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micro iUSB3.0 / nano iUSB3.0 / iPurifier2 comparison

Technology		micro iUSB3.0	nano iUSB3.0	iPurifier2
Signal				
	USB3.0 Chipset Improved performance and fault tolerance over USB2.0. *Side Bar 1: USB3.0 chipsets*	✓	✓	USB2.0
	REclock®/REgenerate®/Rebalance® Re-clocks/Re-generates/Re-balances USB signal, recreates a 'perfect' USB signal. *Side Bar 2: USB Audio Class 2.0 (UAC2)*	✓	✓	✓
	Low Jitter Crystal Clock Oscillator True crystal clock for ultra-low Jitter in the all-important 'audio band.' *Side Bar 3: True Crystal Clocks*	✓	✓	✓
Power				
	PowerStation+® USB Power Supply as quiet as battery: 3-Stage Sub-sonic noise filters + 3-Stage 6th Order RFI noise filter.	✓	-	-
	PowerStation® USB Power Supply line for super low-noise: Sub-sonic noise filter + 2-Stage 4th Order RFI noise filter.	-	✓	-
	Active Noise Cancellation+® Extremely low noise floor (0.1uV) ANC+ circuit, lower noise than batteries. *Side Bar 4: Active Noise Cancellation*	✓	-	-
	Active Noise Cancellation® Very low noise floor (0.5uV) ANC circuit, comparable to batteries. *Side Bar 4: Active Noise Cancellation*	-	✓	✓
Feature				
	IsoGround® Eliminates Ground/Earth loops, reduces RF noise.	✓	RF only	RF only
	Dual-USB Output Ports Separate USB Port for Power only (allows use of dual-headed USB cable).	2 sets	1 set	-
	Auto USB Power USB Power Always ON or follow the status of the computer.	✓	✓	-
	RapidCharge (BC1.2) Super-fast USB charging.	✓ 2.5A	✓ 2.1A	-
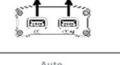
Side Bar 1: USB3.0 chipsets

USB3.0 chipsets are markedly superior to USB2.0 chipsets. This is in part due to improved IC construction processes that are needed to support the data rate of USB 3.0 which at 5GBPS, is 10x that of USB 2.0.

Side Bar 2: USB Audio Class 2.0

USB Audio Class 2.0 Devices are especially sensitive to data quality issues. Computer hard-disks work in 'Bulk Mode' which allows corrupt data to be re-sent and is extremely robust in terms of data integrity.

Audio/Video streaming requires real-time operation and hence no data can be re-sent even if corrupted. Further, the timing accuracy required is also much stringent than in 'Bulk Mode.'

Side Bar 3: True Crystal Clocks

True crystal clocks with a clean power supply offer around 100 femtoseconds jitter in the all-important audio band (20Hz-20kHz).

By comparison a SONET-derived Femto-Clock (US$50), has around 500 Femtoseconds jitter in this audio band.

Side Bar 4: Active Noise Cancellation

Active Noise Cancellation generates an opposite phase signal to the noise to cancel it. Due to its operation it also stops noise from the device being reverse-injected into the power supply or computer.