

## San Marino Smart City Long-Distance Optical Transceiver 10G



### Overview

Learn what an SFP 10GB LR transceiver is, its key specs, use cases, and how to choose the right 10G LR module for your network.

### Key Takeaways

The San Marino LS-SM5510-A0C is a 10G SFP+ long-distance optical transceiver capable of transmitting up to 100 km over single-mode fiber, ideal for smart city and telecom applications.

- Data Rate: 10 Gbps (SFP+ standard)
- Transmission Distance: Up to 100 km over OS2 single-mode fiber (SMF)
- Wavelength: 1550 nm, suitable for long-haul communication
- Connector Type: LC duplex
- Power Consumption: Low, optimized for energy-efficient deployments
- Monitoring: Supports Digital Diagnostic Monitoring (DDM) via SFF-8472 interface
- Compliance: Fully SFP+ MSA compliant, compatible with Huawei SFP-10G-ZR100 and similar devices

Functionality and Use Cases

The transceiver integrates both a transmitter and receiver in a single module, converting electrical signals to optical signals for transmission and back for reception. This enables high-speed, low-latency communication over long distances, which is critical for smart city networks, 5G backhaul, and data center interconnects. Typical applications include:

- Smart city infrastructure: Connecting IoT devices, traffic management systems, and surveillance networks
- Telecom and metro networks: Long-haul 10G Ethernet links and backbone connectivity
- Data centers: High-speed interconnects between switches and storage systems

#### Advantages

- Long-distance capability: Supports up to 100 km without signal degradation
- High reliability: EML laser and APD receiver ensure stable performance over extended distances
- Flexibility: Hot-pluggable SFP+ form factor allows easy upgrades and modular deployment
- Energy efficiency: Low power consumption reduces operational costs in large-scale deployments

#### Integration in Smart Cities

In smart city networks, these transceivers are essential for bridging core networks with distributed access points, including 5G base stations and fiber-to-the-premises (FTTP) deployments. They provide the bandwidth and low latency required for real-time applications such as video surveillance, traffic monitoring, and IoT sensor data aggregation. Overall, the San Marino LS-SM5510-A0C 10G SFP+ transceiver is a robust solution for long-distance, high-speed optical networking, making it highly suitable for modern smart city and telecom infrastructures.

## Article Content

SFP-10G-LR-I-SKY | Cisco® | Transceivers | Skylane | Skylane Optics

This Cisco® SFP-10G-LR-I compatible SFP+ transceiver provides 10GBase-LR throughput up to 10km over single-mode fiber (SMF)

SFP 10GB LR Transceiver Guide: Specs, Distance & Buying Tips

Learn what an SFP 10GB LR transceiver is, its key specs, use cases, and how to choose the right 10G LR module for your network.

SFP-10GB-ZR 100KM Long-Range 10G Transceiver Module

The STC-10G-ZR+ is a high-power 10G SFP+ transceiver supporting long-haul 10 Gigabit Ethernet links up to 100 kilometers over

10g lr sfp Transceiver | 10km Single-Mode Fiber Module

With a transmission range of up to 10 kilometers, this transceiver is ideal for connecting remote network devices in large-scale

SFP-10GB-ZR 100KM Long-Range 10G Transceiver Module

SFP-10GB-ZR 100KM transceiver for high-performance 10G connectivity over extended distances up to 100KM, ideal for telecom

San Marino Optical Receiver 1G Customization

BlazingFast Photonics delivers high-speed optical transceivers, silicon photonics, co-packaged optics, OSFP 1.6T modules, laser

San Marino Single-Mode Optical Transceiver Market (2025-2031)

6Wresearch actively monitors the San Marino Single-Mode Optical Transceiver Market and publishes its comprehensive annual

SFP+ 1/10G MR 1310nm SM 10km 6.2dB LC

SO-SFP-1G-10G-LR is a versatile 1310nm SFP+ transceiver for SingleMode (SM) fiber with a rate select between GbE and 10GbE

All About the SFP-10G-ZR: Understanding the 1550nm 80km Optical ...

The SFP-10G-ZR optical module offers 10G data rate, 1550nm wavelength, and 80km reach, perfect for long-haul telecom and

SFP 10G LR: High-Speed Long-Reach Fiber Transceivers

Among the available 10G optical solutions, SFP 10G LR transceivers stand out as one of the most widely deployed and trusted

SFP+ 10G-LR/MR 1310nm SM 10km 6.2dB LC

The SO-SFP-10GE-LR is a versatile 1310nm transceiver supporting a wide range of traffic formats. The optical performance is in

SFP+10G 1310nm 10Km LC Optical Module Guide

The SFP+10G 1310nm 10Km LC optical module is a powerful and versatile solution for high-speed, long-distance data transmission.

Related Video Reference

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