



Scripting Utilities Enhance the EM405-8 Ethernet M-Module Carrier / Bridge

The scripting utilities of the EM405-8 Ethernet M-Module Carrier/Bridge provide enhanced programming capabilities allowing the user to embed software on the bridge itself to improve performance and further integrate a set of M-modules.

By embedding a script or a set of scripts on the EM405-8, the burden for monitoring, configuring and controlling the M-modules is taken off the network and placed onto the EM405-8's embedded processor. Thus providing significant performance improvements and allowing the EM405-8 and associated M-modules to be more easily customized and integrated for a specific application.

Overview:

The EM405-8 Ethernet M-Module carrier easily bridges up to eight (8) standard M-Modules to a typical Ethernet (LAN) network.

The scripting utilities, based on the interpretive language Lua[†], provide a powerful tool for utilizing the intelligence of the EM405-8. EM405-8 specific extensions to the Lua language make controlling the bridge and associated M-modules from custom scripts very straightforward. Developing a script does not require complex development tools nor does it require advanced knowledge of embedded programming.

Mass Storage Option

The mass storage option of the EM405-8 provides non-volatile storage of scripts, supporting files and collected data. It also provides for the feature of a startup script allowing the EM405-8 to boot into a custom configuration and begin monitoring and controlling the M-Modules autonomously.

Key Features

The EM405-8 implementation of scripting contains all the basics of Lua including all standard libraries, as well as EM405-8 specific extensions. Key features include:

- Lua 5.1 language interpreter
- Lua 5.1 standard libraries (math, table, string, i/o, etc.)
- EM405-8 extensions to control M-modules and EM405-8 utilities
- Call existing M-module drivers and other libraries via Alien Library
- Store and retrieve data to/from mass storage device (mass storage is an EM405-8 option)
- Create custom commands and pass data over the Ethernet interface
- Create custom web pages to be served by the EM405-8
- Configure startup script for autonomous operation
- TCP/IP raw socket interpreter for development
- Develop scripts using any text editor. No compilation required
- Network based commands to use and manage scripts (store, retrieve, run, halt, etc.)

Additional Information:

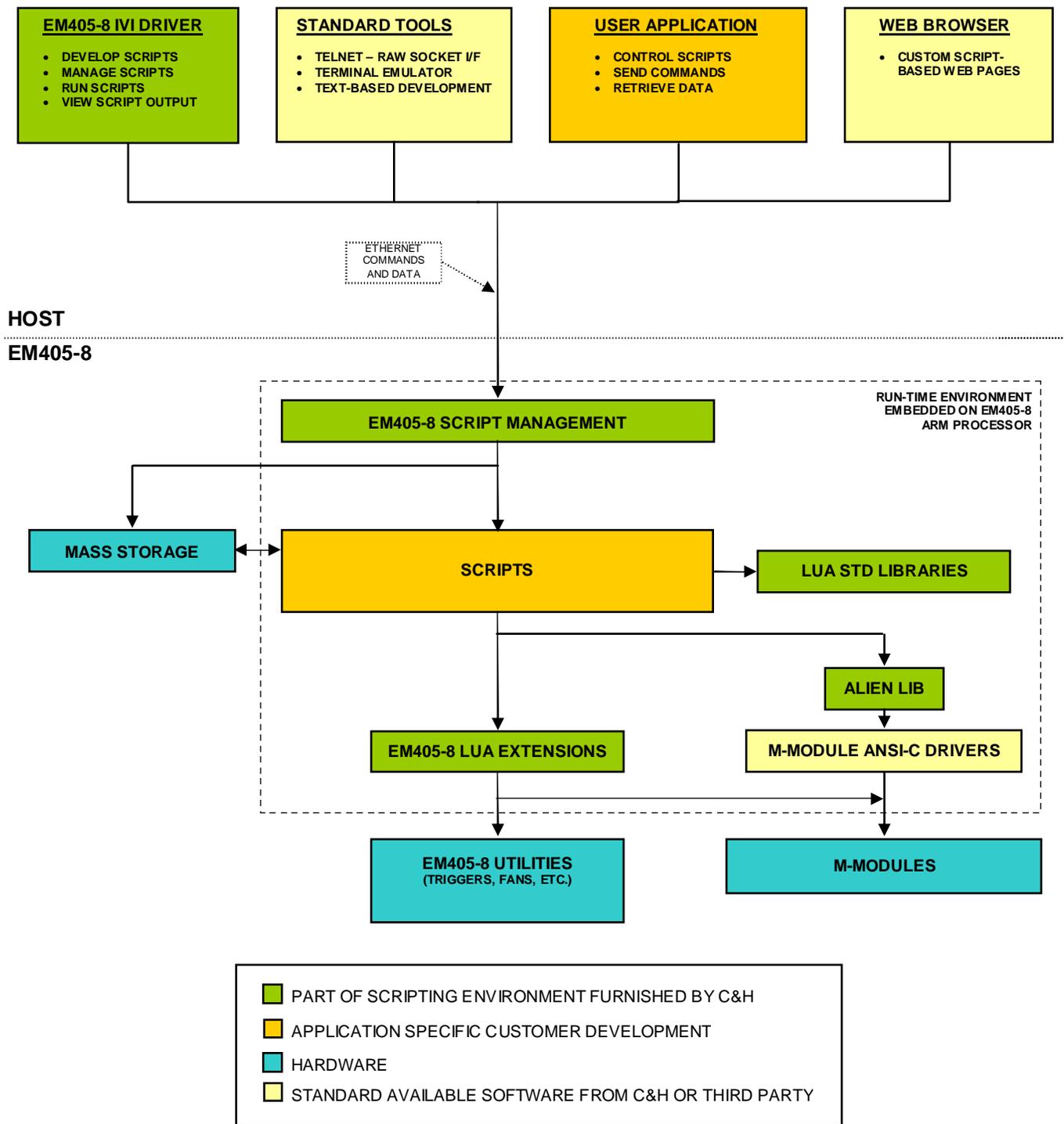
Data sheets and user manuals for the EM405-8 including the EM405-8 Scripting Manual can be found on C&H's website at www.chtech.com

Ordering Information:

The scripting utilities come standard with all EM405-8 M-Module carriers. The EM405-8 Ordering Information is as follows:

- Part Number: 11029380-xxxx**
- 0001 with triggers
 - 0002 without triggers
 - 0003 triggers / 16GB Drive
 - 0004 no trigger / 16GB Drive

* Non-volatile storage of scripts is available with the -0003 or -0004 ordering option or configured products that include the mass storage option.



EM405-8 Scripting Utilities Architecture Diagram

† Lua is an open source, interpretive programming language designed, implemented, and maintained by a team at PUC-Rio in Brazil. Lua is Copyright © 1994-2008 Lua.org, PUC-Rio.