New Monitors with SFP+ Connection

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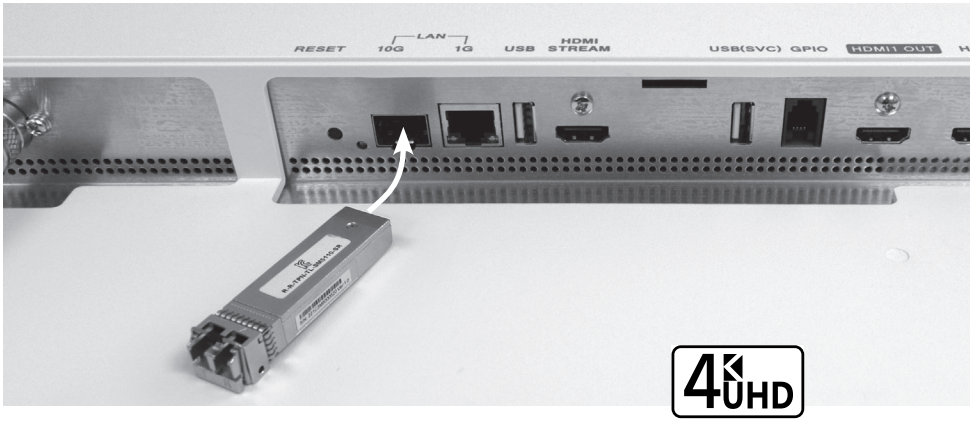

What is it?

SFP+ (Small Form-factor Pluggable Plus) modules are 10Gbps hot-swappable transceivers used for high-speed data networking.

Benefits of SFP+ Modules

- High speed: SFP+ provides a much higher speed than the standard SFP module, which meets the dramatically demanding data traffic growth.
- Hot pluggable: it is perfect for expanding or modifying existing networks without completely changing the cable infrastructure.
- Compact size: same as the standard SFP size and appearance, the SFP+ compact design provides high port density and saves space.
- Lower cost: successful form factor in the industry, plenty of suppliers, lower fees.
- Comprehensive interoperability: optical interoperates with the traditional XFP, X2, and XENPAK modules, efficiently upgrading the old cabling to modern networking.

SFP+ Module Types

Optical Fiber (multimode/singlemode)

- SFP+ SR (Short Range): Uses 850nm lasers over OM3/OM4 multimode fiber, reaching up to 300–400 meters.
- SFP+ LR (Long Range): Uses 1310nm lasers over single-mode fiber (OS2); typically reaches 10km.
- SFP+ LRM (Long Reach Multimode): Supports legacy multimode fiber, reaching up to 220 meters.
- SFP+ ER (Extended Range): Uses 1550nm lasers, designed for long-distance, up to 40km.
- SFP+ ZR: Specialized modules for very long distances, reaching up to 80–120 km.
- SFP+ BiDi (Bidirectional): Uses a single fiber strand (simplex) for both transmitting and receiving, using different wavelengths (e.g., 1270nm/1330nm).

Copper Media

10GBASE-T SFP+ (Copper): Uses RJ-45 connectors with Cat6a/7 cable for short-distance, typically up to 30–100 meters.

Additional

- CWDM/DWDM SFP+: Designed for wavelength division multiplexing to maximize fiber capacity in metropolitan networks.
- SFP+ DAC/AOC (Direct Attach/Active Optical Cables): Pre-terminated copper or fiber cables with fixed SFP+ modules on each end, often used for within-rack connections (up to 7m for passive DAC, 100m for AOC).

Module Selection Factors

- Distance & Media: Multimode (SR) for short, Singlemode (LR/ER/ZR) for long, or Copper (10GBASE-T).
- Compatibility: Many vendors require MSA-compliant (Multi-Source Agreement) modules, but vendor-specific coding may be needed for specific switch brands.

FM-E3250DN and FM-E3230DN monitors are ready for installation in today's high-speed medical networks!