

## 400GbE to 400GbE (QSFP-DD to QSFP-DD) Active Copper Cable P/N: GQD-AC401-DXXC

### Features

- ✓ Hot-plug QSFP-DD form factor with 16 pair cables
- ✓ Support up to 8x 50Gb/s PAM4 and 10~25Gbps NRZ
- ✓ Support up to 7m or longer with 26AWG cable
- ✓ 100Ohm differential impedance system
- ✓ 3.3V power supply & typical power consumption 2.5W
- ✓ Commercial case temperature range of 0°C to 70°C
- ✓ Latency less than 40ns with 7m length
- ✓ I2C management

### Applications

- ✓ Infiniband NDR/HDR/EDR
- ✓ Switch / router / HBA
- ✓ Enterprise network
- ✓ Data Center Network
- ✓ Data storage and communication industry

### STANDARDS COMPLIANCE

- ✓ IEEE P802.3cd
- ✓ QSFP-DD MSA HW Rev 6.01
- ✓ CMIS 4.0
- ✓ ROHS

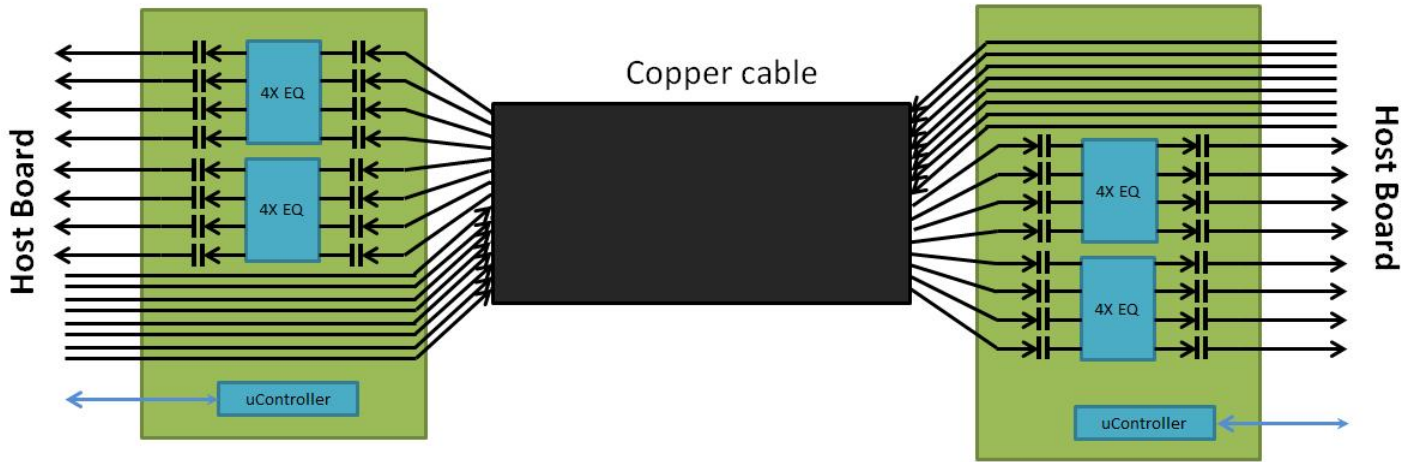
### Description

Gigalight's QSFP-DD ACC(Active Copper Cable) assembly series product provide superior signal integrity performance and reliability, comparing to PCC and AOC, ACC is a re-drive solution which built-in linear equalizer to compensate transmission loss, it is an effective solution with low power, low latency, low cost to help high-speed data centers even AI high-computational applications.

Gigalight's GQD-AC401-DxxC cable connects data signals from each of the 16 pairs on the single QSFP-DD end to the other QSFP-DD end, each pair operates at data rates of up to 50Gb/s and can be adaptive downward compatibility. The product operates 3.3V power supply and comply with QSFP-DD-MSA and IEEE802.3cd ,it's

high performance & cost effective I/O solutions for LAN, HPC and SAN. The high speed cable assemblies meet 400Gigabit Ethernet, Infiniband requirements for performance and reliability.

### Block Diagram



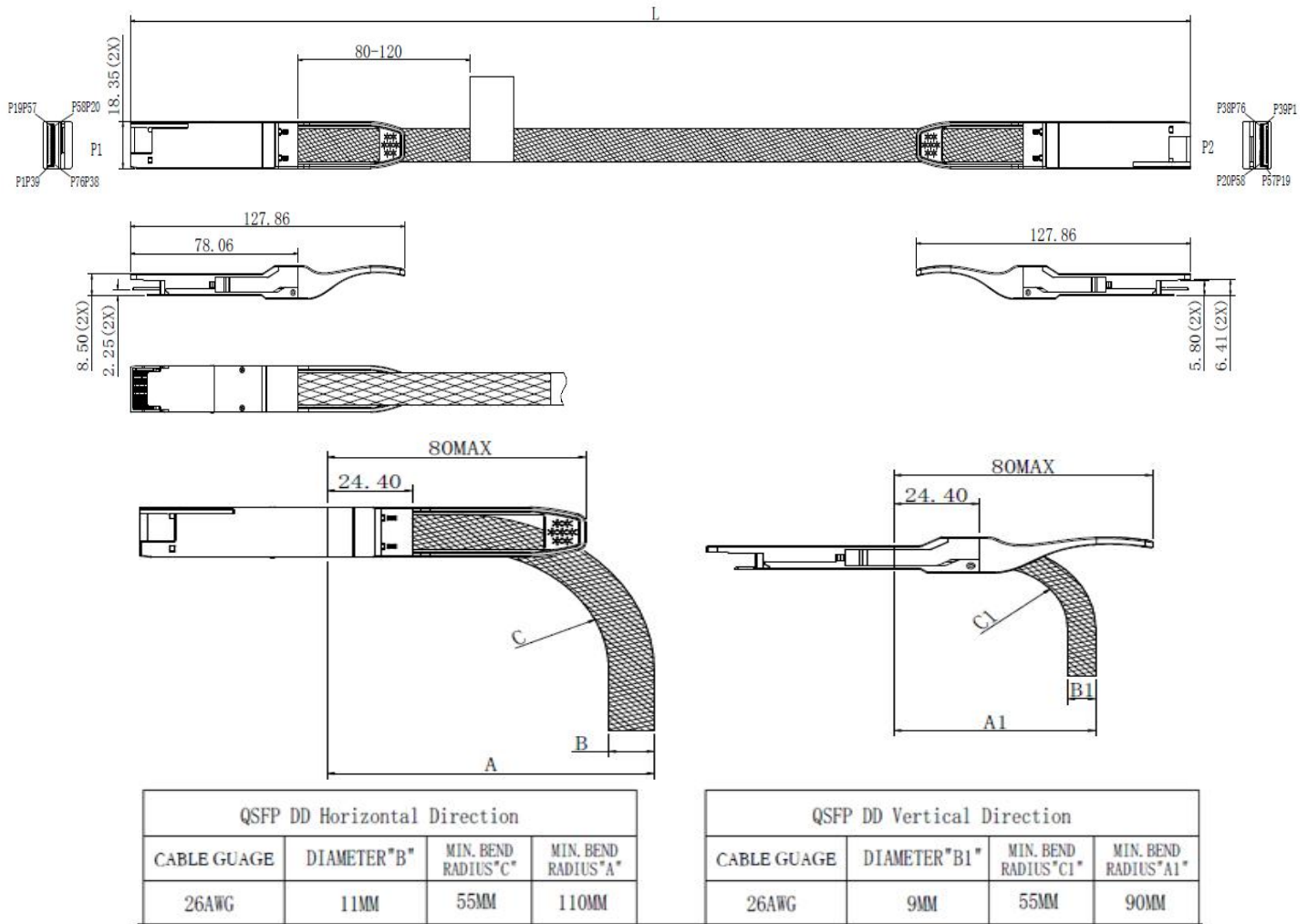
### Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	$T_s$	-20	85	°C
Humidity (non-condensing)	Rh	5	95	%
Supply Voltage	Vcc	-0.3	3.6	V
Latency(7m)	DL		40	ns

### Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	$T_c$	0		70	°C
Supply Voltage	Vcc	3.13	3.3	3.47	V
Power Consumption	PD		2.5		W
Data Rate per Lane (PAM4)	Fd1		26.56		GBaud/s
Data Rate per Lane (NRZ)	Fd2	10.3125		26.56	Gbps
Humidity	Rh	5		85	%

## Mechanical Dimensions



## Ordering information

Part Number	GQD-AC401-DXXC
Length (meter)	3~7
Wire gauge (AWG)	30AWG~26AWG

If length(meter) is decimal, PN should be as GQD-AC401-DXXC.

Less than 3m reach, it's recommend to choose Gigalight's 400G QSFP-DD DAC;

3~4m, 30AWG&26AWG is available alternatively;

4m~7m, the default wire gauge is 26AWG cable;

Above 7m, please consult the sales to customize.

## Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Gigalight before they become applicable to any particular order or contract. In accordance with the Gigalight policy of continuous improvement specifications may change without notice. The publication of information in this data sheet does not imply freedom from patent or other protective rights of Gigalight or others. Further details are available from any Gigalight sales representative.

E-mail: [sales@gigalight.com](mailto:sales@gigalight.com)

Official Site: [www.gigalight.com](http://www.gigalight.com)

## Revision History

Revision	Date	Description
Preliminary	Spe-04-2023	Advance Release.