itron Noritake

“GT-Clone” User’s Manual for GT-CP Series

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This manual is subject to change without prior notice.

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1. Environment for Using GT-Clone

Operating System

Microsoft Windows10

Environment

Required: .Net Framework 4.5

The WinUSB driver is required to connect to a GT-CP module.

We recommend using the WinUSB driver.

Note: The WinUSB driver is already installed on Windows8.1 and later.

Noritake Compatible Modules

- GTWQ043C3A00PA (F150 or later)
- GTWV050C3A00PA (F150 or later)
- GTWV070C3A00PA (F150 or later)

Installation

This tool does not require any software installation.

This software is intended for communication using the USB interface. However, it can also be used with a serial (UART) connection, but operations will take more time because of lower transfer speed.

2. Operation Overview

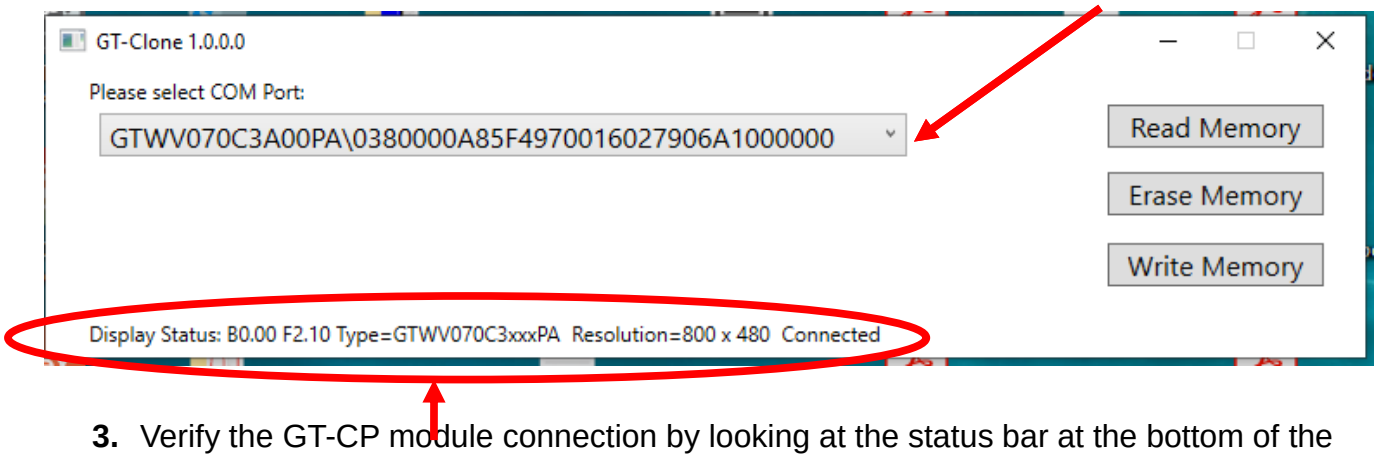
GT-Clone is intended for producers or integrators to transfer their final projects created with GTOMP or other software to GT-CP modules on a production line. The cloning process starts with obtaining the binary image of the tested and verified final design (Read Memory). This operation is time-consuming, but it is performed only once.

On the production line, only the Erase Memory and Write Memory functions are used.

3. Read Memory

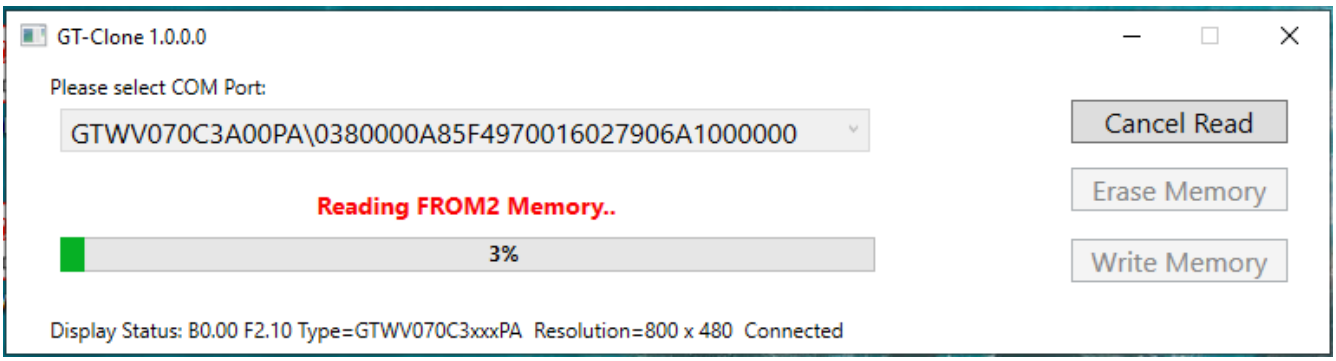
The Read Memory operation is started by clicking the Read Memory button. This creates a binary file containing the entire memory content of the connected module. Before clicking the button, ensure the following:

1. USB cable is connected to GT-CP module and module is powered.
2. Connected module is selected from the drop-down list ("Please select COM port:").



3. Verify the GT-CP module connection by looking at the status bar at the bottom of the GT-Clone tool window. The status bar should display basic information about the connected module.
4. Click the Read Memory button to start reading the connected module's memory contents.

   After you click on the Read Memory button, a standard "Save As..." dialog will pop up. Enter the location and name of the binary file, to which GT-Clone will write the connected GT-CP module's memory contents. Afterwards, the Read Memory operation will start.



It takes up to 60-70 minutes to read the GT-CP module's 256MB of internal memory. During that time, the progress bar shown above will indicate the operation's progress. The read operation can be canceled by clicking the Cancel Read button.

3. Erase Memory

The Erase Memory operation will erase the connected GT-CP module's FROM2 content. Note that this operation cannot be undone, so be careful.

To erase the GT-CP module's FROM2 memory:

1. Ensure the USB cable is connected to GT-CP module and module is powered.
2. Select the connected module from the drop-down list ("Please select COM port:")
3. Verify the GT-CP module connection by looking at the status bar at the bottom of the GT-Clone tool window. The status bar should display basic information about the connected module.
4. Click the Erase Memory button.

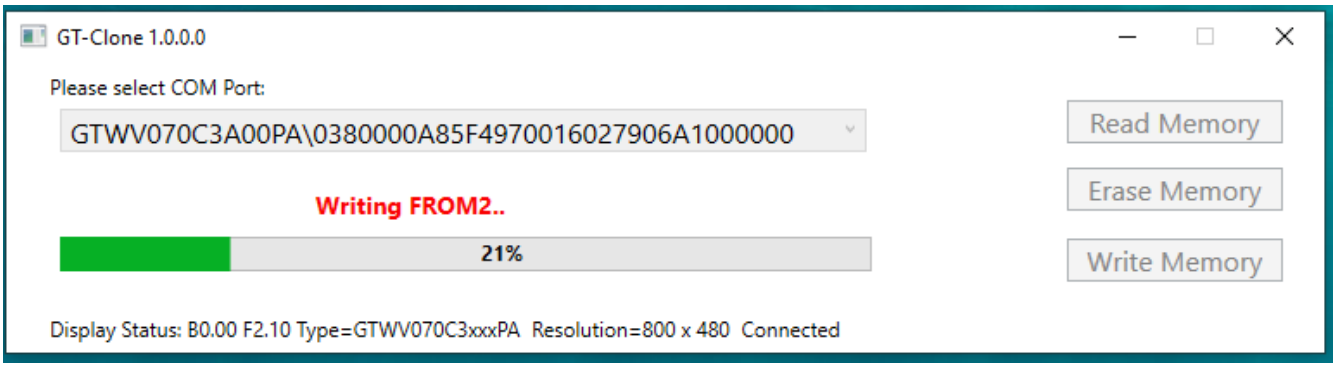
4. Write Memory

The Write Memory operation writes the contents of the binary file created during the Memory Read operation to the connected GT-CP module. If the operation is successful, it will create an exact copy ("clone") of the of the source GT-CP module's memory contents.

To write GT-CP module memory contents and create the "clone", do the following:

1. Ensure USB cable is connected to GT-CP module and module is powered.
2. Select the connected module from the drop-down list ("Please select COM port:")
3. Verify the GT-CP module connection by looking at the status bar at the bottom of the GT-Clone tool window. The status bar should display basic information about the connected module.
4. Click the Write Memory button.
5. Select the binary file created during the Read Memory operation.

The GT-Clone program will check the integrity of the binary file and verify that the connected GT-CP module is the exact same type as the source module. If there is no problem, the process of writing to the internal memory of the module will proceed.



The duration of the Write Memory operation will depend on size of the data to be written, but in general is much faster then the Read Memory operation.

To make another copy of the module, simply repeat steps 1 to 5.

Important!

Regarding Automatic Macro operation at power-on:

If the module to be read from (or erased / written to) is currently programmed with a Program Macro set to automatically start on power-on, and that Program Macro is not programmed to automatically stop when a command is received from the host, it is necessary to short pins 2 and 3 of connector CN8 on power-on to prevent the Program Macro from automatically running.