

# System-Defined Device Setup Classes Available to Vendors

<https://docs.microsoft.com/en-us/windows-hardware/drivers/install/system-defined-device-setup-classes-available-to-vendors>

If you're writing a Windows device driver for a specific category of device, you can use the following list to select the right pre-defined values to use for the Class and ClassGuid entries in the [Version Section](#) of the driver's INF file.

Note:

If you're looking for info on reserved classes and GUIDs, see [System-Defined Device Setup Classes Reserved for System Use](#).

## Device categories and class values

### Audio Processing Objects (APOs)

Class = AudioProcessingObject

ClassGuid = {5989fce8-9cd0-467d-8a6a-5419e31529d4}

This class includes Audio processing objects (APOs). For more info, see [Windows Audio Processing Objects](#).

### Battery Devices

Class = Battery

ClassGuid = {72631e54-78a4-11d0-bcf7-00aa00b7b32a}

This class includes battery devices and UPS devices.

### Biometric Device

Class = Biometric

ClassGuid = {53D29EF7-377C-4D14-864B-EB3A85769359}

(Windows Server 2003 and later versions of Windows) This class includes all biometric-based personal identification devices.

### Bluetooth Devices

Class = Bluetooth

ClassGuid = {e0cbf06c-cd8b-4647-bb8a-263b43f0f974}

(Windows XP SP1 and later versions of Windows) This class includes all Bluetooth devices.

### Camera Device

Class = Camera

ClassGuid = {ca3e7ab9-b4c3-4ae6-8251-579ef933890f}

(Windows 10 version 1709 and later versions of Windows) This class includes universal camera drivers.

### CD-ROM Drives

Class = CDROM

ClassGuid = {4d36e965-e325-11ce-bfc1-08002be10318}

This class includes CD-ROM drives, including SCSI CD-ROM drives. By default, the system's CD-ROM class installer also installs a system-supplied CD audio driver and CD-ROM changer driver as Plug and Play filters.

### Disk Drives

Class = DiskDrive

ClassGuid = {4d36e967-e325-11ce-bfc1-08002be10318}

This class includes hard disk drives. See also the HDC and SCSIAdapter classes.

### Display Adapters

Class = Display

ClassGuid = {4d36e968-e325-11ce-bfc1-08002be10318}

This class includes video adapters. Drivers for this class include display drivers and video miniport drivers.

### Extension INF

Class = Extension

ClassGuid = {e2f84ce7-8efa-411c-aa69-97454ca4cb57}

(Windows 10 and later versions of Windows) This class includes all devices requiring customizations. For more details, see [Using an Extension INF File](#).

### **Floppy Disk Controllers**

Class = FDC

ClassGuid = {4d36e969-e325-11ce-bfc1-08002be10318}

This class includes floppy disk drive controllers.

### **Floppy Disk Drives**

Class = FloppyDisk

ClassGuid = {4d36e980-e325-11ce-bfc1-08002be10318}

This class includes floppy disk drives.

### **Hard Disk Controllers**

Class = HDC

ClassGuid = {4d36e96a-e325-11ce-bfc1-08002be10318}

This class includes hard disk controllers, including ATA/ATAPI controllers but not SCSI and RAID disk controllers.

### **Human Interface Devices (HID)**

Class = HIDClass

ClassGuid = {745a17a0-74d3-11d0-b6fe-00a0c90f57da}

This class includes interactive input devices that are operated by the system-supplied [HID class driver](#). This includes USB devices that comply with the [USB HID Standard](#) and non-USB devices that use a HID minidriver. For more information, see [HIDClass Device Setup Class](#). (See also the Keyboard or Mouse classes later in this list.)

### **IEEE 1284.4 Devices**

Class = Dot4

ClassGuid = {48721b56-6795-11d2-b1a8-0080c72e74a2}

This class includes devices that control the operation of multifunction IEEE 1284.4 peripheral devices.

### **IEEE 1284.4 Print Functions**

Class = Dot4Print

ClassGuid = {49ce6ac8-6f86-11d2-b1e5-0080c72e74a2}

This class includes Dot4 print functions. A Dot4 print function is a function on a Dot4 device and has a single child device, which is a member of the Printer device setup class.

### **IEEE 1394 Devices That Support the 61883 Protocol**

Class = 61883

ClassGuid = {7ebefbc0-3200-11d2-b4c2-00a0c9697d07}

This class includes IEEE 1394 devices that support the IEC-61883 protocol device class.

The 61883 component includes the *61883.sys* protocol driver that transmits various audio and video data streams over the 1394 bus. These currently include standard/high/low quality DV, MPEG2, DSS, and Audio. These data streams are defined by the IEC-61883 specifications.

### **IEEE 1394 Devices That Support the AVC Protocol**

Class = AVC

ClassGuid = {c06ff265-ae09-48f0-812c-16753d7cba83}

This class includes IEEE 1394 devices that support the AVC protocol device class.

### **IEEE 1394 Devices That Support the SBP2 Protocol**

Class = SBP2

ClassGuid = {d48179be-ec20-11d1-b6b8-00c04fa372a7}

This class includes IEEE 1394 devices that support the SBP2 protocol device class.

### **IEEE 1394 Host Bus Controller**

Class = 1394

ClassGuid = {6bdd1fc1-810f-11d0-bec7-08002be2092f}

This class includes 1394 host controllers connected on a PCI bus, but not 1394 peripherals. Drivers for this class are system-supplied.

### **Imaging Device**

Class = Image

ClassGuid = {6bdd1fc6-810f-11d0-bec7-08002be2092f}

This class includes still-image capture devices, digital cameras, and scanners.

### **IrDA Devices**

Class = Infrared

ClassGuid = {6bdd1fc5-810f-11d0-bec7-08002be2092f}

This class includes infrared devices. Drivers for this class include Serial-IR and Fast-IR NDIS miniports, but see also the Network Adapter class for other NDIS network adapter miniports.

### **Keyboard**

Class = Keyboard

ClassGuid = {4d36e96b-e325-11ce-bfc1-08002be10318}

This class includes all keyboards. That is, it must also be specified in the (secondary) INF for an enumerated child HID keyboard device.

### **Media Changers**

Class = MediumChanger

ClassGuid = {ce5939ae-ebde-11d0-b181-0000f8753ec4}

This class includes SCSI media changer devices.

### **Memory Technology Driver**

Class = MTD

ClassGuid = {4d36e970-e325-11ce-bfc1-08002be10318}

This class includes memory devices, such as flash memory cards.

### **Modem**

Class = Modem

ClassGuid = {4d36e96d-e325-11ce-bfc1-08002be10318}

This class includes [modem devices](#). An INF file for a device of this class specifies the features and configuration of the device and stores this information in the registry. An INF file for a device of this class can also be used to install device drivers for a *controllerless modem* or a *software modem*. These devices split the functionality between the modem device and the device driver. For more information about modem INF files and Microsoft Windows Driver Model (WDM) modem devices, see [Overview of Modem INF Files](#) and [Adding WDM Modem Support](#).

### **Monitor**

Class = Monitor

ClassGuid = {4d36e96e-e325-11ce-bfc1-08002be10318}

This class includes display monitors. An INF for a device of this class installs no device driver(s), but instead specifies the features of a particular monitor to be stored in the registry for use by drivers of video adapters. (Monitors are enumerated as the child devices of display adapters.)

### **Mouse**

Class = Mouse

ClassGuid = {4d36e96f-e325-11ce-bfc1-08002be10318}

This class includes all mouse devices and other kinds of pointing devices, such as trackballs. That is, this class must also be specified in the (secondary) INF for an enumerated child HID mouse device.

### **Multifunction Devices**

Class = Multifunction

ClassGuid = {4d36e971-e325-11ce-bfc1-08002be10318}

This class includes combo cards, such as a PCMCIA modem and netcard adapter. The driver for such a Plug and Play

multifunction device is installed under this class and enumerates the modem and netcard separately as its child devices.

### **Multimedia**

Class = Media

ClassGuid = {4d36e96c-e325-11ce-bfc1-08002be10318}

This class includes Audio and DVD multimedia devices, joystick ports, and full-motion video capture devices.

### **Multiport Serial Adapters**

Class = MultiportSerial

ClassGuid = {50906cb8-ba12-11d1-bf5d-0000f805f530}

This class includes intelligent multiport serial cards, but not peripheral devices that connect to its ports. It does not include unintelligent (16550-type) multiport serial controllers or single-port serial controllers (see the Ports class).

### **Network Adapter**

Class = Net

ClassGuid = {4d36e972-e325-11ce-bfc1-08002be10318}

This class consists of network adapter drivers. These drivers must either call [NdisMRegisterMiniportDriver](#) or [NetAdapterCreate](#). Drivers that do not use NDIS or NetAdapter should use a different setup class.

### **Network Client**

Class = NetClient

ClassGuid = {4d36e973-e325-11ce-bfc1-08002be10318}

This class includes network and/or print providers.

**Note** **NetClient** components are deprecated in Windows 8.1, Windows Server 2012 R2, and later.

### **Network Service**

Class = NetService

ClassGuid = {4d36e974-e325-11ce-bfc1-08002be10318}

This class includes network services, such as redirectors and servers.

### **Network Transport**

Class = NetTrans

ClassGuid = {4d36e975-e325-11ce-bfc1-08002be10318}

This class includes NDIS protocols CoNDIS stand-alone call managers, and CoNDIS clients, in addition to higher level drivers in transport stacks.

### **PCI SSL Accelerator**

Class = SecurityAccelerator

ClassGuid = {268c95a1-edfe-11d3-95c3-0010dc4050a5}

This class includes devices that accelerate secure socket layer (SSL) cryptographic processing.

### **PCMCIA Adapters**

Class = PCMCIA

ClassGuid = {4d36e977-e325-11ce-bfc1-08002be10318}

This class includes PCMCIA and CardBus host controllers, but not PCMCIA or CardBus peripherals. Drivers for this class are system-supplied.

### **Ports (COM & LPT ports)**

Class = Ports

ClassGuid = {4d36e978-e325-11ce-bfc1-08002be10318}

This class includes serial and parallel port devices. See also the MultiportSerial class.

### **Printers**

Class = Printer

ClassGuid = {4d36e979-e325-11ce-bfc1-08002be10318}

This class includes printers.

### **Printers, Bus-specific class drivers**

Class = PNPPrinters

ClassGuid = {4658ee7e-f050-11d1-b6bd-00c04fa372a7}

This class includes SCSI/1394-enumerated printers. Drivers for this class provide printer communication for a specific bus.

### **Processors**

Class = Processor

ClassGuid = {50127dc3-0f36-415e-a6cc-4cb3be910b65}

This class includes processor types.

### **SCSI and RAID Controllers**

Class = SCSIAdapter

ClassGuid = {4d36e97b-e325-11ce-bfc1-08002be10318}

This class includes SCSI HBAs (Host Bus Adapters) and disk-array controllers.

### **Security Devices** Class = Securitydevices

ClassGuid = {d94ee5d8-d189-4994-83d2-f68d7d41b0e6}

(Windows 8.1, Windows 10) This class includes [Trusted Platform Module](#) chips. A TPM is a secure crypto-processor that helps you with actions such as generating, storing, and limiting the use of cryptographic keys. Any new manufactured device must implement and enable TPM 2.0 by default. For more information, see [TPM Recommendations](#).

### **Sensors**

Class = Sensor

ClassGuid = {5175d334-c371-4806-b3ba-71fd53c9258d}

(Windows 7 and later versions of Windows) This class includes sensor and location devices, such as GPS devices.

### **Smart Card Readers**

Class = SmartCardReader

ClassGuid = {50dd5230-ba8a-11d1-bf5d-0000f805f530}

This class includes smart card readers.

### **Software Component**

Class = SoftwareComponent

ClassGuid = {5c4c3332-344d-483c-8739-259e934c9cc8}

(Windows 10 version 1703 and later versions of Windows) This class includes virtual child device to encapsulate software components. For more details, see [Adding Software Components with an INF file](#).

### **Storage Volumes**

Class = Volume

ClassGuid = {71a27cdd-812a-11d0-bec7-08002be2092f}

This class includes storage volumes as defined by the system-supplied logical volume manager and class drivers that create device objects to represent storage volumes, such as the system disk class driver.

### **System Devices**

Class = System

ClassGuid = {4d36e97d-e325-11ce-bfc1-08002be10318}

This class includes HALs, system buses, system bridges, the system ACPI driver, and the system volume manager driver.

### **Tape Drives**

Class = TapeDrive

ClassGuid = {6d807884-7d21-11cf-801c-08002be10318}

This class includes tape drives, including all tape miniclass drivers.

### **USB Device**

Class = USBDevice

ClassGuid = {88BAE032-5A81-49f0-BC3D-A4FF138216D6}

USBDevice includes all USB devices that do not belong to another class. This class is not used for USB host controllers and hubs.

### **Windows CE USB ActiveSync Devices**

Class = WCEUSBS

ClassGuid = {25dbce51-6c8f-4a72-8a6d-b54c2b4fc835}

This class includes Windows CE ActiveSync devices.

The WCEUSBS setup class supports communication between a personal computer and a device that is compatible with the Windows CE ActiveSync driver (generally, PocketPC devices) over USB.

### **Windows Portable Devices (WPD)**

Class = WPD

ClassGuid = {eec5ad98-8080-425f-922a-dabf3de3f69a}

(Windows Vista and later versions of Windows) This class includes WPD devices.

## **Recommended content**

### **1. USB Device Registry Entries - Windows drivers**

<https://docs.microsoft.com/en-us/windows-hardware/drivers/usbcon/usb-device-specific-registry-settings>

This topic describes the device-specific registry entries.

### **2. Generic Identifiers - Windows drivers**

<https://docs.microsoft.com/en-us/windows-hardware/drivers/install/generic-identifiers>

Generic Identifiers

### **3. Identifiers Generated by USBSTOR.SYS - Windows drivers**

<https://docs.microsoft.com/en-us/windows-hardware/drivers/install/identifiers-generated-by-usbstor-sys>

Identifiers Generated by USBSTOR.SYS

### **4. Standard USB Identifiers - Windows drivers**

<https://docs.microsoft.com/en-us/windows-hardware/drivers/install/standard-usb-identifiers>

Standard USB Identifiers