JINPAT

Since 1996

USB Slip Rings

www.jinpat-slipring.com

Features

USB2.0

- Supports high-speed transmission rates up to 480Mbps
- Integrates U3, E2, E3, SD1, SD2, HD signals, and general electrical/data signals
- Multi-channel integrated design, capable of combining power, video, control signals, etc.
- Compact structure, stable transmission, strong anti-interference ability
- Suitable for video surveillance, medical equipment, automation systems, etc.

USB3.0

- Supports ultra-high-speed data transmission up to 5Gbps
- High frequency, high bandwidth, suitable for HD video and large-capacity data transmission
- Can integrate U3, E2, E3, SD1, SD2, HD, and general signals
- Precision structure, providing low-loss, low-interference rotary connection solutions
- Suitable for industrial vision systems, robotics, HD display equipment, etc.

Customization & Services

JINPAT USB 2.0 and USB 3.0 slip rings provide stable data transmission at 480Mbps and up to 5Gbps, respectively, with minimal interference. Both support integration with various signal types, including U3, E2, E3, SDI (SD1/SD2), HD video, Ethernet, and standard power/control signals. The USB 2.0 slip ring is ideal for applications requiring compact size and multi-signal rotary connections, while the USB 3.0 slip ring is optimized for applications demanding ultra-fast and stable rotary transmission.

Selection table

USB3.0 Sliprings

Model	USB 3.0 Channels	Circuit Channels	Rated Voltage (V)	Dimensions (mm)		Customization Capabilities
				Outer Diameter	Length	
LPMS-01U3	1	0	0~48V AV/DC	φ7.6	19.1	U2/E2/E3/ SD1/SD2/S
LPMS-01U3-0301	1	3		φ7.98	22	
LPM-01U3	1	0	0~110V AV/DC	φ12.8	23.5	
LPM-01U3-1001-05S	1	10		φ16	37	
LPC-01U3-0502-10S	1	5	0~220V AV/DC	φ22	22	
LPC-02U3-0602	2	6		φ22	57.3	

USB2.0 Sliprings

Model	USB 2.0 Channels	Circuit Channels	Rated Voltage (V)	Dimensions (mm)		Customization Capabilities
				Outer Diameter	Length	
LPMS-01U2-0601-04S	1	6	0~48V AV/DC	φ7.6	19.1	E2/E3/SD1 /SD2/S
LPMS-02U2-0201-06S	2	2		φ7.98	22	
LPM-02U2-0402-04S	2	4	0~110V AV/DC	φ12.8	23.5	U3/E2/E3/SD1 /SD2/HD/S
LPM-04U2-0501-05S	4	5		φ16	37	
LPC-02U2-1002-16S	2	10	0~220V AV/DC	φ22	57.3	
LPC-08U2-1002-06S	8	10		φ25	85.7	

Signal Naming Chart

Signal Type Description

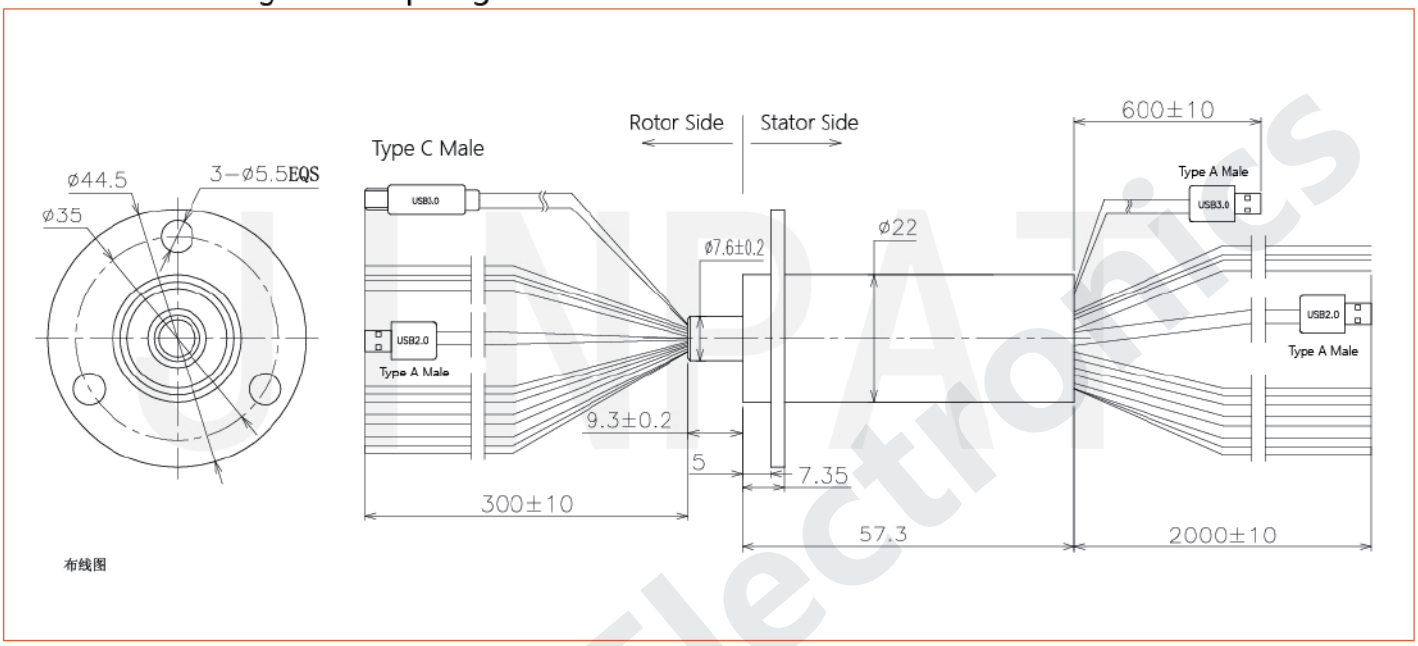
The signal arrangement follows the order of regular signals Þrst, followed by special signals (the sequence of all signals is arranged as shown in the table below).
Note: Any signal that is not categorized as a special signal is considered a regular signal.
Signal Naming Convention: LPC-DXX-Power-Regular Signal-Special Signal.

Signal Type	Signal Name	Naming	Remarks
Regular Signal	RS232/RS422/RS485/CANBus/ CC-Link/Inter Bus/DeviceNet/ ProÞBus/Control and Other Signals	S	Distinguishing the Number of Loops: X channels are speciÞed by OXS (including shielded rings) (for example, 4 channels of RS232 signals are denoted as 04S).
Special Signal	USB1.0	U1	Signal Groups: The X groups are represented by OXU1 (e.g., one group of USB 1.0 signals is denoted as 01U1).
	USB2.0	U2	Signal Groups: The X groups are denoted by OXU2 (e.g., two groups of USB 2.0 signals are represented as 02U2).
	USB3.0	U3	Signal Groups: The X groups are denoted by OXU3 (e.g., three groups of USB 2.0 signals are represented as 03U3).
	Intermediate Frequency Signal (Above 30MHz)	MF	Signal Groups: The X groups are denoted by OX MF (e.g., two groups of intermediate frequency signals are represented as 02MF).
	Ethernet Speed (10Mbps, 10 Megabit)	E1	Signal Groups: The X groups are denoted by OXE1 (e.g., one group of Ethernet signals is represented as 01E1).
	Ethernet Speed (10Mbps, Fast Ethernet)	E2	Signal Groups: The X groups are denoted by OXE2 (e.g., one group of Fast Ethernet signals is represented as 01E2).
	Ethernet Speed (1000Mbps, Gigabit Ethernet)	E3	Signal Groups: The X groups are denoted by OXE3 (e.g., one group of Gigabit Ethernet signals is represented as 01E3).
	Ethernet Speed (10000Mbps, 10 Gigabit Ethernet)	E4	Signal Groups: The X groups are denoted by OXE4 (e.g., one group of 10 Gigabit Ethernet signals is represented as 01E4).

Product Dimension Drawing

JINPAT

USB 2.0-3.0 Integration Slip ring SERIES



Rotating interface: The point where the rotating part meets the stationary part.

Customization options

Note: The following special requirements can be customized, JINPAT most of the basic accessories are standardized, modular, non-standard customization can also greatly reduce the cost and delivery time.

1、Customized rotor and stator outlet and outlet length

2、Due to structural limitations, can be customized in accordance with the speciÞed length or height or external diameter

3、Yasukawa, Panasonic, Siemens and other servo system signals, power lines, and encoder lines mixed slip ring

4、Mixed high-speed data transmission (including Ethernet, USB, RS232, RS485, Profbus, CanBUS, CANOPEN, DeviceNET, CANBUS, CANPUS). CANOPEN, DeviceNET, CC-LINK, ProÞNET, EtherCAT and other types of industrial lines).

5、Anti-shock, high temperature and other special environment customization

6、Can be mixed with pneumatic, hydraulic rotary joints integrated pneumatic-electrical-hydraulic slip ring

7、Military grade

8、Waterproof, underwater mode optional, IP65,IP68 optional

Signal Naming Chart

Signal Type	Signal Name	Naming	Remarks
Special Signal	Analog Video	AV	Signal Classiᵽcation by Channels: X channels of Analog Video are represented as 0XAV (for example, three channels are 03AV).
	SDI	SDI:HD-SDI /SD-SDI	Grouped by Category: X groups are represented as 0XSD1 (e.g., one group of HD-SDI is 01SD1).
		SD2:3G-SDI	Grouped by Category: X groups are represented as 0XSD2 (e.g., two groups of 3G-SDI is 02SD2).
		SD2:6G-SDI	Grouped by Category: X groups are represented as 0XSD3 (e.g., two groups of 6G-SDI is 02SD3).
		SD2:12G-SDI	Grouped by Category: X groups are represented as 0XSD4 (e.g., two groups of 12G-SDI is 02SD4).
	DP	DP	Grouped by Category: X groups are represented as 0XSDP (e.g., one group of DP signals is 01DP).
	HDMI	HD	Grouped by Category: X groups are represented as 0XHD (e.g., one group of HDMI signals is 01HD).
	Fiber Optic	FO (Fiber Optic) Indicator	Distinguished by Channels: X channels are represented as 0XFO (e.g., single-channel Fiber optic is 01FO, dual-channel Fiber optic is 02FO).
	High Frequency	LPCC Series High Frequency, HC Indicates	Distinguished by Channels: X channels are represented as 0XHC (e.g., single-channel Fiber optic is 01HC, dual-channel Fiber optic is 02HC).
		LPHF Series High Frequency, HF Indicates	Distinguished by Channels: X channels are represented as 0XHF (e.g., single-channel Fiber optic is 01HF, dual-channel Fiber optic is 02HF).