Discontinued

FUJITSU Component Connector
QSFP28 Active Optical Cable

QSFP28 Active Optical Cable that is able to transmit 100Gbps (25Gbps x 4ch)

RoHS Compliant

100Gbps high speed transmission
25Gbps x 4 channels optical transceiver conforms to QSFP28 MSA
It also conforms to transmission speed of InfiniBand™ EDR certified in April 2015, Plugfest compliant cable, and 100 Gigabit Ethernet (100GBASE-SR4)

Next-generation High-speed Optical Engine Structure *
New Optical engine structure with Flexible printed circuit (FPC) with polymer optical wave guide, and improved optical coupling with lens structure

Over drive technology*
New technology that makes it possible to drive 25Gbps signals with 14Gbps VCSELs realized reliable and low cost solution
* Developed by FUJITSU LABORATORIES LTD

Applications
HPCs, Servers, HCAs, Switches, Storage, etc.

Specifications

Item	Specifications
Data rate	25.78125Gbps x 4 lanes
BER	10^{-12} (PRBS-31)
Power supply	3.3 V
Operating temperature	0 to +70 deg. C (Case temperature)
Link reach	100m
Power consumption	2.5W
Wave length	840 to 860nm
Size	72.4 (L) x 19 (W) x 13.5 (H) mm

Schedule
Customer samples: May 2017
Mass production: July 2017

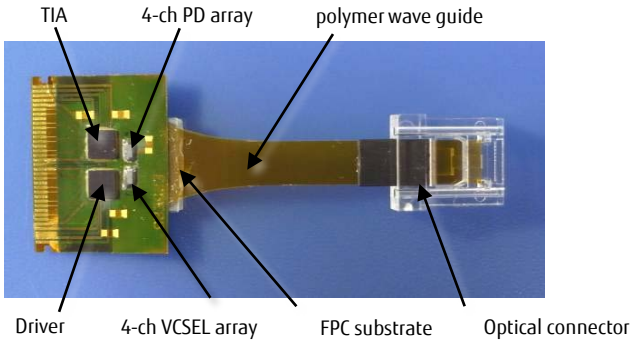
Part numbers

Item	Part number
For Infiniband EDR	FPD-204R008-xx
For 100G Ethernet SR4	FPD-205R008-xx

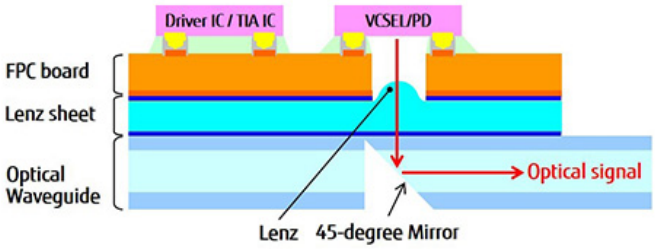
xx: cable length (m): 05, 10, 15, 20, 30, 50, A0 (100)

■ Reference – Optical Engine Structure

- Bare chips mounting onto the FPC by flip-chip bonding
- Lens sheet by imprinting technology
- Optical polymer wave guide
- Passive mounting for the lens film and the polymer wave guide



Optical engine (4ch Tx and Rx)

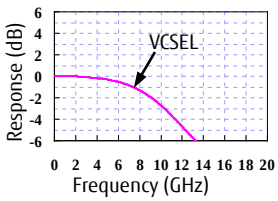


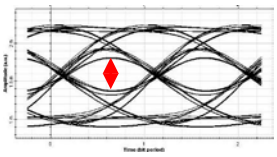
Cross section of the engine

■ Reference – Over Drive Technology

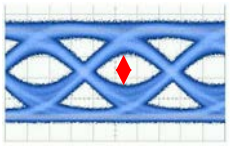
- Enables 25Gbps operation with 14Gbps VCSEL by 3-tap finite impulse response (FTR) pre-emphasis implemented VCSEL driver

Without pre-emphasis



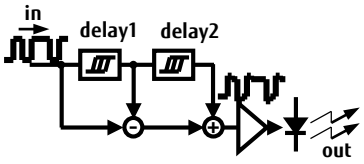


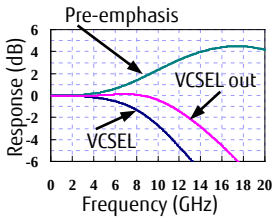
Simulated waveform (25 Gbps)

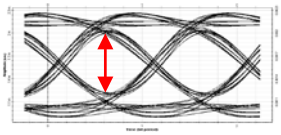


Measured waveform (25 Gbps)

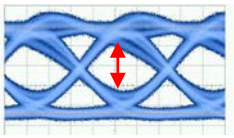
With pre-emphasis







Simulated waveform (25 Gbps)



Measured waveform (25 Gbps)

Cautions

- Always carefully read and understand the product manual and/or delivery specifications for proper operation and handling before actual use.
- Use only at the specified rated supply voltage.
- Never install the products in a wet, highly humid, dusty, oily or smoky environment.
- The products in this document are designed for general use. They are not for use in equipment that poses high fatal risks or danger and not for use requiring extremely high reliability such equipment in nuclear facilities, medical life support systems, etc.

Contact

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