400G QSFP DD Checker

100G/200G/400G QSFP/QSFP DD

FCKL-400

Features

- 200Gbps(8x25.78125Gpbs NRZ) and 400Gbps(8x26.5625GBd PAM4) BERT
- QSFP/QSFP DD Status Checker
- Friendly Graphic User Interface(GUI)
- Support WIN10 64-bit
- Support QSFP/QSFP DD Module Max 14W Power Consumption
- Support QSFP DD CMIS V4.0 information monitor
- Operating case temperature range: 0 to 70°C
- 12V DC power supply
- RoHS compliant (lead free)

Applications

- Bit Error Rate Testing
- 100G QSFP28(4x25.78125Gbps NRZ)/200G QSFP56(4x26.5625GBd PAM4)/
  200G QSFP28 DD(8x25.78125Gbps NRZ)/400G QSFP56 DD(8x26.5625GBd PAM4)
- GUI Operating environment: Win XP, Win 7, Win8 and Win10

Description

The QSFP DD Checker is an instrument which can help you to test QSFP/QSFP DD 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. In addition it can measure the power of the module.

The QSFP DD Checker combines the Serial Pattern Generator, Bit Error Rate Analyzer. It provides common transmission rate for 8x25Gbps NRZ and 8x26.5625GBd PAM4.

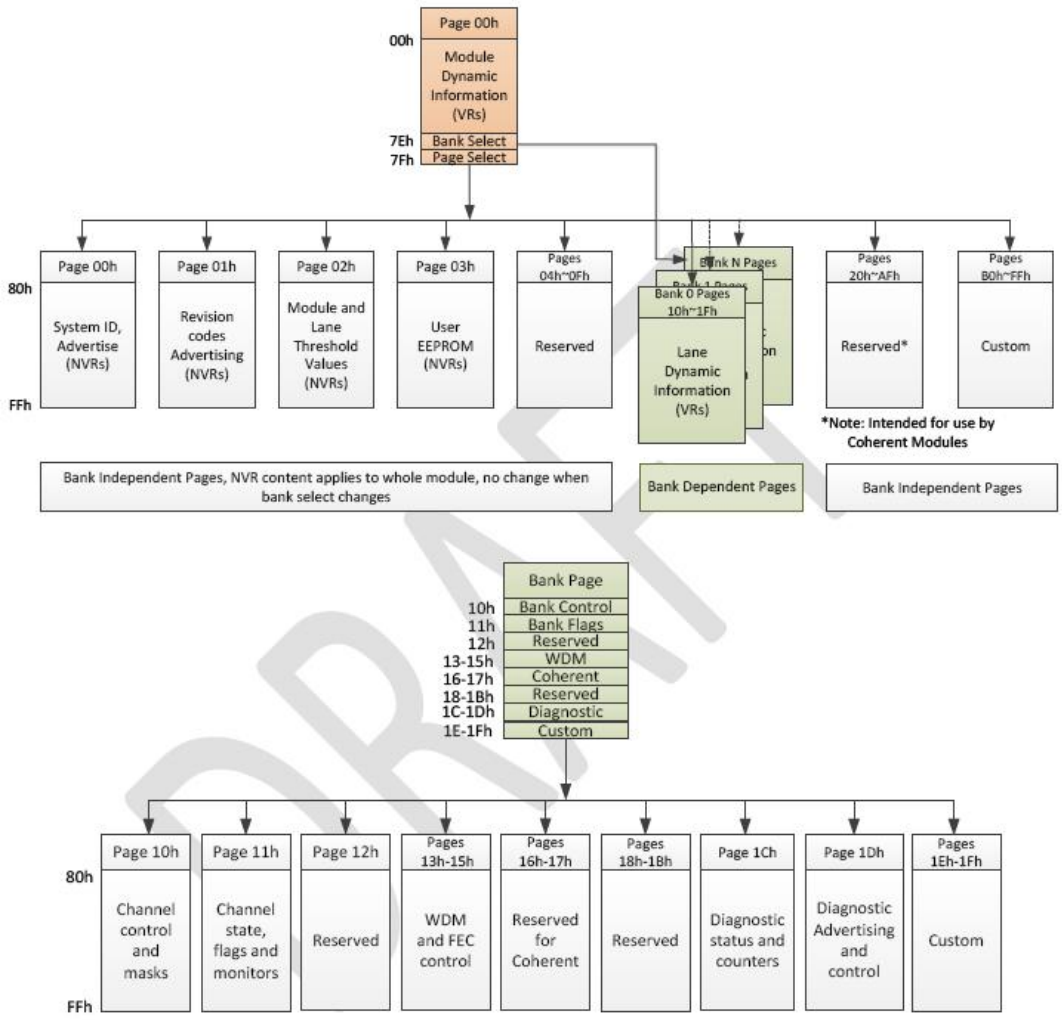
The friendly graphic user interface (GUI) provides clear monitoring for bit error rate, bit error counter, time, status, power of the module, selection of data rate and PRBS pattern.

Working mode

NRZ mode: Can support 100G QSFP28 and 200G QSFP28 DD module BER testing\DDM information monitor\EEPROM Data reading\LOS and LOL Status monitor and so on ;

PAM4 mode: Can support 100G QSFP28 and 200G QSFP28 DD module BER testing\DDM information monitor\EEPROM Data reading\LOS and LOL Status monitor and so on ;

Support QSFP DD CMIS V4.0 Register Mapping.



QSFP DD Memory Map

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V_{cc}	-0.5	16	V
Storage Temperature	T_s	-20	85	°C
Case Operating Temperature	T_c	0	70	°C
Humidity (non-condensing)	Rh	5	95	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	V_{cc}	9	12	19	V
Operating Case Temperature	T_c	0		70	°C
Data Rate Per Lane	fd		25.78125		Gbps
			26.5625		GBd
Humidity	Rh	5		85	%
Power Dissipation	P_m			25	W

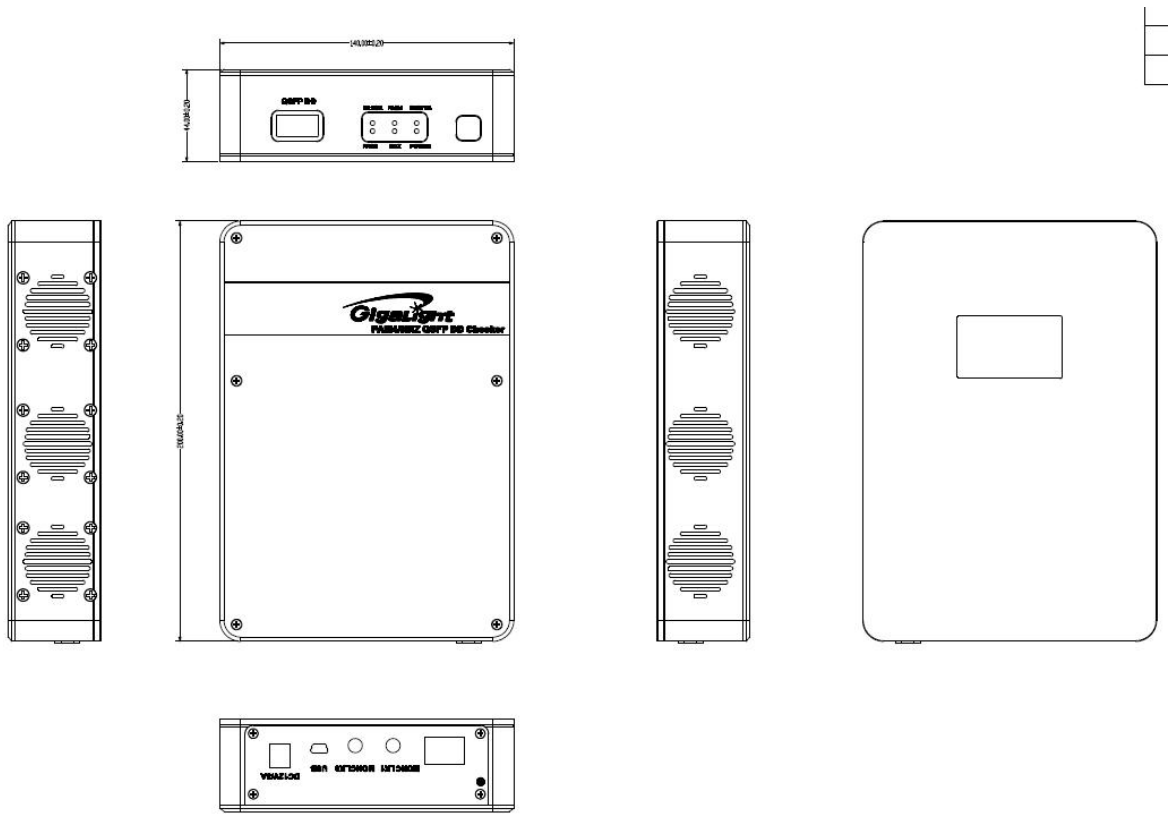
Electrical Specifications (OFI CEI-56G-VSR)

Parameter	Symbol	Min	Typical	Max	Unit
Differential input impedance	Zin	90	100	110	ohm
Differential Output impedance	Zout	90	100	110	ohm
Differential input voltage amplitude aAmplitude	ΔVin			900	mVp-p
Differential output voltage amplitude	ΔVout			900	mVp-p
Skew	Sw			300	ps
Near-end Eye Width at 10^-6 probability(EW6)		0.265			UI
Near-end Eye Height at 10^-6 probability(EH6)		70			mV
Far-end Eye Width at 10^-6		0.20			UI

probability(EW6)					
Far-end Eye Height at 10^-6 probability(EH6)		30			mV
Near-end Eye Linearity		0.85			-

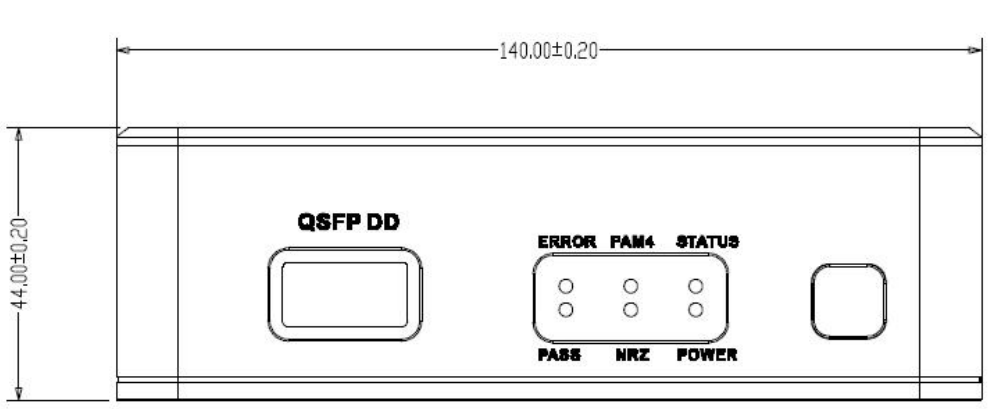
Main Frame	
QSFP DD ports	QSFP or QSFP DD
Transmission rate	25.78125Gbps NRZ 26.5625GBd PAM4
Pattern Generator	NRZ(PRBS7, PRBS9, PRBS21, PRBS23, PRBS31) PAM4(PRBSQ7, PRBSQ9, PRBSQ21, PRBSQ23, PRBSQ31)
Module Power measured	
supply current	0~4000mA
Accuracy	±15%

Mechanical Dimensions

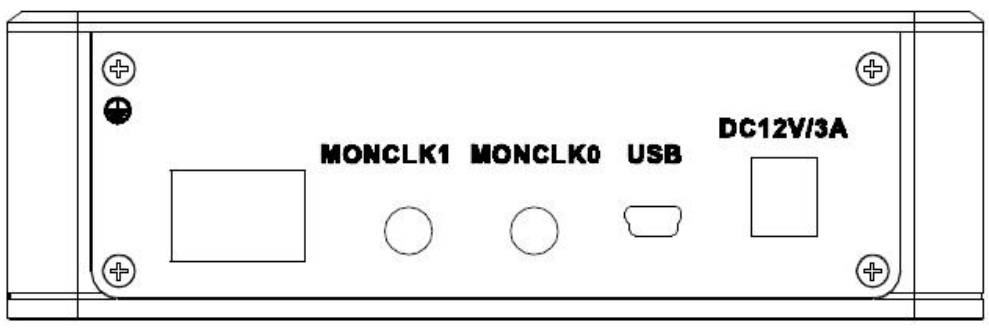


Mechanical Specifications

1. QSFP DD PORTS and work status



2. MINI USB and DC Power



Regulatory Compliance

Feature	Standard
Environmental protection	2011/65/EU
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. QSFP28 / QSFP DD MSA
2. Ethernet 100GBASE-SR4 IEEE802.3bm and 200GBASE-SR4 IEEE802.3cd

⚠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
400G QSFP DD CHECKER	100G/200G/400G NRZ and PAM4 BERT

Important Notice

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Revision History

Revision	Date	Description
V0	Sep-24-2025	Advance Release.