

Copper SFP

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Variants

1G Ethernet 100M 10G 30M

Details

Copper SFP 10/100/1000 RJ45

The Optcore DT-Copper is a high-performance and cost-effective copper SFP module designed for 10/100/1000BASE-T Ethernet applications. It complies with SFP MSA, IEEE 802.3u, and IEEE 802.3ab standards, ensuring compatibility with standard SFP ports in switches, routers, and networking equipment.

This module supports data transmission up to 100 meters over Cat5e/Cat6/Cat6a UTP cables. It uses all four twisted pairs and allows access to PHY settings via I2C interface for advanced control and monitoring.

Applications

Use Case
10/100/1000Base-T Ethernet LAN
Gigabit Ethernet over Cat5e / Cat6 / Cat6a Cable
Switch to Switch Interface
Router / Server Connectivity
Ethernet Media Converters

Key Features

Features
Supports 10/100/1000BASE-T operation
Up to 100m transmission over Cat5e / Cat6 / Cat6a
Hot-pluggable SFP form factor
SGMII interface support
Fully metallic enclosure for low EMI
Low power consumption (~1.05W)
RJ45 compact connector
Access to PHY via I2C interface
Operating temperature: 0°C to +70°C

Technical Specification

Parameter	Specification
Model	DT-Copper 1G
Product Type	Copper SFP Transceiver
Form Factor	SFP (Hot-pluggable)
Data Rate	10 / 100 / 1000 Mbps
Connector	RJ45 Female
Cable Type	Cat5e / Cat6 / Cat6a
Max Distance	100 meters
Interface	SGMII

Digital Diagnostics	Not Supported
Operating Temperature	0°C to +70°C
Storage Temperature	-40°C to +85°C
Power Consumption	~1.05W
Weight	0.025 kg

Compliance

Standards
SFP MSA
IEEE 802.3u / IEEE 802.3ab
IEC / EN 61000-4-2
IEC 60825
FDA 21CFR 1040.10 / 1040.11
RoHS Compliant