

Smart City-Level CFP2 Remote Monitoring Selection Guide



Article Overview

CFP2-DCO modules provide high-capacity, coherent optical transmission for smart city remote monitoring, supporting 100G-400G links with robust telemetry, interoperability, and operational efficiency.

Key Considerations for CFP2 Selection

1. **Transmission Capacity and Modulation** CFP2-DCO modules support 100Gbps QPSK up to 400Gbps 16QAM, enabling high-bandwidth data transport for dense urban monitoring networks, including video, environmental sensors, and IoT devices (). Choose the module based on required throughput and distance, considering metro or long-haul deployment needs.

2. **Interoperability and Standards** Ensure modules comply with OpenROADM MSA, CableLabs, Optical Internetworking Forum (OIF), and OpenZR+ standards for seamless integration with existing network infrastructure (). This guarantees compatibility with switches, routers, and aggregation points in smart city networks.

3. **Operational Efficiency** CFP2-DCO modules integrate DSP, SerDes, and thermal/power management to maintain low bit error rates (BER) and stable performance across temperature and aging (). Modules handle electrical lane equalization, retiming, and optical bias control, reducing the need for manual intervention and improving uptime.

4. **Telemetry and Remote Monitoring** Modules provide CMIS/DOM telemetry, enabling real-time monitoring of optical power, temperature, and signal integrity. This is critical for smart city deployments where remote monitoring reduces maintenance visits and ensures continuous operation of streetlights, cameras, and environmental sensors ().

5. **Deployment Scenarios** CFP...

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Cisco already offers a range of analog CFP2 transceivers. With the analog version, the DSP (Digital Signal Processor) chip resided

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Cisco Digital 100G CFP2 Pluggable Optical Module

This includes a 100G Staircase-FEC mode that enables interoperability with other, non-CFP2-DCO-based IPoDWDM products. The

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The module does support different FEC algorithms to best match customer needs. This includes a 100G Staircase-FEC

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CFP, CFP2 and CFP4 OVERVIEW

OVERVIEW The tables below list the CFP, CFP2 and CFP4 transceivers and cable assemblies currently provided in the Smartoptics

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The selection of smart functionalities depends beside the smart meter capability also on project goals, end user structure,

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This chapter presents state-of-the-art knowledge and cutting-edge innovations in the area of smart cities, advanced

Contact Us

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