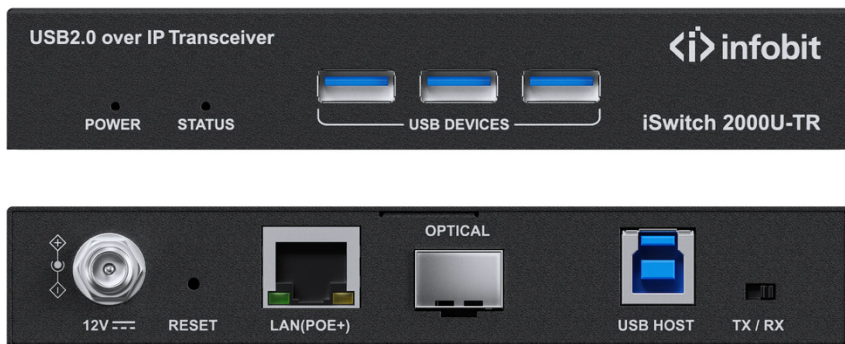


iSwitch 2000U-TR

USB over IP Transceiver

Datasheet V1.0



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1. INTRODUCTION

1.1 OVERVIEW

The **iSwitch 2000U-TR** is a USB 2.0 **transceiver** configurable as either a transmitter or a receiver for USB extension over Gigabit Ethernet. Fully interoperable with the **iSwitch 2000H/ 2000HC** series family, it offers a cost-effective solution for applications where only USB 2.0 signal extension is required.

1.2 FEATURES

- USB **transceiver** configurable as either transmitter or receiver.
- High-speed **USB 2.0** transmission over Gigabit Ethernet.
- Functions as a **local USB hub** with support for USB 3.2 Gen 2 in Transmitter mode.
- Supports **PoE 802.3at (PoE+)** for power supply via a remote PoE-capable switch.
- Supports **point-to-multipoint** application—up to seven remote USB peripherals can be associated with one transmitter in **USB over IP (USB over IP)** mode.
- Unlimited number of associated keyboards and mice in **Keyboard Mouse Over IP (KmoIP)** mode.
- Interoperable with the **iSwitch 2000H/ 2000HC** series family, providing an efficient and cost-effective solution for USB 2.0 signal extension.
- Supports **802.1x authentication**.
- Integrates with the IP controller (**iSwitch 2000-CTL**) for device management.

1.3 PACKAGE CONTENTS

- 1 x iSwitch 2000U-TR Transceiver Unit
- 1 x 12V DC 2A Power Adapter (US/EU/UK/AU)
- 2 x Wall-Mount Brackets
- 2 x Screws

1.4 SPECIFICATIONS

Technical	
USB Host	1 x USB 3.2 Gen 2 Type-B, 10Gbps
USB Device	- Local end: 3 x USB 3.2 Gen 2 Type-A, 10Gbps (applies to TX mode) - Remote end: 3 x USB 2.0 Type-A, 480Mbps (applies to RX mode)
LAN	1 x RJ45 (PoE+)
Control Methods	- DIP switch (for TX/RX configuration) - IP controller (iSwitch 2000-CTL) - Telnet API
General	
Operating Temperature/ Humidity	32°F – 113°F (0°C – 45°C), 10% – 90%, non-condensing
Storage Temperature/ Humidity	-4°F – 158°F (-20°C – 70°C), 10% – 90%, non-condensing
ESD Protection	Human body model: ±8kV (air-gap discharge) / ±4kV (contact discharge)

General	
Power Supply	12V DC; PoE+
Power Consumption	- No load: 2.2W - Max.: 18.5W (full load with 3A current)
Device Dimension (W x H x D)	5.51" x 0.93" x 3.54" (140 mm x 23.5 mm x 90 mm)
Net Weight	0.70lb (0.32kg)

2. PANEL OVERVIEW

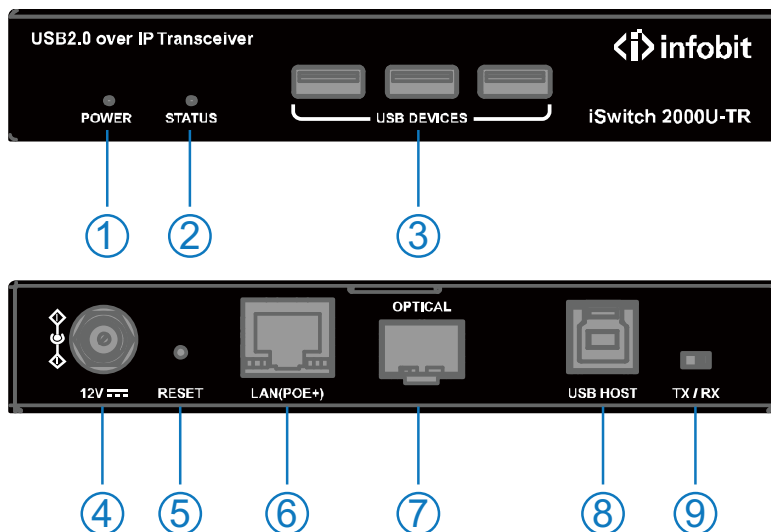


Figure 1: Front and Rear Panels

#	Name	Description
1	POWER LED	• On: The device is powered on. • Blinking: The device is booting. • Off: The device is powered off.
2	STATUS LED	For TX mode: • On: The device is powered on. • Blinking slowly: The device is being upgraded. • Blinking rapidly: The Find me function is activated through the control API to help locate a specific device. For more information, refer to the API documentation. For RX mode: • On: The device is connected to a network and associated with a valid USB transmitter. • Blinking: The device is connected to a network but associated with an invalid USB transmitter. • Blinking slowly: The device is being upgraded. • Blinking rapidly: The Find me function is activated through the control API to help locate a specific device. For more information, refer to the API documentation. • Off: The device is either not connected to the network or connected but not associated with any USB transmitter.
3	USB DEVICES	For TX mode: 3 x USB 3.2 Gen 2 Type-A ports. For RX mode: 3 x USB 2.0 Type-A ports. Connect to USB peripherals for USB extension.

#	Name	Description
		Note: - In TX mode, the device works as a local USB hub. - When powered by a DC adapter, the three ports share a total output current of 3A. - When powered by PoE, the three ports share a total output current of 2.5A.
4	12V	Connect to the included power adapter.
5	RESET	Press and hold the recessed button for at least five seconds, then release it to restore the device to factory default settings. Note: Restoring factory default settings erases all configurations and custom data. Back up any important settings before proceeding.
6	LAN(POE+)	Connect either the LAN (POE+) port or the Optical port to a Gigabit Ethernet switch for IP streaming and device control. Default IP mode: DHCP
7	OPTICAL	Note: - If both Ethernet ports are connected to the switch, the first detected connection takes priority. - Connect the Optical port to the network switch using a single-mode or multimode SFP module (not included). Transmission distance may vary based on the SFP module. - The LAN (POE+) port supports PoE+ power input from a PoE+ enabled switch, eliminating the need for a local adapter.
8	USB HOST	USB 3.2 Gen 2 Type-B port. Connect to the USB host device.
9	TX/RX	DIP switch for switching between TX and RX modes. Default: TX

Note: The device can be powered by either a 12V DC adapter or a PoE switch. When connected to both, it prioritizes the DC adapter over the PoE switch.

3. TYPICAL APPLICATIONS

3.1 POINT-TO-POINT APPLICATION

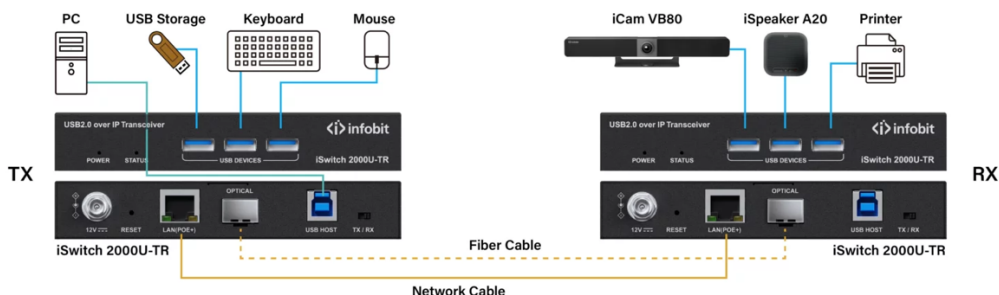


Figure 2: Point-to-Point Application

3.2 POINT-TO-MULTIPOINT APPLICATION

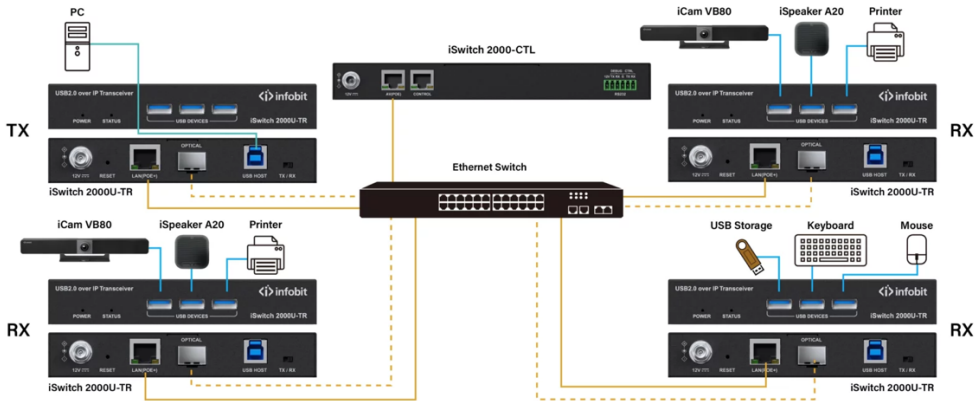


Figure 3: Point-to-Multipoint System Integration

3.3 AV OVER IP SYSTEM INTEGRATION

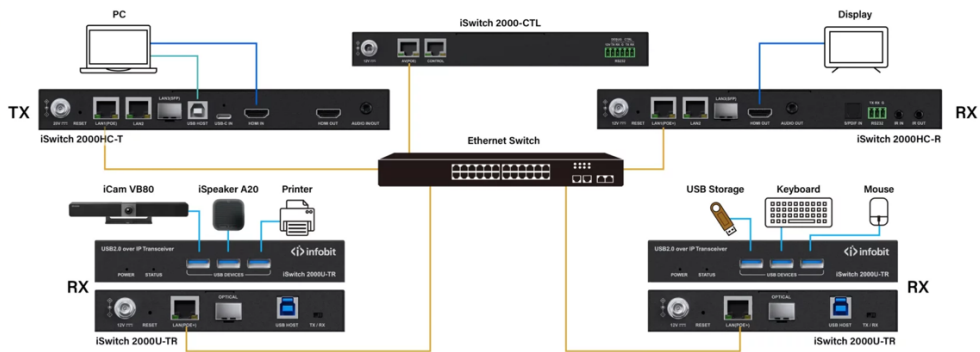


Figure 5: AV over IP System Integration