# STARVIEW
TECHNOLOGIES

# SV-DAC-400GT6T6-xM

Starview QSFP-DD 400Gbps Direct Attach Cable modules, distance up to 1m;3m.

## Features

- Compatible with IEEE 802.3bj and IEEE 802.3cd
- Supports aggregate data rates of 400Gbps(PAM4)
- Optimized construction to minimize insertion loss and cross talk
- Pull-to-release slide latch design
- 28AWG through 30AWG cable
- Straight and break out assembly configurations available
- Customized cable braid termination limits EMI radiation
- Customizable EEPROM mapping for cable signature
- RoHS compliant

## Applications

- Switches, servers and routers
- Data Center networks
- Storage area networks
- High performance computing
- Telecommunication and wireless infrastructure
- Medical diagnostics and networking
- Test and measurement equipment

## Ordering Information

| Part number | Description |
|---|---|
| **SV-DAC-400GT6T6-1M** | Starview QSFP-DD 400Gbps Direct Attach Cable modules, distance up to 1m. |
| **SV-DAC-400GT6T6-3M** | Starview QSFP-DD 400Gbps Direct Attach Cable modules, distance up to 3m. |

QSFP-DD passive copper cable assembly feature eight differential copper pairs, providing four data transmission channels at speeds up to 56Gbps(PAM4) per channel, and meets 400G Ethernet and InfiniBand Enhanced Data Rate(EDR) requirements. Available in a broad rang of wire gages-from 28AWG through 30AWG-this 400G copper cable assembly features low insertion loss and low cross talk.

QSFP-DD uses PAM4 signals for transmission, which doubles the rate. However, there are more stringent requirements for cable insertion loss. For detailed requirements, please see High Speed Characteristics.

## High Speed Characteristics

| Parameter | Symbol | Min | Typical | Max | Unit | Note |
|---|---|---|---|---|---|---|
| Differential Impedance | TDR | 90 | 100 | 110 | Ω | |
| Insertion loss | SDD21 | -16.06 | | | dB | At 13.28 GHz |
| Differential Return Loss | SDD11 | | | See 1 | dB | At 0.05 to 4.1 GHz |
| | SDD22 | | | See 2 | dB | At 4.1 to 19 GHz |
| Common-mode to common-mode output return loss | SCC11 SCC22 | | | -2 | dB | At 0.2 to 19 GHz |
| Differential to common-mode return loss | SCD11 SCD22 | | | See 3 | dB | At 0.01 to 12.89 GHz |
| | | | | See 4 | | At 12.89 to 19 GHz |
| Differential to common Mode Conversion Loss | SCD21-IL | | | -10 | dB | At 0.01 to 12.89 GHz |
| | | | | See 5 | | At 12.89 to 15.7 GHz |
| | | | | -6.3 | | At 15.7 to 19 GHz |

Notes:
1. Reflection Coefficient given by equation SDD11(dB) < -16.5 + 2 × SQRT(f ), with f in GHz
2. Reflection Coefficient given by equation SDD11(dB) < -10.66 + 14 × log10(f/5.5), with f in GHz
3. Reflection Coefficient given by equation SCD11(dB) < -22 + (20/25.78)*f, with f in GHz
4. Reflection Coefficient given by equation SCD11(dB) < -15 + (6/25.78)*f, with f in GHz
5. Reflection Coefficient given by equation SCD21(dB) < -27 + (29/22)*f, with f in GHz