

## **Centurion Technologies**

## A quick note about USB classes

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## **USB Classes**

One of our customers recently brought to our attention that there is confusion about the USB classes listed in our USB blocking functionality. The customer wanted to know what would block when each class was blocked.

Blocked	f Function	^
	Unknown devices	
	Audio	
<ul> <li>Image: A start of the start of</li></ul>	Communications/CDC	
	Human Input Devices (Keyboard/Mouse)	
	Physical	
~	Image	
~	Printer	
~	Mass Storage	
	Hub	
~	CDC-Data	
~	Smart Card	
~	Content Security	
	Video	
	Personal Healthcare	
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Unfortunately, providing a list of every USB device and what class they belong to is impossible. There are cases when a keyboard is more than just a keyboard. We have a USB keyboard in our office that also has a smart card reader built into it. If you were to try to block the keyboard using the "Human Input Devices (Keyboard/Mouse)" blocking, the keyboard and mouse input would be blocked, but the smart card reader on the keyboard would still function until the "Smart Card" class was also blocked.

There are also cases where a device may not be what it appears. A digital camera normally appears as a "Mass Storage Device" when hooked up to a computer to download photos. However, it is possible to control digital cameras via software. We have seen instances where a digital camera hooked up to a computer registers as a "Personal Healthcare" device.



Centurion recommends taking a cautious approach when blocking USB devices. Protecting your computers and your users should be your first priority if you are unsure. The advanced USB blocking screen has a "Defaults" button which takes care of most cases. When in doubt, test a specific device or call our technical support line for assistance. We are always happy to talk to our customers!

Now for the list of USB devices I promised. This list is edited from information on Wikipedia.

Description	Examples
Unspecified <sup>[14]</sup>	(Device class is unspecified. Interface descriptors are used for determining the required drivers.)
Audio	Speaker, microphone, sound card, MIDI
Communications and CDC Control	Modem, Ethernet adapter, Wi-Fi adapter
Human interface device (HID)	Keyboard, mouse, joystick
Physical Interface Device (PID)	Force feedback joystick
Image	Webcam, scanner
Printer	Laser printer, inkjet printer, CNC machine
Mass storage	USB flash drive, memory card reader, digital audio player, digital camera, external drive
USB hub	Full bandwidth hub
CDC-Data	(This class is used together with class 02h—Communications and CDC Control.)
Smart Card	USB smart card reader
Content security	Fingerprint reader
Video	Webcam
Personal Healthcare	Pulse monitor (watch)
Diagnostic Device	USB compliance testing device
Wireless Controller	Bluetooth adapter, Microsoft RNDIS
Miscellaneous	ActiveSync device
Application-specific	IrDA Bridge, Test & Measurement Class (USBTMC), <sup>[15]</sup> USB DFU (Direct Firmware update) <sup>[16]</sup>
Vendor-specific	(This class code indicates that the device needs vendor specific drivers.)