

800G QSFP-DD + OSFP/OSFP-RHS Checker 800G/400G/200G QSFP112/QSFP112-DD/QSFP56/QSFP56-DD +800G/400G OSFP/OSFP-RHS

Features

- ◆ 800Gbps(8x53.125GBd PAM4) and 400Gbps(8x26.5625GBd PAM4) BERT
- ◆ 1xQSFP/QSFP-DD + 1xOSFP/OSFP-RHS(GUI can be used optionally ,not supported for simultaneous use)
- ◆ QSFP/QSFP DD or OSFP/OSFP-RHS Status Checker
- ◆ Friendly Graphic User Interface(GUI)
- ◆ Support QSFP/QSFP DD/OSFP/OSFP-RHS Module
- ◆ Max 17W Power Consumption
- ◆ Support CMIS V4.0 information monitor
- ◆ Operating ambient temperature range: 0 to 40°C
- ◆ 12V DC power supply
- ◆ RoHS compliant (lead free)



Applications

- ◆ PRBS Bit Error Rate testing
- ◆ SSPRQ code for optical eye graph testing
- ◆ Support the calculation error correction capability of FEC and estimate the FEC margin size
- ◆ 800G QSFP112 DD(8x53.125GBd PAM4)/400G QSFP56 DD(8x26.5625GBd PAM4)/
400G QSFP112(4x53.125GBd PAM4)/200G QSFP56(4x26.5625GBd PAM4)/
800G OSFP(8x53.125GBd PAM4)/400G OSFP(8x26.5625GBd PAM4)
800G OSFP-RHS(8x53.125GBd PAM4)/400G OSFP-RHS(8x26.5625GBd PAM4)
- ◆ GUI Operating environment: Win XP, Win 7, Win8 and Win10

Description

The QSFP-DD + OSFP/OSFP-RHS Checker is an instrument which can help you to test QSFP/QSFP DD/OSFP/OSFP-RHS module. It can help you to read the internal memory EEPROM of the modules and display details of the EEPROM (such as the Part Number, Vendor Name, description and range.), monitor all DDM information. You can change the EEPROM if you know the module password. There are two types of ports 1xQSFP/QSFP-DD + 1xOSFP/OSFP-RHS, GUI can be used optionally (not supported for simultaneous use).

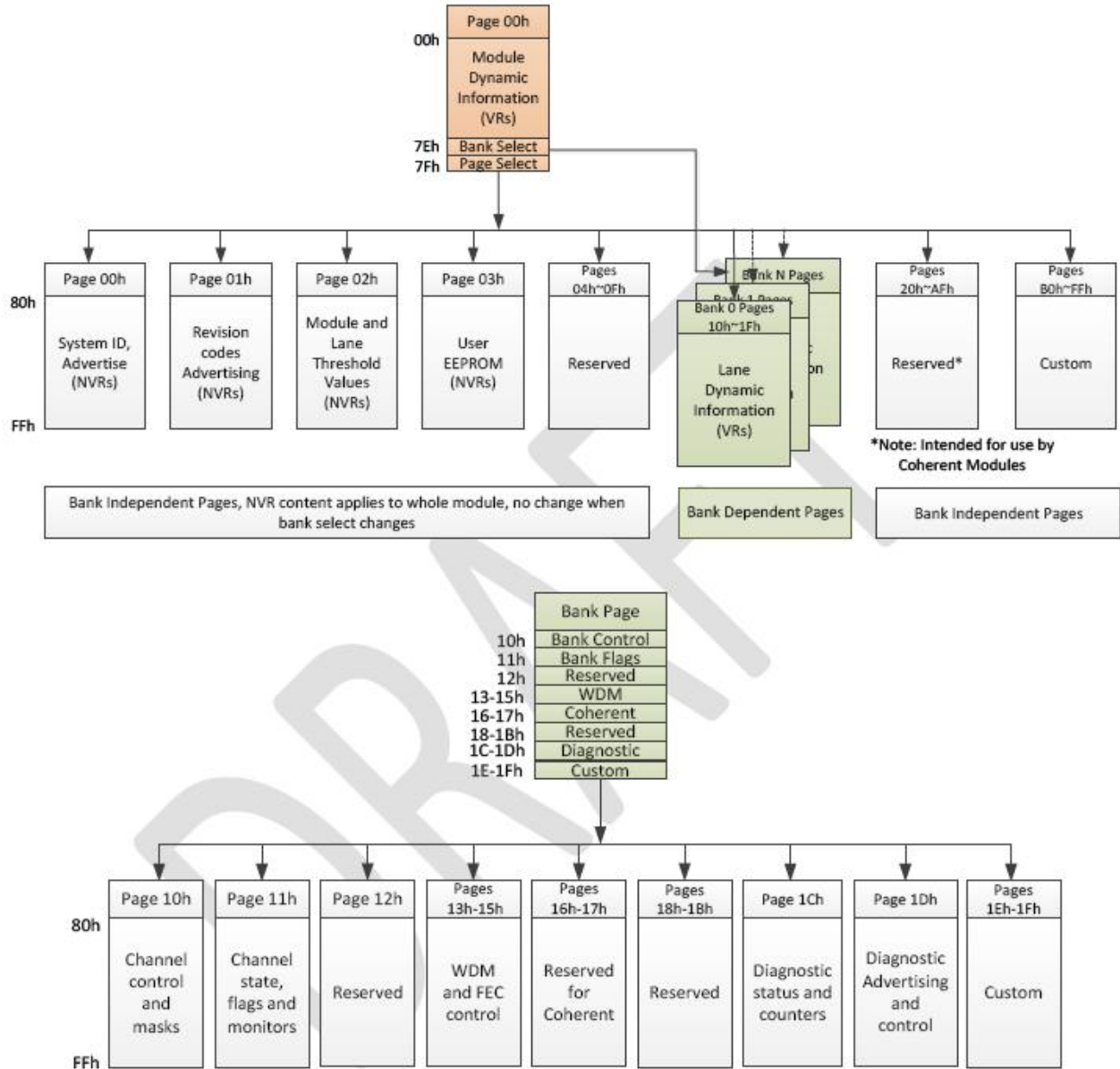
The QSFP DD Checker combines the Serial Pattern Generator, Bit Error Rate Analyzer, estimate the FEC margin size. It provides common transmission rate for 8x53.125GBd PAM4 and 8x26.5625GBd PAM4. The friendly graphic user interface (GUI) provides clear monitoring for bit error rate, bit error counter, time, FEC margin size, status, selection of data rate and PRBS pattern.

Working mode

QDD mode: Can support 800G QSFPDD and 400G QSFPDD/QSFP112 module BER testing\DDM information monitor\EEPROM Data reading\LOS and LOL Status monitor and so on.

OSFP mode: Can support 800G OSFP/OSFP-RHS and 400G OSFP/OSFP-RHS module BER testing\DDM information monitor\EEPROM Data reading\LOS and LOL Status monitor and so on.

Support CMIS V4.0 Register Mapping.



Memory Map

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V_{cc}	0	15	V
Storage Temperature	T_s	-20	85	°C
Operating ambient Temperature	T_a	-10	50	°C
Humidity (non-condensing)	Rh	5	85	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	V_{cc}	9	12	19	V
Operating ambient Temperature	T_a	0		40	°C
Data Rate Per Lane	fd		53.125		GBd
			26.5625		GBd
Humidity	Rh	5		85	%
Power Dissipation	P_m			32	W
Module Power Dissipation	P_{mo}			17	W

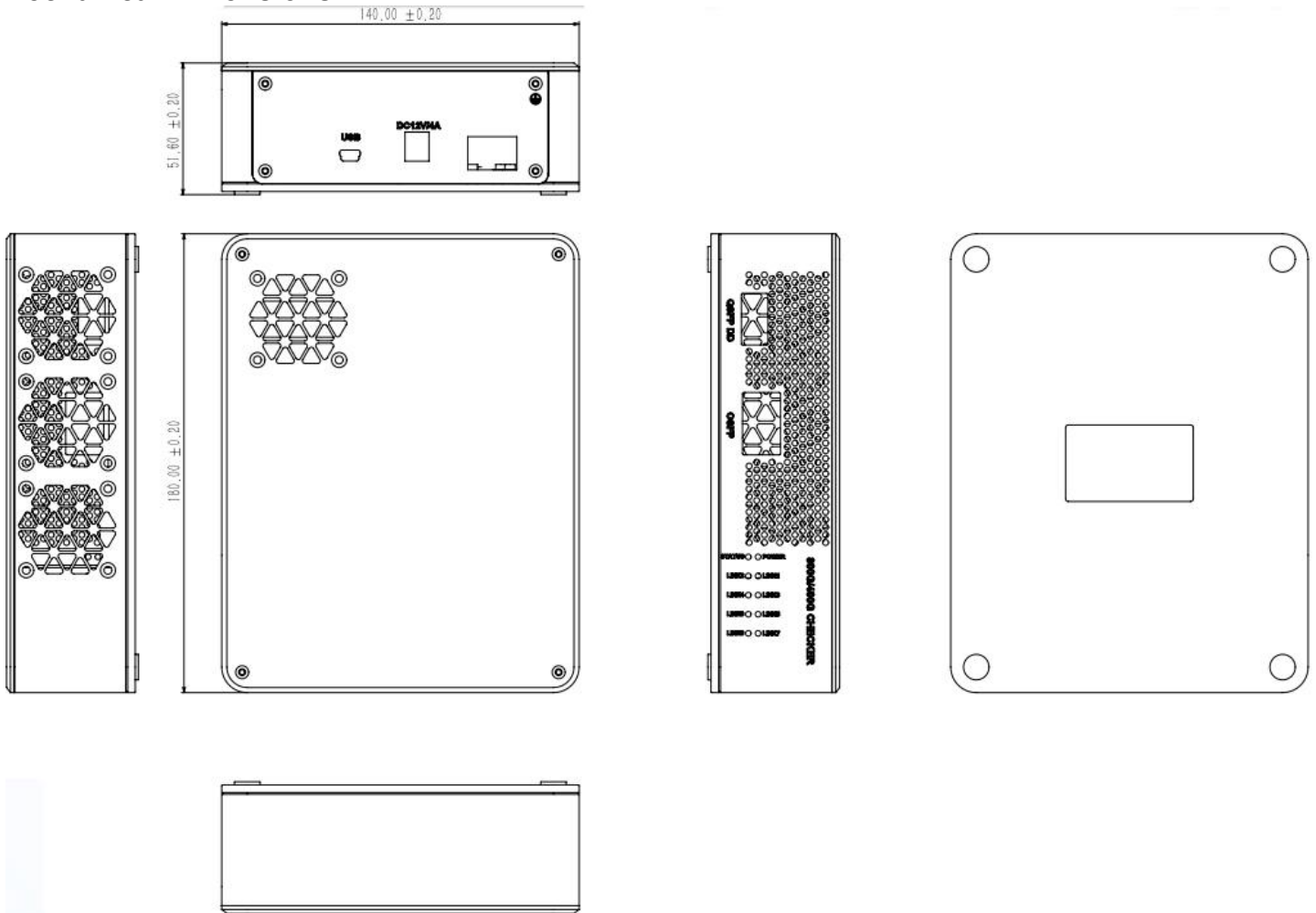
Electrical Specifications (OIF CEI-112G-VSR)

Parameter	Symbol	Min	Typical	Max	Unit
Differential input impedance	Z_{in}	90	100	110	ohm
Differential Output impedance	Z_{out}	90	100	110	ohm
Differential input voltage amplitude	ΔV_{in}			850	mVp-p
Differential output voltage amplitude	ΔV_{out}			850	mVp-p
Eye Height in the region from T_s -50 mUI to T_s + 50 mUI			10		mV

Main Frame

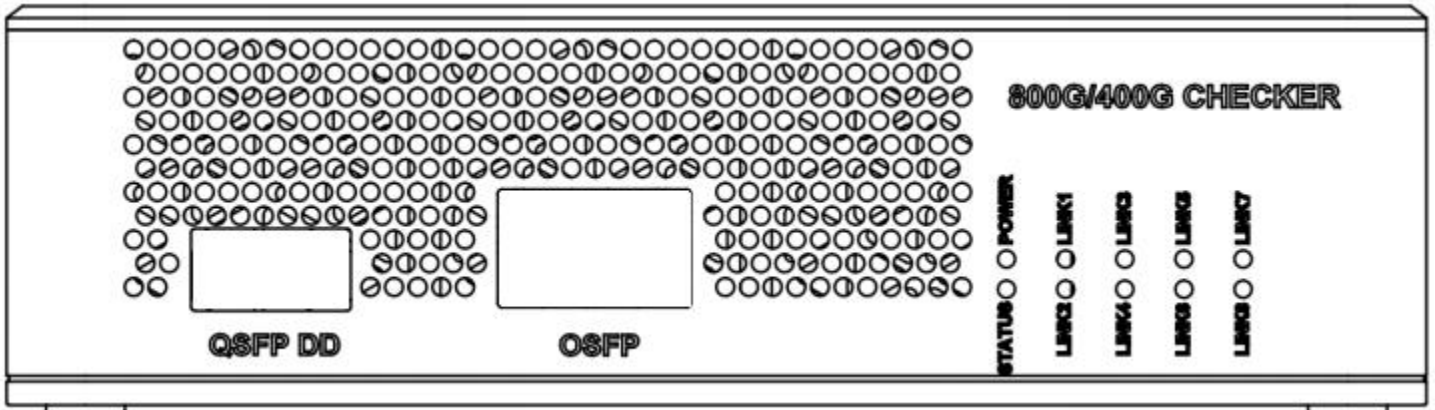
QSFP DD port	QSFP or QSFP DD
Or OSFP port	OSFP or OSFP-RHS
Transmission rate	53.125GBd PAM4 26.5625GBd PAM4
Pattern Generator	PAM4(PRBSQ7, PRBSQ9, PRBSQ10, PRBSQ11, PRBSQ13, PRBSQ15, PRBSQ20, PRBSQ23, PRBSQ31,SSPRQ)

Mechanical Dimensions

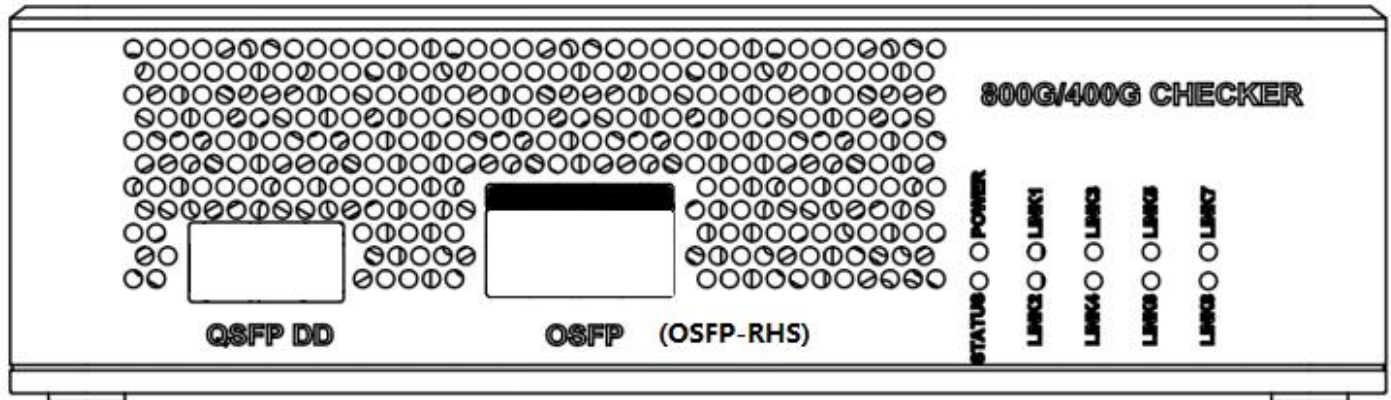


Mechanical Specifications

1. QSFP DD or OSFP PORTS and work status

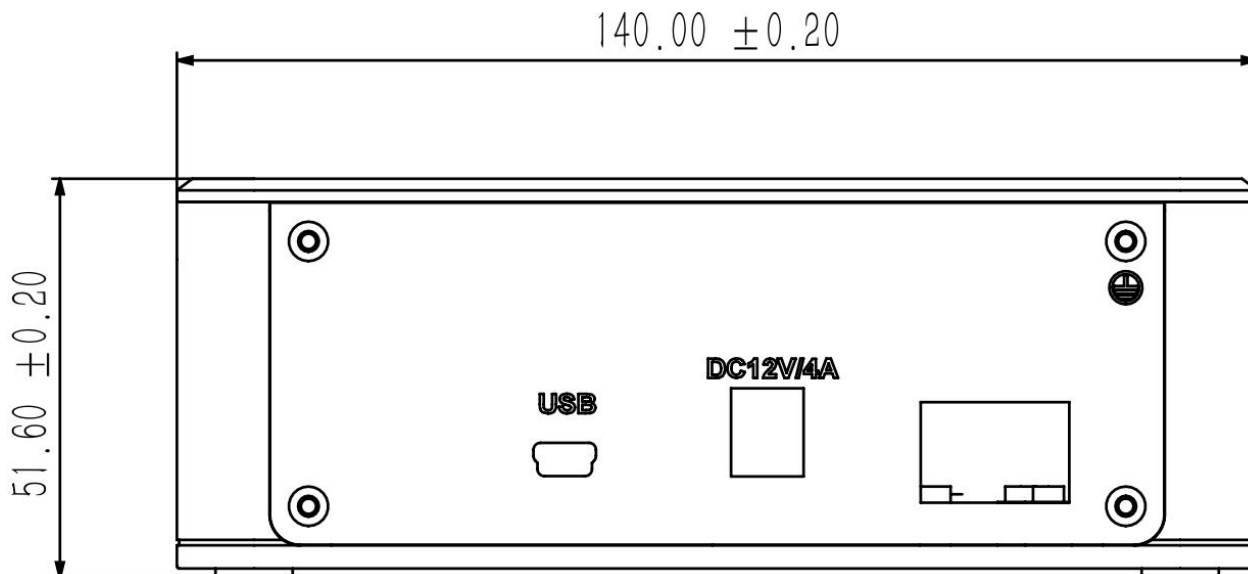


P/N: 800G QSFP-DD+OSFP CHECKER (OSFP Finned-top)



P/N: 800G QSFP-DD+OSFP-RHS CHECKER

2. MINI USB and DC Power



Regulatory Compliance

Gigalight 800G QSFP-DD + OSFP/OSFP-RHS Checkers meet the requirements of the following standards:

Feature	Standard
Environmental protection	Directive 2011/65/EU with amendment(EU)2015/863
CE EMC	EN55032: 2015 EN55035: 2017 EN61000-3-2:2014 EN61000-3-3:2013
FCC	FCC Part 15, Subpart B ANSI C63.4-2014

References

1. OSFP / QSFP DD MSA
2. IEEE 802.3ck / CEI-112G-VSR

CAUTION:

Use of controls or adjustment or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Ordering Information

Part Number	Product Description
800G QSFP-DD+OSFP CHECKER	800G/400G/200G PAM4 BERT, QSFPDD port + OSFP port; ERP Code 480701017
800G QSFP-DD+OSFP-RHS CHECKER	800G/400G/200G PAM4 BERT, QSFPDD port + OSFP-RHS port; ERP Code 480701016

Important Notice

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Revision History

Revision	Date	Description
V0	Jun-26-2024	Advance Release.