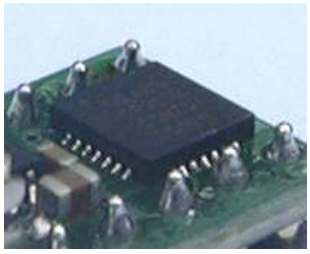
Windows USB Driver Installation

Installing the Virtual COM Port Driver on Windows.



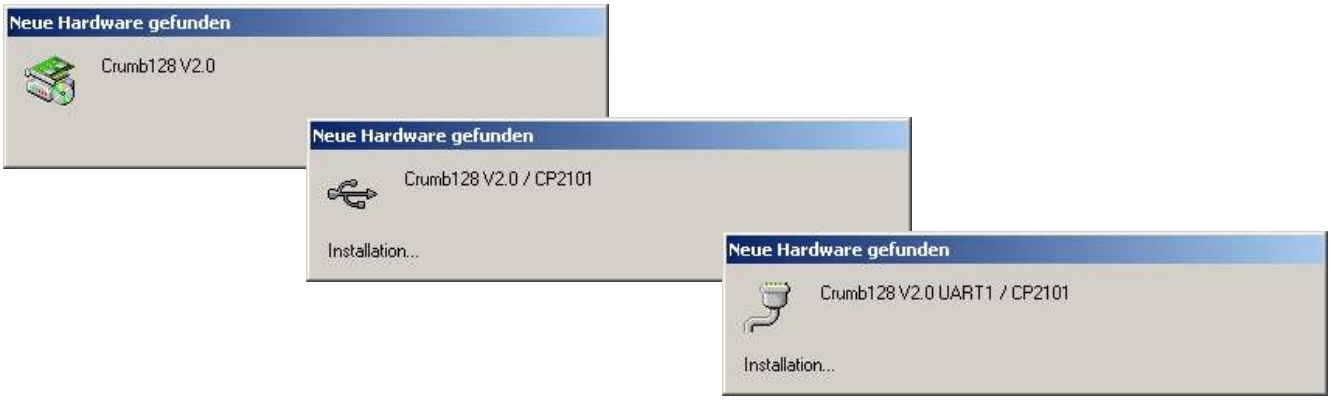
Several chip45.com products provide a USB 2.0 Full Speed interface based on Silicon Laboratories USB-to-UART bridge chip CP2101/2. On the module side, the CP2101 is connected to a UART of the microcontroller. In combination with a virtual COM port driver on the host side, a transparent serial communication path to the microcontroller is provided.

The USB driver should be installed on the PC prior to connecting the product via USB to the PC. If the driver was installed properly, the module is recognized correctly by the driver without the need of going through the "hardware wizard" procedure.

Downloading the USB driver – The latest version of the CP2101/2 USB driver is available at http://www.chip45.com on the product's download page. The original CP2101/2 USB driver is available at http://www.silabs.com, but you will have to manually point the "hardware wizard" to the correct .inf file. Using the chip45.com customized drivers is recommended!

Start the Installation – The following applies to all CP2101/2 based products, the name Crumb128 is referred to as an example. Unzip the file USB driver ZIP-file to some temporary directory and start the file PreInstaller.exe. The drivers are installed to C:\chip45.com\<product> by default, but you can choose any directory you prefer by selecting the Browse button. Selecting Install starts the installation procedure. If the installation completed successfully, an information box is shown. Selecting OK leaves the installation program. The driver is ready to accept connections immediately, no reboot is necessary.

Connecting the Crumb128 – When the driver installation is completed, the Crumb128 V2.0 module can be connected to any of the PC's USB ports. As soon as the module is connected, the "found new hardware" dialog boxes are shown (see below). The driver recognizes the Crumb128 V2.0 module by it's product name and PID.



Using the Virtual COM Port – Open "Control Panel -> System -> Hardware -> Device Manager / Systemsteuerung -> System -> Hardware -> Gerätemanager" to see the new devices created by the driver. A new entry under "USB-Controller" is created with the name "Crumb128 V2.0 / CP2101" as well as a new COM port named "Crumb128 V2.0 UART1 / CP2101" followed by the name of the virtual COM port (COM5 in the example below).

The new COM5 port can be used simlarly to a real COM port, i.e. the port can be used by a terminal program (e.g. Windows HyperTerm) and the serial port settings can be set to COM5, 115200, 8/N/1, no handshake and communcation with the Crumb128 module can be started. You can use the preinstalled bootloader of Crumb128 to test the communication (see IN001 Infosheet for activating the bootloader for USB communication).

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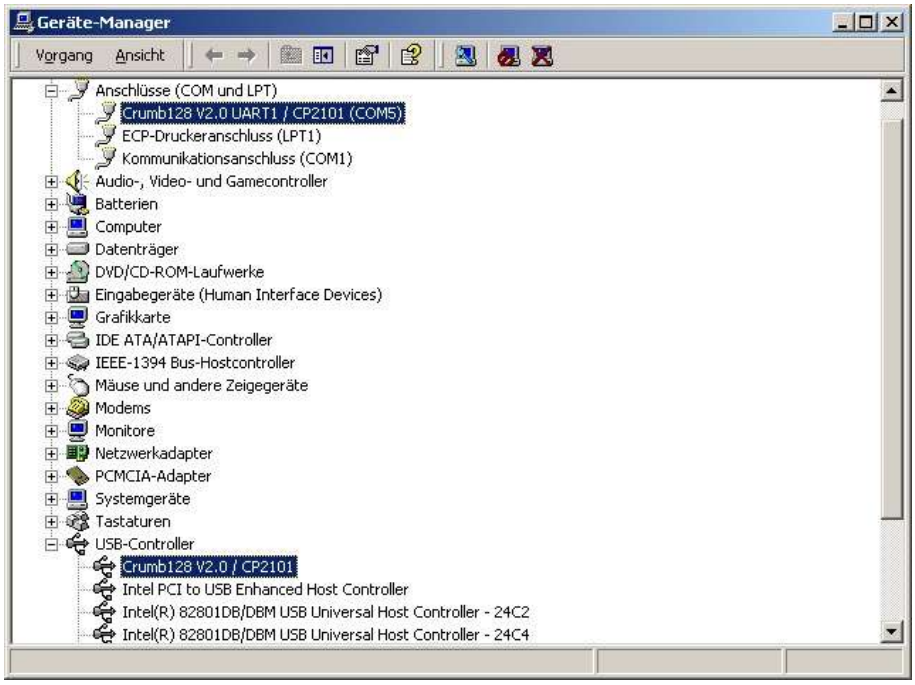
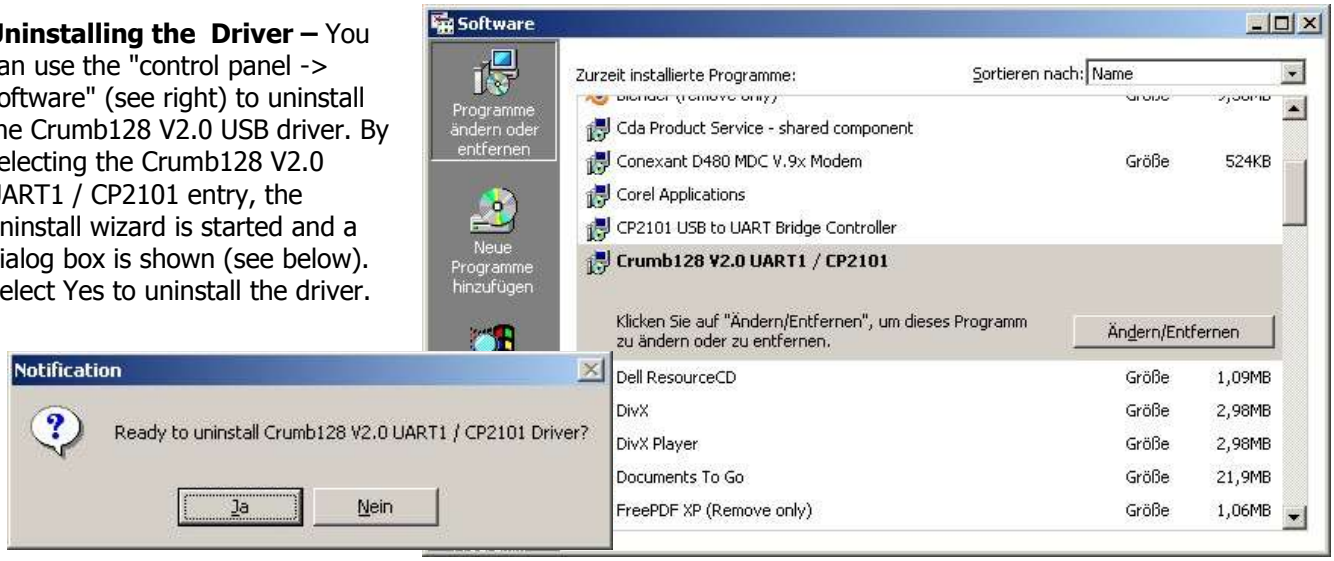


Uninstalling the Driver – You can use the "control panel -> software" (see right) to uninstall the Crumb128 V2.0 USB driver. By selecting the Crumb128 V2.0 UART1 / CP2101 entry, the uninstall wizard is started and a dialog box is shown (see below). Select Yes to uninstall the driver.



This will also remove all virtual COM ports from the device manager and restart numbering of virtual COM ports, in case you used more than one Crumb128 module at one host.

If you used other USB devices based on the CP2101 USB<->UART chip, the driver is shared among the installed devices and you are being noticed of that (see right). If you want to continue using the other CP2101 based devices, select No/Nein to keep the shared driver resource!

Further Information – You can visit Silicon Laboratories homepage (www.silabs.com) for information about the CP2101/2 USB-to-UART bridge chip. The data sheet for the CP2101/2 is also available at www.chip45.com.

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