

Connecting a Cobolt laser in Micro-manager

1. Install Micro-Manager on your computer
2. When starting Micro-Manager, you will be asked if you'd like to begin with a "Saved Configuration". Select "none" and continue to open the program.
3. Open "Hardware Configuration Wizard" from the Tools menu.
4. Select "New configuration" on the first screen and proceed with NEXT.
5. Select the "CoboltOfficial" device driver from the library. (Figure 1)
6. Select the correct COM port for your laser. (Figure 2)
7. Select BaudRate 115200. (Figure 3)
8. Continue with the device installation.

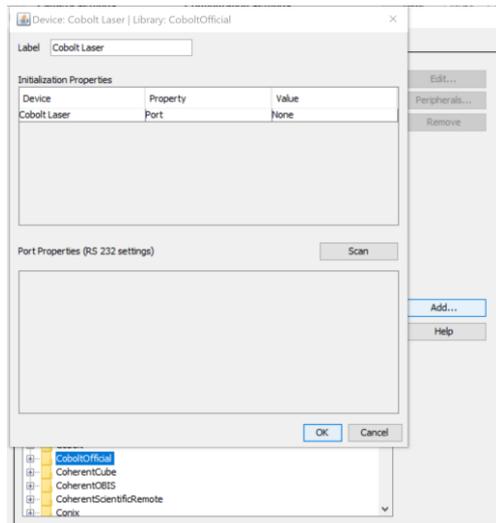


Figure 1: Select CoboltOfficial

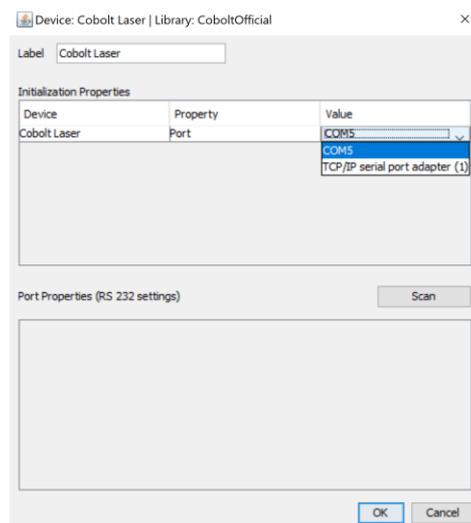


Figure 2: Select COM port

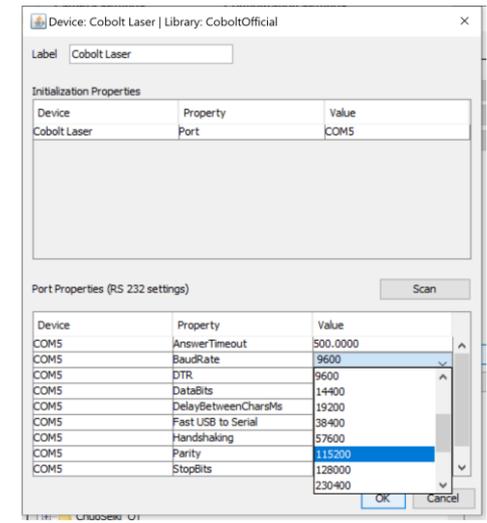
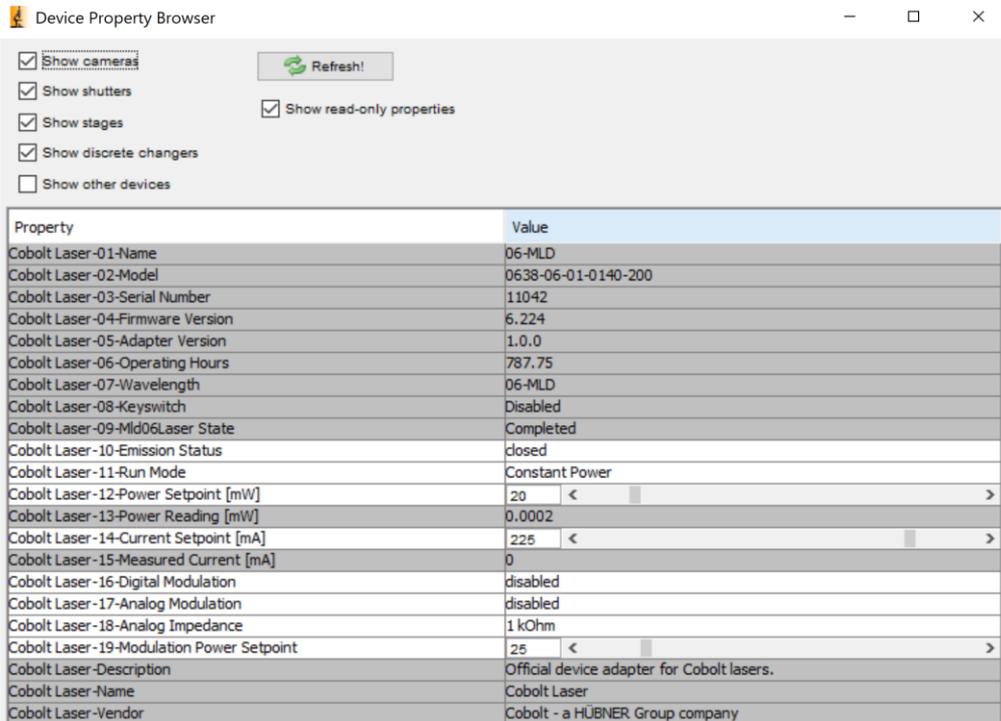


Figure 3: BaudRate 115200

Connecting a Cobolt laser in Micro-manager

1. After completing the installation, the Cobolt laser will be connected but NOT emitting. (Emission Status = Closed)
2. Open the "Device Property Browser" from the Tools Menu. The Device Property Browser is specific for the 06-01 Series or Cobolt Skyra and the device driver will recognize which type of laser is connected.
3. In the Device Property Browser window there will be controls to turn your Cobolt laser on, control the power, and change the laser operating mode ("Run Mode" :constant power, constant current, or modulation mode).
 - a. If you are controlling the laser modulation with an external function generator, it is necessary to put the Cobolt laser in "Modulation Mode" in this window.



The screenshot shows the "Device Property Browser" window with several checkboxes on the left: "Show cameras" (checked), "Show shutters" (checked), "Show stages" (checked), "Show discrete changers" (checked), and "Show other devices" (unchecked). A "Refresh!" button is also present. The main area is a table with the following data:

Property	Value
Cobolt Laser-01-Name	06-MLD
Cobolt Laser-02-Model	0638-06-01-0140-200
Cobolt Laser-03-Serial Number	11042
Cobolt Laser-04-Firmware Version	6.224
Cobolt Laser-05-Adapter Version	1.0.0
Cobolt Laser-06-Operating Hours	787.75
Cobolt Laser-07-Wavelength	06-MLD
Cobolt Laser-08-Keyswitch	Disabled
Cobolt Laser-09-Mld06Laser State	Completed
Cobolt Laser-10-Emission Status	closed
Cobolt Laser-11-Run Mode	Constant Power
Cobolt Laser-12-Power Setpoint [mW]	20
Cobolt Laser-13-Power Reading [mW]	0.0002
Cobolt Laser-14-Current Setpoint [mA]	225
Cobolt Laser-15-Measured Current [mA]	0
Cobolt Laser-16-Digital Modulation	disabled
Cobolt Laser-17-Analog Modulation	disabled
Cobolt Laser-18-Analog Impedance	1 kOhm
Cobolt Laser-19-Modulation Power Setpoint	25
Cobolt Laser-Description	Official device adapter for Cobolt lasers.
Cobolt Laser-Name	Cobolt Laser
Cobolt Laser-Vendor	Cobolt - a HÜBNER Group company

Tip! For comparison, a similar set of controls is available in the Cobolt Monitor GUI. It is a good practice to familiarize yourself with the Cobolt lasers by using the Cobolt GUI before trying to control via Micro-Manager.

Troubleshooting tip: The Cobolt Monitor GUI and Micro-Manager cannot be connected at the same time. The laser will only be recognized by one program at a time. If the laser is not connecting in Micro-Manager, check for other programs on the computer that may be communicating to the laser (ex: LabView, Cobolt Monitor, etc.)

Tip! Please refer to the Cobolt laser manual for information about how to control the lasers.

Micro-Manager is free and open source -- it is funded by a grant from the NIH (US National Institutes of Health). Please cite the use of Micro-Manager in your scientific publications. Images in this document are collected from Micro-Manager for instructional purposes.