



PmmC Loader User Guide

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INTRODUCTION

Personality Module Micro Code (PmmC)

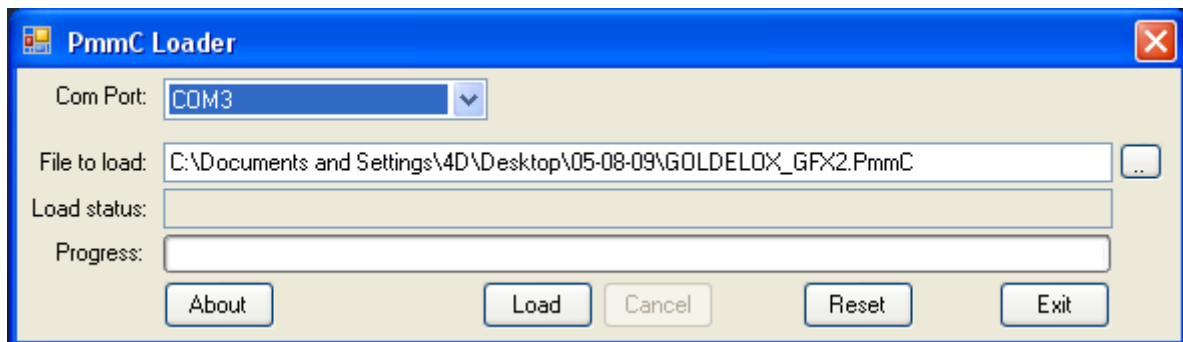
The GOLDELOX and the PICASO are highly integrated and configurable custom processors. The internal architectures of both are constructed of high level functional blocks that is controlled and supervised by EVE (Extensible Virtual Engine).

EVE is a proprietary, high performance virtual processor engine with an extensive byte-code instruction set optimised to execute compiled 4DGL programs. It is the heart of the GOLDELOX and the PICASO processors. This implementation across a variety of architectures provides a single unified platform. The same application code developed under 4DGL for the GOLDELOX can run on any other 4D custom processor such as the PICASO.

The combined blocks of EVE, the built-in graphics and system functions and the low level drivers make up and define the personality of the GOLDELOX and the PICASO (analogy to that of a soft silicon). This is referred to as the Personality-module-micro-Code or PmmC for short. Future enhancements to the chip level configuration or any of the functional blocks can easily be accommodated with a new PmmC file which can then be uploaded and programmed into the GOLDELOX or the PICASO by the user.

PmmC Loader

The PmmC-Loader is a MS Windows based software tool to aid in programming the GOLDELOX and the PICASO processors with PmmC system files. The PmmC file is uploaded and programmed into the processor via its hardware Serial Port.



SYSTEM REQUIREMENTS

- The PmmCLoader.exe application. The latest version can be downloaded from:
www.4dsystems.com.au/downloads/PmmC-Loader/Software/Windows/
- Microsoft Windows Operating System (XP, Vista) that supports the .Net framework version 2.0 or higher.
- .Net Framework version 2.0 or higher. If your existing Windows operating system does not have this installed then a free version can be downloaded and installed from [here](#).
- Real serial port (with serial to TTL level conversion circuitry) or micro-USB (μ USB-MB5 and μ USB-CE5). The μ USB-MB5 and the μ USB-CE5 are fully supported by the PmmC Loader. These micro-USB modules provide a direct hardware serial link between the PC and the GOLDELOX/PICASO based modules. Latest information can be found on the individual product [pages](#):
- micro-USB drivers. These drivers must be installed to provide the virtual serial link between the PC and the mentioned micro-USB modules. Please check for the latest drivers on the relevant product page.
- The target GOLDELOX or PICASO based hardware module that supports PmmC system file uploads. The following is a short list of processors that can be updated with the PmmC file:
 - Goldelox GFX
 - Goldelox GFX2
 - Goldelox SGC
 - Goldelox DOS
 - Picaso GFX
 -
- Check for the latest relevant PmmC file, with an extension of .pmmc, on the specific product [page](#).

GETTING STARTED

- Make sure the Windows .Net environment is running on your system. If not then download and install the latest .Net Framework from the link mentioned above.
- Connect your micro-USB module via the USB cable.
- Download and install the latest micro-USB drivers and make sure to note the com port allocated by your PC by checking “Device Manager”, “Ports”.
- Download the specific PmmC System file for your module to a convenient location on your PC.
- Download and install the PmmCLoader.exe application.
- Connect your target 4D module to the micro-USB module.
- Now run the PmmCLoader.exe application. Make sure to specify the correct com port for the micro-USB module in the “Com Port” dialog box.
- Specify the location of the previously downloaded PmmC file in the “File to load” dialog box or click the browse button on the right hand side and search for the location.
- When ready to transfer the PmmC file to the target 4D module, click the “Load” button. The progress bar will indicate downloading progress.
- ‘Load Status’ label displays text messages. Error and status messages are displayed here.
- Once the file is transferred successfully, you will receive a message ‘Programmed Successfully’. Your module is now ready to be used with the latest PmmC.
- In case of problems check your connections and repeat the process. If the problems persist, contact support@4dsystems.com.au for technical support.

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