Generic Timer Module Configuration Tool

Overview

The Freescale generic timer module (GTM) configuration tool assists with the development of software for Freescale MCUs that contain the GTM IP. This is done by allowing the user to configure the GTM through an Eclipse-based GUI and using the settings to automatically generate initialization code for the GTM, which is run once by the CPU on initialization. The GTM IP is a data flow-driven, large scalable timer with a modular design and a centralized routing unit. The GTM configuration tool provides a GUI to configure the individual register sets within the GTM with the target goal of supporting specialized timer input and output signals in support of specific application goals such as 4, 5, 6 and 8 cylinder applications for powertrain, transmission and motor control, including angle clock generation. The system functionality of the GTM module is similar to that of the Freescale eTPU and eMIOS peripherals.

Development System Tools

The GTM Configuration tool generates code to initialize the GTM and contains examples supporting builds with HighTec®, GreenHills®, and WindRiver® compilers. The GUI layout is in three views:
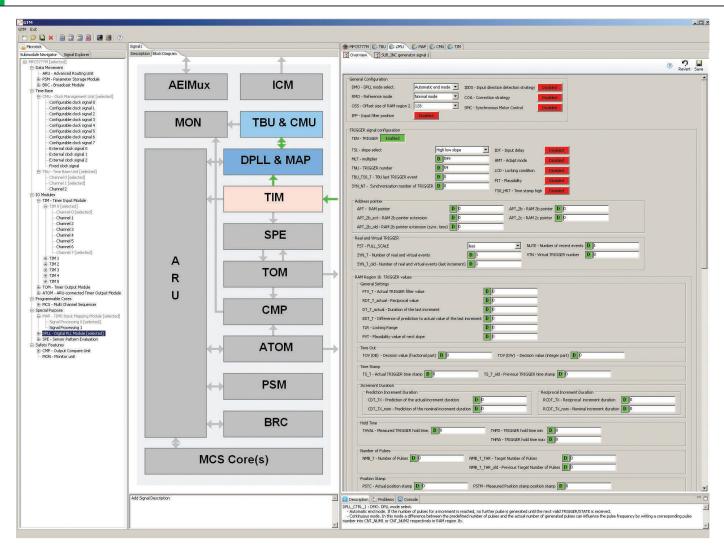
- The project view contains the list of projects that are open thru the use of windows. Under each project there are two windows. The submodule navigator contains a list of the all the GTM submodules down to the channel level so that the user can select the desired channel and drag the channel to the signal view to activate for use and configuration. The signal explorer contains a list of all signals/data flows constructed by the user down to the channel level so that the user can select the desired signal.

- The signal view contains the signals created by the user. The user is able to create new signals and name them here. When a signal is selected the corresponding registers become active and selectable.

- The register view contains the windows for the submodules down to the channel level. When a signal is selected the corresponding register window becomes visible and selectable. This view provides the user with the ability to manipulate the registers of the GTM to configure the desired behavior.

There are also project settings that allow the user to customize how the code is generated. Consistency check support is available so that a list of settings can show the user options that may not have been considered when configuring the GTM. The GTM configuration tool will also generate software to download a MCS software image to the MCS cores of the GTM.

GTM Configuration Tool Browser

Specifications

Host Platforms Windows Only

- Microsoft® Windows XP 32-bit & 64-bit (Professional Edition), or

- Microsoft Windows 7 32-bit & 64-bit (Home Premium Edition & Professional Edition), or

- Microsoft Windows 8 32-bit & 64-bit (Home Premium Edition & Professional Edition)

Qorivva MCU Device Support

- MPC5777M

System Requirements

Recommended Configuration

- 1.8 GHz Pentium® compatible processor

- 2.0 GB RAM

- 0.3 GB Hard disk space

- CD-ROM drive for installation

Support Policy

Online help and documentation includes:

- 12-month technical support

- Free 30-day evaluation license available

Standard Suite—GTM Configuration Tool

- Node Locked Part Number: GTM-CFG-TOOL-N

For more information, visit freescale.com/GTMconfigtool