# 10G SFP+ Direct Attach Cable (DAC) 7m 24AWG



Product Overview 2

Part Number WTDC10-7A

## 1. Product Overview

SFP+ Direct Attach Cables are compliant with SFF-8432 and SFF-8402 specifications. Various choices of wire gauge are available from 30 to 24 AWG with various choices of cable length (up to 7m).

The SFP+ passive cable assemblies are high performance, cost effective I/O solutions for 10G Ethernet. SFP+ copper cables allow hardware manufactures to achieve high port density, configurability and utilization at a very low cost and reduced power budget.

Applications l Benefits

10G Ethernet

### Features

- Up to 10. 3125 Gbps data rate
- Up to 7-meter transmission
- Hot-pluggable SFP 20PIN footprint
- Improved Pluggable Form Factor (IPF)
- compliant for enhanced EMI/EMC performance
- Compatible with SFP+ MSA
- Compatible to SFF-8402 and SFF-8432
- Temperature Range: 0~ 70 °C
- RoHS Compatible
- High Speed Characteristics
- Pin Descriptions
- SFP+ Pin Function Definition

### Applications

## 2. Pin Descriptions

| Pin | Pin | Logic | Symbol | Symbol | Name/Description | Notes |
|---|---|---|---|---|---|---|
| 1 | 1 | | VeeT | VeeT | Transmitter Ground | |
| 2 | 2 | LV-TTL-O | TX Fault | TX Fault | N/A | 1 |
| 3 | 3 | LV-TTL-I | TX_DIS | TX_DIS | Transmitter Disable | 2 |
| 4 | 4 | LV-TTL-I/O | SDA | SDA | Tow Wire Serial Data | |
| 5 | 5 | LV-TTL-I | SCL | SCL | Tow Wire Serial Clock | |
| 6 | 6 | | MOD_DEF0 | MOD_DEF0 | Module present, connect to VeeT | |
| 7 | 7 | LV-TTL-I | RS0 | RS0 | N/A | 1 |

| Pin | Pin | Logic | Symbol | Symbol | Name/Description | Notes |
|---|---|---|---|---|---|---|
| 8 | 8 | LV-TTL-O | LOS | LOS | LOS of Signal | 2 |
| 9 | 9 | LV-TTL-I | RS1 | RS1 | N/A | 1 |
| 10 | 10 | | VeeR | VeeR | Receiver Ground | |
| 11 | 11 | | VeeR | VeeR | Receiver Ground | |
| 12 | 12 | CML-O | RD- | RD- | Receiver Data Inverted | |
| 13 | 13 | CML-O | RD+ | RD+ | Receiver Data Non-Inverted | |
| 14 | 14 | | VeeR | VeeR | Receiver Ground | |
| 15 | 15 | | VccR | VccR | Receiver Supply 3.3V | |
| 16 | 16 | | VccT | VccT | Transmitter Supply 3.3V | |
| 17 | 17 | | VeeT | VeeT | Transmitter Ground | |
| 18 | 18 | CML-I | TD+ | TD+ | Transmitter Data Non-Inverted | |
| 19 | 19 | CML_I | TD- | TD- | Transmitter Data Inverted | |
| 20 | 20 | | VeeT | VeeT | Transmitter Ground | |
| 1. | Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor | Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor | Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor | Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor | Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor | |
| 2. | Passive cable assemblies do not support | Passive cable assemblies do not support | Passive cable assemblies do not support | LOS and TX_DIS | LOS and TX_DIS | |

## 3. Pin Descriptions

| Length (m) | Cable AWG |
|---|---|
| 0.3 | 30 |
| 0.5 | 30 |
| 1 | 30 |
| 2 | 30 |
| 3 | 30 |
| 4 | 24 |
| 5 | 24 |
| 7 | 24 |

## 4. Pin Descriptions

| Feature | Test Method | Performance |
|---|---|---|
| Electrostatic Discharge (ESD) to the Electrical Pins | MIL-STD-883C Method 3015.7 | Class 1(>2000 Volts) |
| Electromagnetic Interference (EMI) | FCC Class B | Compliant with Standards |

| Feature | Test Method | Performance |
|---|---|---|
| Electromagnetic Interference (EMI) | CENELEC EN55022 Class B | Compliant with Standards |
| Electromagnetic Interference (EMI) | CISPR22 ITE Class B | Compliant with Standards |
| RF Immunity (RFI) | IEC61000-4-3 | Typically Show no Measurable Effect from a 10V/m Field Swept from 80 to 1000MHz |
| RoHS Compliance | RoHS Directive 2011/65/EU and it's Amendment Directives （EU） 2015/863 | RoHS （EU）2015/863 compliant |
| REACH Compliance | REACH Regulation (EC) No 1907/2006 | REACH (EC) No 1907/2006 compliant |

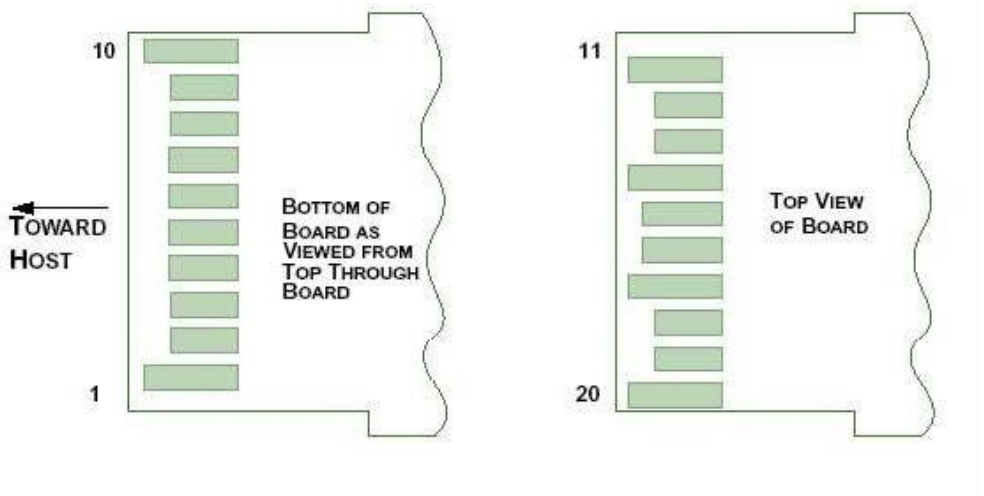
# 5. Additional Specifications

| Parameter | Symbol | Min | Typical | Max | Unit | Note |
|---|---|---|---|---|---|---|
| Differential Impedance | TDR | 90 | 100 | 110 | Ω | |
| Insertion loss | SDD21 | -17.04 | | | dB | At 5.15625 GHz |
| Differential Return Loss | SDD11 SDD22 | | | See 1 | dB | At 0.05 to 4.1 GHz |
| Differential Return Loss | SDD11 SDD22 | | | See 2 | dB | At 4.1 to 11.1 GHz |
| Differential to common-mode return loss | SCD11 SCD22 | | | -10 | dB | At 0.2 to 11.1 GHz |
| Common-mode to common-mode output return loss | SCC11 SCC22 | -3 | -3 | -3 | dB | At 0.01 to 11.1 GHz |
| Notes: Reflection Coefficient given by equation SDD11(dB) < -12 + 2 × SQRT(f ), with f in GHz Reflection Coefficient given by equation SDD11(dB) < -6.3 + 13 × log10(f/5.5), with f in GHz | Notes: Reflection Coefficient given by equation SDD11(dB) < -12 + 2 × SQRT(f ), with f in GHz Reflection Coefficient given by equation SDD11(dB) < -6.3 + 13 × log10(f/5.5), with f in GHz | Notes: Reflection Coefficient given by equation SDD11(dB) < -12 + 2 × SQRT(f ), with f in GHz Reflection Coefficient given by equation SDD11(dB) < -6.3 + 13 × log10(f/5.5), with f in GHz | Notes: Reflection Coefficient given by equation SDD11(dB) < -12 + 2 × SQRT(f ), with f in GHz Reflection Coefficient given by equation SDD11(dB) < -6.3 + 13 × log10(f/5.5), with f in GHz | Notes: Reflection Coefficient given by equation SDD11(dB) < -12 + 2 × SQRT(f ), with f in GHz Reflection Coefficient given by equation SDD11(dB) < -6.3 + 13 × log10(f/5.5), with f in GHz | Notes: Reflection Coefficient given by equation SDD11(dB) < -12 + 2 × SQRT(f ), with f in GHz Reflection Coefficient given by equation SDD11(dB) < -6.3 + 13 × log10(f/5.5), with f in GHz | Notes: Reflection Coefficient given by equation SDD11(dB) < -12 + 2 × SQRT(f ), with f in GHz Reflection Coefficient given by equation SDD11(dB) < -6.3 + 13 × log10(f/5.5), with f in GHz |

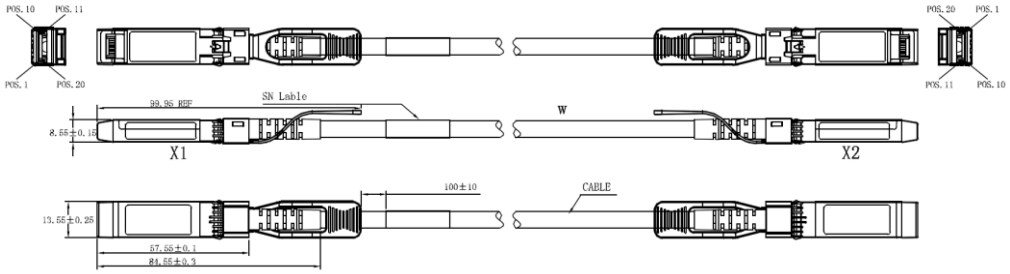
# 6. Cable Product Photograph



## 7. Pin Assignment




## 8. Mechanical Specifications




## 9. Revision History

| Version | Date | Description | Prepared by |
|---|---|---|---|
| V6 | 2025 | Unified WincoTek datasheet format | WincoTek |
| V6.1 | 2026-10-23 | Engineering and format review | WincoTek |