

Cubloc Downloader

Utility for Deploying Cubloc User Programs
and Firmware without Cubloc Studio

User's Manual

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"Everything for Embedded Control"

COMFILE
TECHNOLOGY

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Introduction

The Cubloc Downloader is a .Net application that can be used to deploy firmware and user programs to the Cubloc without requiring Cubloc Studio.

The user interface source code is also included so customers can customize this feature specifically for their needs.

System Requirements

- Windows XP, Vista, 7 or 8
- .Net Framework 4.0

Theory of Operation

Cubloc user programs require a runtime to be executed, not unlike Java programs requiring the JVM, or .Net programs require the .Net CLR. This runtime is called "Firmware" in Cubloc Studio. The firmware for each Cubloc model can be found in the Cubloc Studio installation folder with a filename of schus[ModelNumber].\$\$\$\$. User programs manifest themselves as *.obj files.

The Cubloc Firmware is released with each version of Cubloc Studio. When downloading a user program, from within Cubloc Studio, it checks if the Cubloc Firmware currently present on the target device equals the Cubloc Firmware released with Cubloc Studio. Cubloc Studio does this with a Firmware Validation Code. If the Firmware Validation Code in Cubloc Studio is different from the Firmware Validation Code on the target device, Cubloc Studio will prompt the user to download the Cubloc Firmware in addition to the user program.

When deploying user programs, you will therefore need to supply the following 3 items:

- ✓ The user program's *.obj file
- ✓ The Cubloc Firmware's *.\$\$\$ file that the user program was compiled for
- ✓ The Firmware Validation Code for the Cubloc Firmware

Getting the Firmware Validation Code

The *.obj file and the Cubloc Firmware's *.\$\$\$ file are easily obtained from Cubloc Studio. However, the Cubloc Validation Code is not present in the user program's *.obj file, nor is it present in the *.\$\$\$ firmware files. Rather it is embedded in the Cubloc Studio program itself. Therefore, to download a user program without Cubloc Studio this Firmware Validation Code must be verified manually.

To get the Firmware Validation Code, open the Cubloc Downloader and press the "Query Device" button.

Creating Items for Deployment

This procedure describes how to obtain the necessary items needed to deploy a user program to a target Cubloc device.

1. Create a program using Cubloc Studio
2. Download the program to a test Cubloc device using Cubloc Studio. Download the firmware if necessary.
3. Obtain the Firmware Validation Code from the test Cubloc device using the procedure described above.
4. Obtain a copy of the *.obj file in Cubloc Studio from the "File"->"Save Object..." menu.
5. Obtain a copy of the appropriate *.\$\$\$ firmware file from Cubloc Studio's installation folder.

Deploying to Target Device

Once the Firmware Validation Code, the *.obj user program file, and the *.\$\$\$ firmware file are obtained, the Cubloc Downloader can be used to deploy these items to a target device.

1. Press the "Query Device" button to verify connectivity and ensure the Firmware Validation Code correct.
2. If the firmware validation code is not correct, use the "Firmware Download" feature to upgrade the target device's firmware.
3. Repeat step 1 and double-check the Firmware Validation Code..
4. If the Firmware Validation Code is correct, use the "Program Download" feature to download the *.obj user program to the target device.