Allied Telesis™

SP10TW

Twinax Direct Attach Cable

The SP10TW SFP+ direct attach copper cable assembly is a low-cost alternative for short reach applications. The design allows for a serial data transmission up to 12Gbps in each direction. Additionally, the copper cable acts as a natural heat sink. The low power consumption assists in making the passive copper cable assembly an economic solution for within rack or rack-to-rack applications.

Overview

These copper cables, known as "direct attach" or "Twinax," connect from one SFP+ slot to another without the need for SFP+ transceivers. This is an economical solution for making short 10 Gigabit connections between products and most servers, network switches and monitoring equipment that have SFP+ slots.

The direct attach cable is terminated on both ends with mechanical connectors that plug directly into SFP+ slots in the same manner as SFP+ transceiver modules. The one, three and seven meter cables are all passive cables. They do not have signal buffers or amplifiers.

Low Latency and Low Power

The Twinax cable with SFP+ type of connection is able to transmit at 10 Gigabit full-duplex speed. This setup offers up to 15 - 25 times lower transceiver latency than current 10GbE CAT6/CAT6a/CAT7 cabling systems at 0.1 μs for Twinax with SFP+ versus 1.5 - 2.5 μs for current 10GbE specification. The power draw of Twinax with SFP+ is around 0.1 Watts compared to the typical 4–8 Watts for current 10GbE.

Key Features

- ► SFF-8431 MSA compliant
- ► Broadband serial data rate operation: 10Mbps to 12Gbps
- ► Power level I: 15 mW per cable end
- ► 100 Ohm differential impedance
- ► Retractable pin latch
- ► EEPROM signature
- ► Pull to release latch design
- ► 360° cable braid crimp
- ► Enhanced EMI skirt design
- ► Linear design for use with EDCs
- ► AC-coupled inputs and outputs
- ► 30AWG to 24AWG cable available
- ► Two year warranty*

* Warranties may be region specific, for local warranty periods please visit the support section on alliedtelesis.com or contact your local sales office

Specifications

MODEL	MEDIA TYPE	TRANSMIT		
		MAXIMUM DATA RATE	OPERATING TEMPERATURE	DISTANCE
SP10TW	Twinax direct attach	10.3Gbps	0°C to 70°C (32°F to 158°F)	1, 3 or 7 m

Environmental

Operating temperature: 0°C to 70°C (32°F to 158°F)
Storage temperature: -40°C to 85°C (-40°F to 185°F)
Relative humidity: 0 to 85% non-condensing

Electrical Characteristics

Parameter	Symbol	Min.	Typ	Max.
Input voltage (V)	Vcc, Vccr	1.8	3.3	5.5
Clock frequency (kHz)	f_{SCL}			400
Power (mW)				15
Current (mA)	Icc			4
Data rate (Gbps)		0.010		10.3125

Ordering Information

AT-SP10TW1
Twinax direct attach cable (1 m)

AT-SP10TW3
Twinax direct attach cable (3 m)

AT-SP10TW7
Twinax direct attach cable (7 m)

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