

SFP M10 - Industrial Edge IoT Device

Key Features

- Wireless Connectivity: Wi-Fi 802.11 b/g/n for seamless internet access
- Web-Based Interface: Provides device management and settings control via web browser
- Real-Time Clock (RTC): Integrated RTC for accurate time-keeping and scheduling tasks
- External Storage: microSD slot for extensive data logging and storage
- Over-the-Air (OTA) Updates: Enables remote firmware updates without physical access



Hardware Specifications

Core and Memory

- Core: Xtensa® dual-core 32-bit LX7 CPU, 240 MHz
- Memory:
 - ROM: 384 KB
 - SRAM: 512 KB
 - Flash Memory: 16 MB
 - PSRAM: 8 MB
 - Extended Temperature Range: -40 to 65 °C

Electrical Specifications

- Power Input Options:
 - USB Type-C: 5V input for flexible power solutions
 - Dedicated Power Connector: 6-36V input range for industrial environments
- Maximum Current Consumption: 0.5A
- Power Consumption: [Consumption in W] (active mode)

User Interface and Indicators

- Web Server Interface: User-friendly interface accessible via web browser for:
 - Device and connection settings configuration
 - User profile and permissions management
 - Offline access for reviewing and managing stored logs and production data
 - Web Serial Interface: Supports real-time debugging and diagnostics for maintenance and troubleshooting
- Buzzer: Audible alerts for system notifications and alerts
- Reset Button: Quick reset functionality for device reinitialization
- Status LEDs: Four LEDs indicating device operational status and connectivity

Protection Features

- Surge and ESD Protection: Ensures device reliability against voltage spikes and electrostatic discharge
- Reverse Voltage Protection: Protects against accidental polarity reversal
- Voltage Supervision: Stabilizes power supply fluctuations
- Short Circuit and Overcurrent Protection: Safeguards against electrical faults
- EMI/RFI Protection: Maintains signal integrity in industrial environments
- Industrial-grade Durability: Reinforced design for challenging industrial applications
- Watchdogs: Hardware and software watchdogs for consistent and reliable operation

Interfaces and Connectivity

- Wireless Connectivity: Wi-Fi 802.11 b/g/n for internet access, with Bluetooth 5.0 for local wireless communication
- Ethernet: High-speed modular RJ45 for stable, wired network connectivity
- USB Port: USB Type-C for data transfer and optional power input
- External Storage: microSD slot for data logging and extended storage
- Digital I/O: 6 isolated digital inputs and 2 isolated digital outputs for enhanced control and monitoring
- Serial Communication Ports: Supports UART, RS232, RS485, and CAN protocols for versatile industrial data exchange
- Expansion Ports: I2C and SPI for flexible expansion with external peripherals

Physical Design and Packaging

- Dimensions: [Dimensions in mm]
- Weight: [Device weight]
- Casing Material: Industrial-grade material ensuring durability in tough environments
- Packaging: Industrial-grade packaging for protection during handling and transport
- Impact and Vibration Resistance: Designed to withstand high-impact and vibration in challenging industrial settings