

USB-2020 Hardware User's Guide *Ver. 1.0*

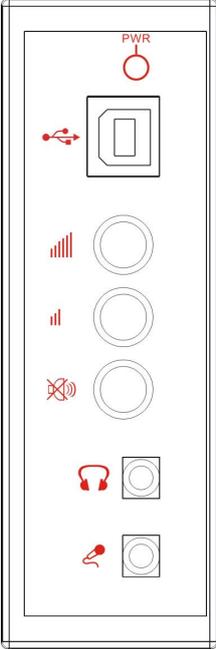
USB Audio Device with HID Last Modified 06/20/2009

USB-2020 Specification

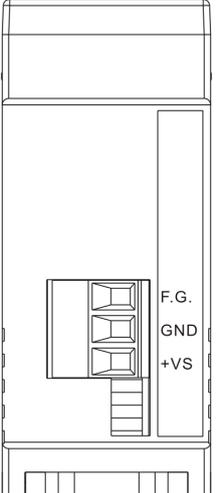
Audio Output 3.5mm stereo phone jack	
Output Channels	Mono, Stereo(L + R)
Resolution	8-bit, 16-bit
Sampling Frequency	32, 44.1, 48 kHz
THD+N	< 0.02% (0 dB), < 3% (-60dB)
SNR	> 87 dB
Output Voltage	3 Vrms
Output Current	30mA
Audio Input 3.5mm stereo phone jack	
Input Channels	Mono, Stereo(L + R)
Resolution	8 bits, 16 bits
Sampling Frequency	8, 11.025, 16, 22.05, 32, 44.1, 48 kHz
THD+N	<0.1% (0 dB)
SNR	> 80 dB
Input Voltage	1.4 Vrms
Input Impedance	10k Ohm
Condenser Microphone Bias	Yes
USB 1.1, 12MHz full-speed, fully compliant with USB 2.0 specification	
HID volume up, volume down and mute buttons	
External power input voltage 10 ~ 30 V DC	
Power consumption 1.8W max.	
Auto switching USB/External power	

USB-2020 Wire Connection

Front View

	Power LED	A red LED as power indicator
	USB Connector	B type, connect to Host(PC)
	Volume UP	HID buttons, link to system's mixer, only workable when your system has load audio mixer.
	Volume Down	
	Mute	
	Audio Out	Connect to earphone or speakers. Driving efficiency is 60mW, it can drive passive speakers directly.
	Audio In	Connect to Condenser Microphone

Bottom View

	F.G.	Frame Ground. It's optional. If you use this pin, it can reduce EMI radiation; improve EMI performance and ESD protection.
	GND	Power input (+10V ~ +30V DC). It's optional. If you use an external power, it can reduce noise from host's USB power, and get better audio performance.
	+Vs	