007