USB5GX-511K

Pro AV/IT Integrator Series™ Four Port USB 3.2 Extender up to 330ft Over Cat6A with USB-C & USB-A Data Ports (up to 5 Gbps)

Version: 1.25

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till May 31, 2024. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunctions.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

Table of Contents

1. Product Introduction

Comprehensive's USB5GX-511K is a four port USB 3.2 super speed extension solution, allowing users to simultaneously extend USB 3.2 Gen 1, 2.0, and 1.1 protocols across a single link with auto negotiated communication between hosts and devices for maximum interoperability and ease of use. The USB5GX-511K is specially designed and enhanced for better performance with USB 3.0 & USB 3.2 cameras and video capture devices, offering support for higher frame rates and resolution support. The USB5GX-511K is easy to install; simply plug and play (no software drivers required) and it works with all major operating systems: Windows®, macOS™, Linux® and Chrome OS™.

1.1 Features

- Supports USB 3.2 Gen 1 data rate up to 5Gbps.
- Integrated four port USB 3.2 hub supporting all USB 3.1, 2.0, 1.1 devices simultaneously at full bandwidth.
- Provides up to 5V 3A (15W) for devices.
- Supports all USB transfer types (Control, Interrupt, Isochronous and Bulk)
- Optimized for cameras and video capture devices & touch screens.
- Single cable, CAT 6A/7 up to 100m.
- Point-to-point connection.
- True plug and play; no software drivers are required.
- Supports bidirectional 24V PoC (power over cable) Power either Tx or Rx.
- Works with all major operating systems: Windows®, macOS™, Linux® and Chrome OS™.
- TAA Compliant.
- 3 Year Worry-Free Warranty.

1.2 Package List

- 1x USB5GX-511K (USB 3.2 Tx & Rx extender kit)
- 1× 24V/1.5A DC power adapter
- 4x Mounting ears
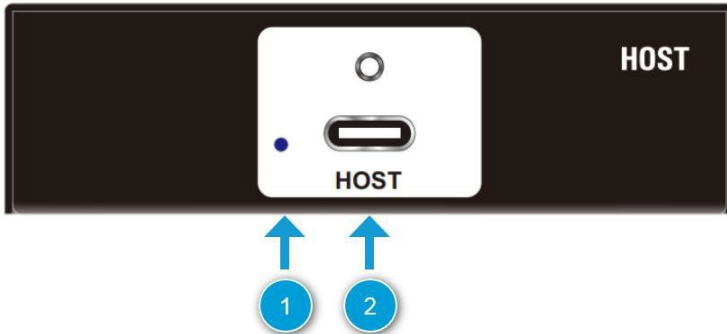- 4x Mounting screws
- 1× Operation manual

Note: Please contact your distributor immediately if any damage or defect in the components is found.

2. Specification

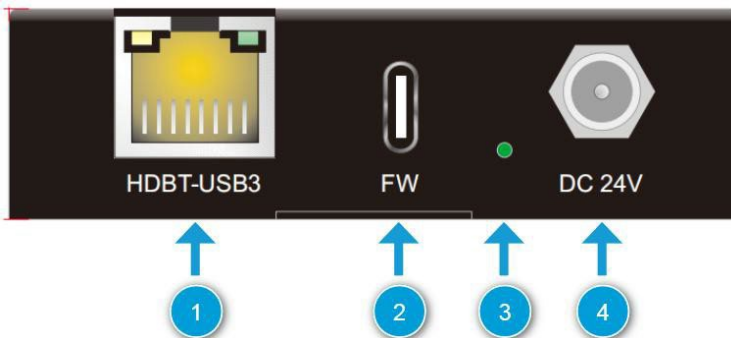| USB5GX-511K (Tx Host)	
Host Connector	(1) Type-C USB
USB Version	USB 3.2 Gen1
FW Port	(1) Type-C USB
Dimension (W*H*D)	130.0mm x 21.5mm x 75.0mm
Net Weight	240g
USB5GX-511K (Rx Device)	
Devices Connector	(3) Type-A USB (1) Type-C USB
Devices Power	Devices share 3A current limit
USB Version	USB 3.2 Gen1
Dimension (W*H*D)	130.0mm x 21.5mm x 75.0mm
Net Weight	275g
Control Part	
Control Connector	(1) 2-pin DIP switch
General	
Transmit distance	Up to 100m with CAT6a cable
PoC standard	Two-way 24V PoC
Data Rate	5Gbps
Operation Temperature	-10℃ ~ +55℃
Storage Temperature	-25℃ ~ +70℃
Relative Humility	10% ~ 90%
External Power Supply	DC 24V 1.5A

3. Panel Description

3.1 HOST Front Panel

① **HOST LED:** The LED illuminates blue when the host connected.

② **HOST:** Type-C USB 3.2 Gen1, connecting to the PC/Laptop.

3.2 HOST Rear Panel

① **HDBT-USB3:** 1x RJ45 port for connecting with the device unit of the extender and supports two-way 24V PoC power supply. The yellow light indicates the connection status of the HDBT, and the green LED is the data light.

Yellow light off: no CAT cable / active connection.

Yellow light blink: Connecting or unstable connection between host and device;

Yellow light lit: CAT cable is stably connected between host and device.

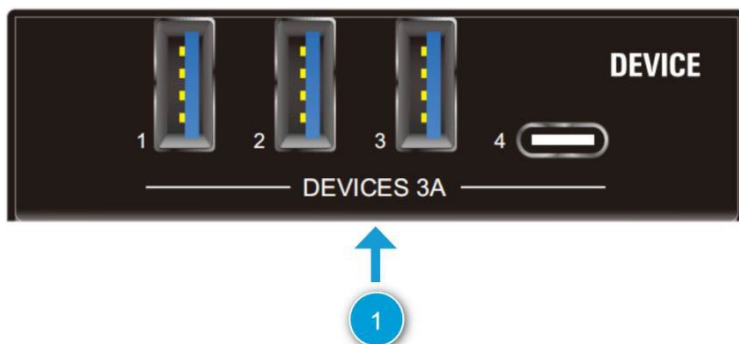Green light off: no USB data signal is transmitting.

Green light flashes regularly (for every 500ms): USB 2.0 data transmitting.

Green light flashes irregularly (for uncertain interval): USB data transmission fault.

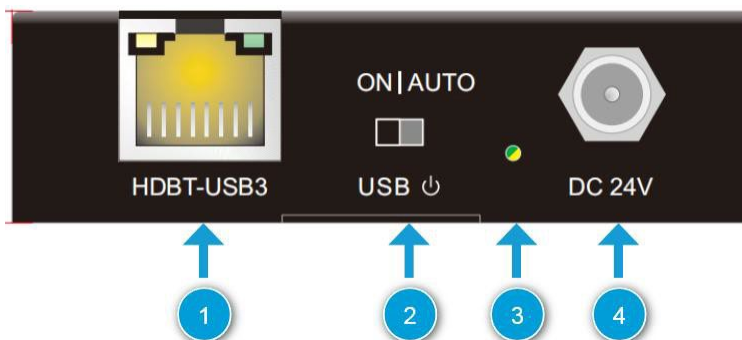Green light lit: USB3.0 data transmitting.

② **FW:** Firmware upgrade.

③ **Power LED:** The LED illuminates green when the unit is power on.

④ **DC 24V:** DC port for DC24V 1.5A power adapter connection.

3.3 DEVICE Front Panel

① **Devices 3A:** 3x Type-A USB 3.2 Gen1 and 1x Type-C USB 3.2 Gen1 for connecting KVM devices, cameras or other USB devices.

Devices share 3A current limit.

3.4 DEVICE Rear Panel

① **HDBT-USB3:** 1x RJ45 port for connecting with the device unit of the extender and supports two-way 24V PoC power supply. The yellow light indicates the connection status of the HDBT, and the green LED is the data light.

Yellow light off: no CAT cable / active connection.

Yellow light blink: Connecting or unstable connection between host and device;

Yellow light lit: CAT cable is stably connected between host and device.

Green light off: no USB data signal is transmitting.

Green light flashes regularly (for every 500ms): USB 2.0 data transmitting.

Green light flashes irregularly (for uncertain interval): USB data transmission fault;

Green light lit: USB3.0 data transmitting.

② **USB power :**1x DIP switch for USB device ports power settings:

AUTO(Default): Follow Host, USB device ports will only output power when a host is active connected.

ON: USB device ports output power all the time.

③ **Power LED:** The LED illuminates green when the unit is powered on, yellow and green lights flash alternately when the current is too high. (When over the total current limitation for USB devices).
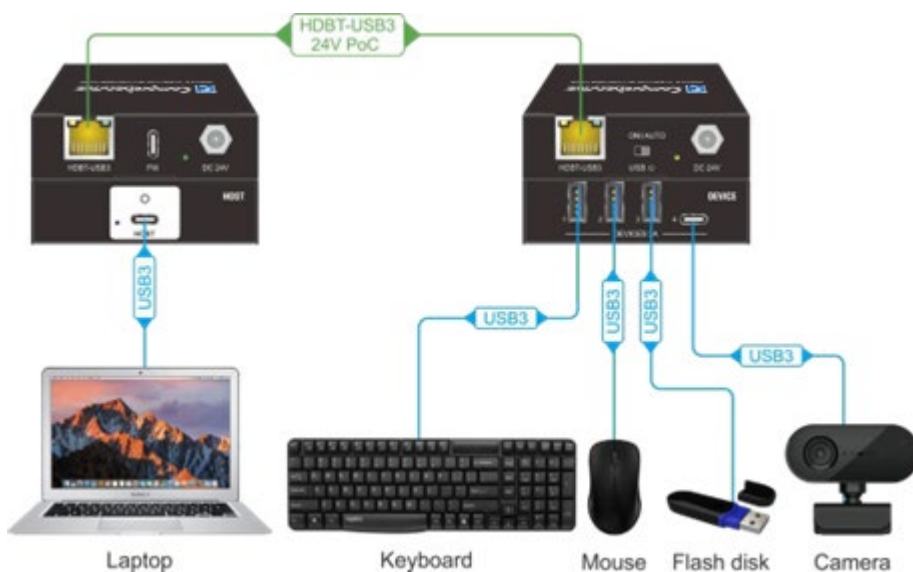
④ **DC 24V:** DC port for DC24V 1.5A power adapter connection.
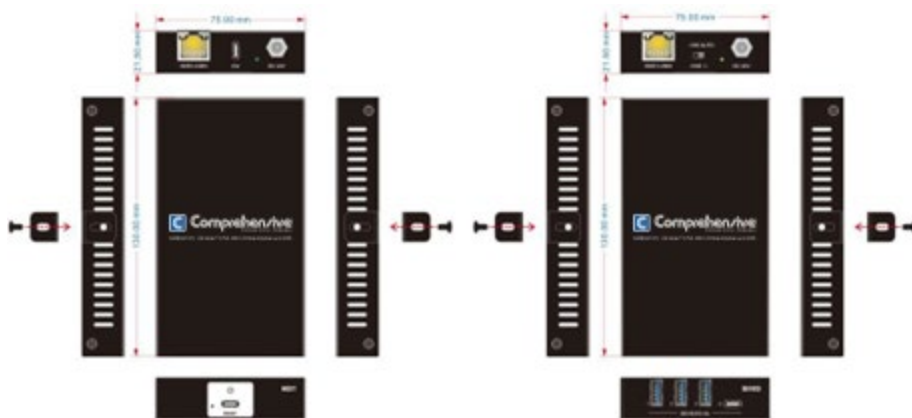
4. System Connection

4.1 Usage Precaution

● Make sure all components and accessories are included before installation.

● System should be installed in a clean environment with proper temperature and humidity.

● All of the power switches, plugs, sockets, and power cords should be insulated and safe.

4.2 System Diagram

5. Panel Drawing

80 Little Falls Road, Fairfield, NJ 07004

sales@comprehensiveco.com l 800.526.0242 l www.ComprehensiveCo.com