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Preliminary

Technical Specification

for

0.1~4 Gbps SFP Checker

Contents

2020 VER A

1. General Description

The 0.1~4Gbps SFP Checker is an instrument which combines the Serial Pattern Generator, Bit Error Rate Analyzer, and Optical Power Meter within a compact size for both optical telecommunication and data communication. It provides common transmission rate **for OC-3, OC-12, 1GFC, 1GbE, 2GFC, OC-48 and 4GFC.** The optical power can be measured by plugging in an optional optical sensor module.

The 0.1~4Gbps SFP Checker can be a help you to read the internal memory EEPROM of the SFP and displays details contents registered into such as the Part Number, Vendor Name , wavelength, description, and range.

With a SFP that is with digital diagnostics, the SFP Checker can be used to monitor the all DDM information. With Meter Module, you can measure the real output power of SFP.

The friendly graphic user interface (GUI) provides clear monitoring for bit error rate, bit error counter, timer, SFP status, optical power from the sensor module and selection of data rate and PRBS.

2. Features

- Pocket size design.
- No warm up time required.
- Connects to a standard PC / laptop with Windows OS via USB connection
- 2 port for duplex LC SFP or AOC.
- SFP Plug-In Module with SC/PC connector for optical power measurement.
- Full function GUI
- Popular USB connection.

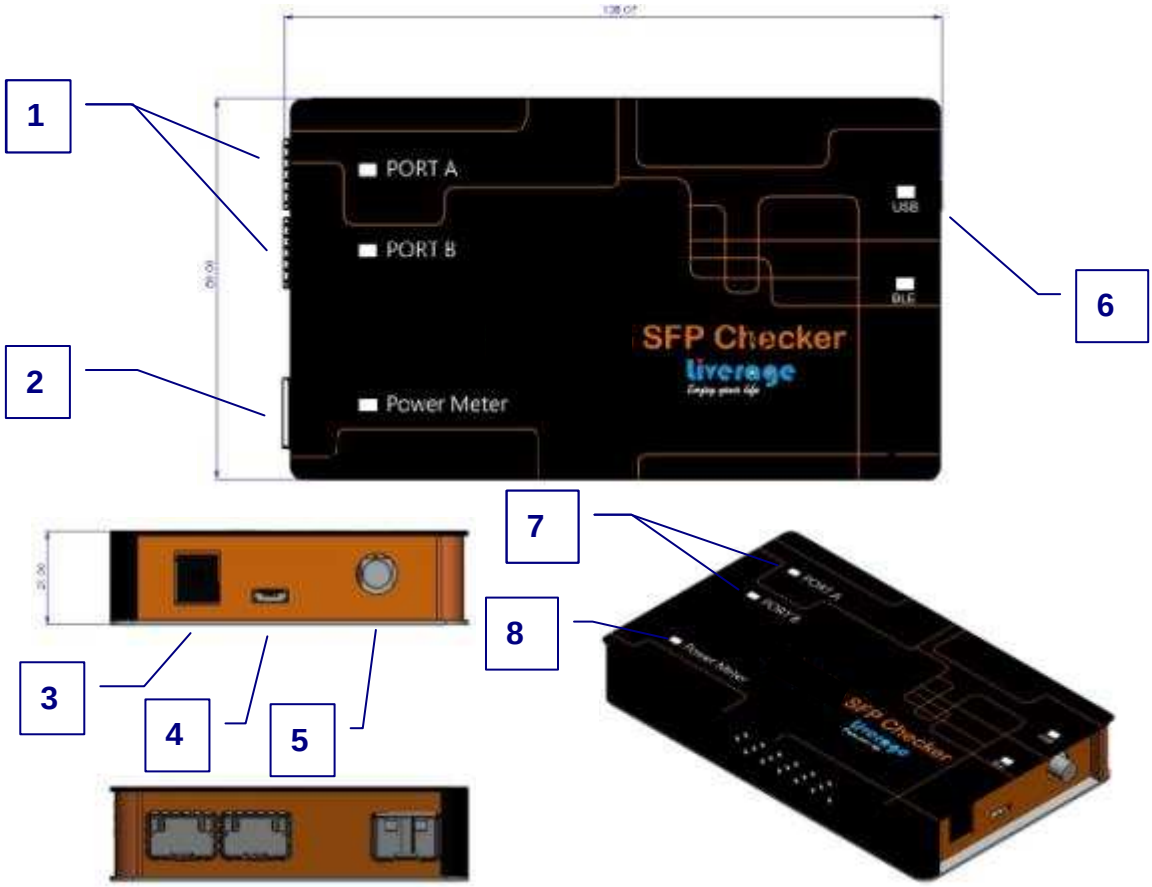
3. Applications

- SFP transceiver or AOC qualification to verify correct SFP
- To confirm proper transmit and receive signal levels
- Optical transmitting power measurement.
- Optical reference signal.
- Bit error rate test.
- To verify proper encoding during the manufacturing

4. Specification

Main Frame	
SFP ports	**Standard SFP 20pin with Cage**
Operating Temp.	**0℃ ~ 50℃**
Storage Temp.	**-10℃ ~ 70℃**
Transmission rate	**0.1Gbps~4Gbps**
Power Supply	**5V / 5A**
Weight	**0.5 Kg**
Optical Power Meter	
Input Wavelength	**850nm, 1270nm~1610nm**
Optical Power Range	**-50 dBm ~ +5 dBm**
Resolution	**0.01 dB**
Accuracy	**±0.3dB under calibrated condition**

5. Elements & Operating Instructions



■ **Elements:**

1. **SFP Pug-In Cage (port A & B) : SFP Plug-In port, for bit error rate test.**
2. **Power Meter Cage : Optical power measurement.**
3. **Power Input :** DC power input 5V / 5A.
4. **Micro USB :** USB port. Connect to host via a standard USB cable.
5. **Clock Output :** Clock output for Eye Diagram Scope's trigger.
6. **LED Status for USB :** LED Status for USB Connection to Computer.
7. **LED Status for SFP :** LED Status for Plug in SFP module, RX LOS or Bit error rate.
8. **LED Status for Meter :** LED Status for Plug in Power Meter module.

■ Operating Instructions:

1. Connect the SFP Checker to the PC by connecting the USB interface.
2. Plug in the SFP Transceiver Module.
3. Select “Data Rate” and “Pattern”.
4. Click “STAR” to start bit error rate test function.
5. Click “STOP” to stop the bit error rate test.
6. Click “RESET” button is to clear bit error rate test data.
7. Plug a Power Meter to measure optical power. Click “POWER METER” the optical power measurement.
8. Click “ID” to show A0h table information

6. Maintenance

Like any other type of electronic equipment, this SFP checker should be kept away from water, high humidity, dust, electricity, and environments of extreme temperatures. Do not drop this tool on any hard surface. Internal modification of any of the SFP checker components can cause a malfunction and will invalidate the manufacturer's warranty.

7. Warranty

The manufacturer warrants this product to be free of defects in workmanship and materials for a period of 1 year after purchase. This warranty is solely limited to the repair or replacement of the original parts. All other costs are the sole responsibility of the owner. This warranty does not cover any defects, damage, or deterioration due to misuse, alteration, or negligence.

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8. Ordering Information:

Part Number	Media	Description
S20071009999	**SFP Checker Main Frame**	**0.1Gbps ~4Gbps** **With 100~220VAC to 5VDC adaptor**

SFP Checker Optical Meter Module				
Part Number	**Connector**	**Wavelength**	**Range**	**Accuracy**
S20125328	SM/MM SC	850 / 1310 / 1490 / 1550 nm	-50 ~ +5 dBm	SM :+/- 0.3 dB MM :+/- 0.5 dB
S20125329	SM/MM SC	850 / CWDM 1270~1610 nm	-50 ~ +5 dBm	SM :+/- 0.3 dB MM :+/- 0.5 dB
S20125126	SM SC	CWDM 1270~1610 nm	-50 ~ +5 dBm	+/- 0.3 dB

9. Service Contacts

Please contact us:

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10. Record of Revisions

Record of Revisions		
Rev.	Date	Description of Change
VER A	2020-06-08	**Primary**
VER B	2020-07-17	**Modify Optical Meter Range** 1. -60 ~ +5 dBm ➔ -50 ~ +5 dBm **Modify Optical Meter Module P/N** 1. S20125238 ➔ S20125328 2. Add S20125329
VER C	2020-09-11	**Delete LED Status for Bluetooth**