

PANIO UEF210

4-Port USB2.0 Optical & Copper Extender

(Cat5e/Cat6 100m & Fiber 20km Transmission)

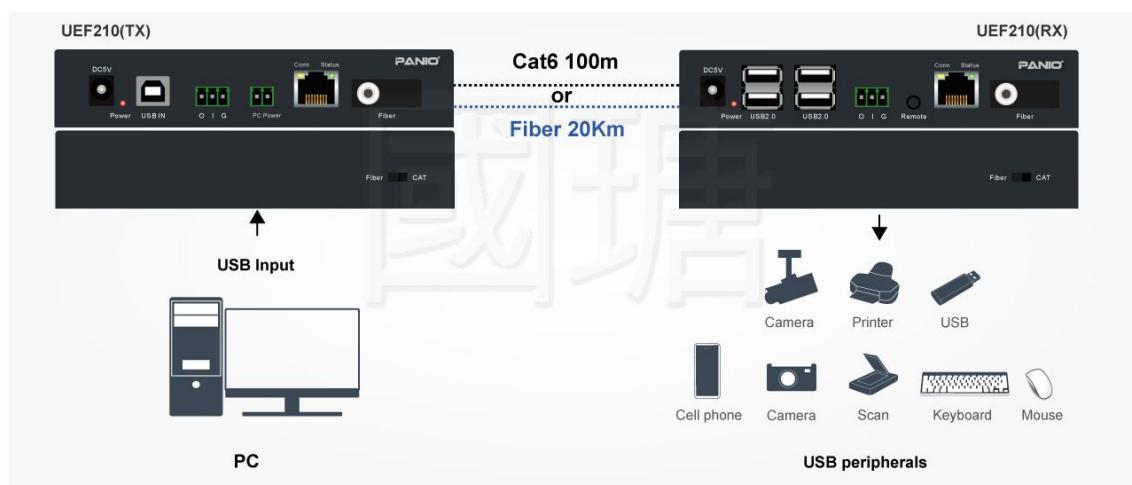
1. Product Overview

The UEF210 is a high-performance 4-port USB2.0 optical & copper integrated extender, specifically designed for long-distance USB peripheral connection and remote device management scenarios. It adopts a "transmitter + receiver" architecture, supporting transparent transmission of USB2.0 signals, TRG signals, and low-speed serial data. The product enables flexible long-distance transmission: up to 100 meters via Cat5e/Cat6 cables and 20 kilometers via single-mode fiber (FC interface). Equipped with a remote host power on/off function and 4 USB2.0 output ports at the receiver end, it supports simultaneous connection of multiple USB peripherals. With pure hardware design, plug-and-play operation, and no need for additional drivers, it is an ideal solution for office environments, industrial control systems, security monitoring, and other scenarios requiring remote USB device access.

2. Key Features

- 4-Port USB2.0 Remote Hub:** The receiver is equipped with 4 USB2.0 output ports, supporting simultaneous connection and operation of up to 4 USB peripheral devices (e.g., keyboards, mice, printers, storage devices) remotely, greatly improving work efficiency.
- Dual Transmission Media & Flexible Distance:** Supports two transmission methods—Cat5e/Cat6 cables (100m) and single-mode fiber (20km). The transmission medium can be selected according to actual application requirements, ensuring stable signal transmission.
- Remote Host Power Control:** Enables remote power on/off of the host, allowing operators at the receiver end to fully control the host, facilitating remote management and enhancing operational convenience.
- Serial Data Transmission Support:** Compatible with RS-232 serial data transmission, adapting to signal transmission needs in various application scenarios and improving device connection flexibility.
- Plug-and-Play & Driver-Free:** Adopts pure hardware design, requiring no installation of additional drivers or software. Simple deployment and immediate use after connection reduce configuration complexity.
- Dual Transmission Interfaces:** Equipped with RJ45 (for copper cable) and FC (for fiber) interfaces, supporting seamless switching between two transmission modes to meet diverse installation environments.

Diagram



3. Technical Specifications

Category	Detailed Specifications
Compliance Standards	USB 2.0
Transmitter Interfaces	1×USB 2.0 (Type A), 1×TRG Port, 1×2Pin PC Power Switch Port
Receiver Interfaces	4×USB 2.0 (Type A), 1×TRG Port, 1×PC Power Switch Button
Transmission Interfaces	RJ45 (Copper Cable), FC (Single-Mode Fiber Interface)
Transmission Distance	- Cat5e/Cat6: Up to 100 meters - FC Single-Mode Fiber: Up to 20 kilometers
Power Requirements	DC 5V (Certified Original Power Adapter)
Operating Temperature	0~60°C
Storage Temperature	-20~70°C
Humidity	0~80% RH, Non-condensing

4. Important Installation Notes

- Cable Requirements:** Use certified USB 2.0 cables for signal connection to ensure optimal transmission performance and stability. For fiber transmission, use FC single-mode

single-core fiber cables; for copper transmission, use standard Cat5e/Cat6 cables.

- **Power Operation:** Only use the original 5V/2A power adapter provided to avoid malfunctions caused by voltage mismatch or unstable power supply. Complete all cable connections before turning on the power.
- **Device Compatibility:** Do not daisy-chain uncertified or non-standard devices to avoid compatibility or performance issues. If using with special equipment, confirm compatibility with PANIO in advance.
- **Environment Maintenance:** Do not use the device in humid, high-temperature, or conductive dust environments. Ensure good ventilation around the device to maintain stable operation.
- **Wiring Taboos:** Avoid running copper cables parallel to or in the same conduit as high-power cables (e.g., air conditioning, motor cables) to prevent electromagnetic interference affecting signal quality.
- **Special Reminder:** This product is designed for USB signal extension and does not support connection to network switches. Hot-swapping USB cables is not recommended; turn off the power before connecting or disconnecting devices.

5. Package Contents

Item	Quantity
UEF210-T Transmitter	1 unit
UEF210-R Receiver	1 unit
5V/2A Power Adapter	1 piece
Multi-Language User Manual	1 piece