

# MapleSystems

## Product Brochure



### Operator Interfaces for Industry



*Introducing*  
**The NEW**  
**HMC**

HMC = HMI + PLC

**Now Available!**

**A Combination  
HMI, PLC and I/O  
that reduces:**

- **Hardware Costs**
- **Development Time**
- **Space Requirements**



# Graphic HMC

## HMC — Blending an HMI with a PLC

To lower costs, save space, simplify control operations, and fully integrate HMI and PLC functionality, Maple Systems has created an all-in-one device called the HMC. Simply defined:

$$\text{HMC} = \text{HMI} + \text{PLC}$$

Human Machine Controller = Human Machine Interface + Programmable Logic Controller



*HMC7057A-M*  
5.7" 6-Key Graphic HMC  
w/ touchscreen color display



*HMC7035A-M*  
3.5" 6-Key Graphic HMC  
w/ touchscreen color display



*HMC7030A-M (or A-L)*  
3" 18-Key Graphic HMC  
w/tri-color LCD display

## HMC7000 Series



*Plug-in I/O module*

Maple's HMC7000 Series Graphic HMCs give you many different module options for I/O. Choose from various configurations of digital and analog inputs and outputs.

The 5.7 inch Graphic HMC can hold up to 5 modules while the 3.5 inch and 3 inch models can hold up to 3 modules.

### Hardware Features Include:

- Vivid LCD displays
- Touchscreen and function key input
- NEMA4/IP65, CE, RoHS, cULus Listed
- Class I, Division 2
- Serial port (RS-232/422/485)
- USB port (programming)
- Analog and Digital I/O

### Software Features Include:

- One easy-to-use configuration software (MAPware)
- Ladder logic editor with powerful instruction set
- Full support for digital and analog I/O
- Image library with support for importing bitmaps
- Data monitoring and ladder monitoring
- Recipes, data logging, trends, alarms, gauges, lamps, buttons, bargraphs, high-speed counters and timers, multi-language support

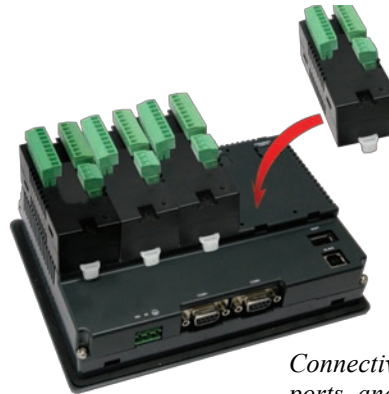
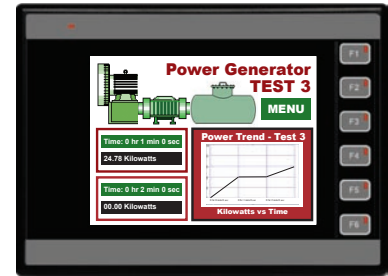
## Fully Integrated Hardware and Software

Increase I/O capabilities by attaching various plug-in modules to the expansion ports on the back of the Graphic HMC. This I/O is fully integrated with all aspects of the HMC.



Attach up to five I/O Modules on the 5.7 inch Graphic HMC, and up to three modules on the 3.0 inch and 3.5 inch models.

The front of Maple's Graphic HMC combines a touchscreen interface with six function keys for direct input.



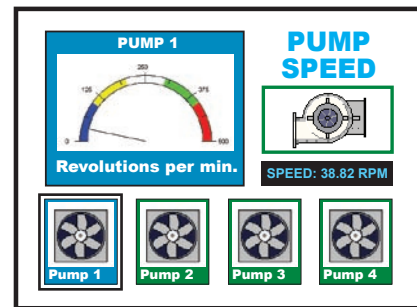
Plug in I/O Modules to the expansion ports on the back of the HMC.

## Visual Interface of an HMI to Command Full I/O Capabilities of a PLC

Maple's HMC7000 series consists of HMCs with 3", 3.5" and 5.7" displays with function keys on the bezel. The 3.5" and the 5.7" models also have touchscreens.



Create intuitive screens using a wide selection of graphic objects. Make easy-to-read analog panel instrumentation including switches, buttons, gauges, warning lights, and alarms.



Objects and screens can be configured with multiple 'tasks' commands that perform predefined functions such as changing screens, writing values to registers, or setting coils.



All models have 6 function keys. The 3" model (above) also has 12 numeric input keys.

**CLASS I  
DIVISION 2**

The entire HMC7000 Series including all I/O modules are Class I Division 2 rated and therefore are a great choice for extreme environments and temperatures.

# Graphic HMC



## HMC7000 Graphic HMC

Part Number	HMC7030A-L	HMC7030A-M	HMC7035A-M	HMC7057A-M
Display Size	2.7"	2.7"	3.5"	5.7"
Display Resolution (pixels)	128 x 64	128 x 64	320 x 240	320 x 240
Color	Tri-Color	Tri-Color	32K	32K
Contrast Ratio	3:1	3:1	700:1	350:1
Backlight	LED	LED	LED	LED
Touchscreen	No	No	Yes	Yes
Function Keys	6	6	6	6
12 Digit Numeric Keypad	Yes	Yes	No	No
Total Memory	1.5 MB	1.5 MB	8 MB	8 MB
Memory	Application	1 MB	1 MB	6 MB
	PLC	64 KB	64 KB	960 KB
USB Ports	Host	0	1	1
	Slave	1	1	1
Serial Ports	1	1	1	2
RTC	Yes	Yes	Yes	Yes
Power Requirement	24VDC, 125mA	24VDC, 125mA	24VDC, 167mA	24VDC, 417mA
Configuration Software	MAPware 7000	MAPware 7000	MAPware 7000	MAPware 7000
Certifications	Class I Division 2	Class I Division 2	Class I Division 2	Class I Division 2
Protection	IP65 (NEMA4X)	IP65 (NEMA4X)	IP65 (NEMA4X)	IP65 (NEMA4X)
I/O Modules	Local I/O	Up to 3 Plug-in I/O Modules	Up to 3 Plug-in I/O Modules	Up to 5 Plug-in I/O Modules
Dimensions (W x H x D)	5.04" x 4.02" x 1.77"	5.04" x 4.02" x 1.77"	5.04" x 4.02" x 1.77"	7.68" x 5.59" x 1.97"

\* Specifications subject to change without notice. Configuration software sold separately.

HMC7000 I/O Expansion Modules						
Part Number	HMC7-MIO-1	HMC7-MIO-2	HMC7-MO-1	HMC7-MI-1	HMC7-MI-2	HMC7-MIO-3
Description	8 Digital Inputs 8 Digital Outputs (NPN type)	8 Digital Inputs 8 Digital Outputs (PNP type)	12 Digital Relay Outputs	16 Digital Inputs	4 Analog Inputs	2 Analog Inputs 2 Analog Outputs
Digital Inputs	8 Bidirectional Optically Isolated	8 Bidirectional Optically Isolated	N/A	14 Bidirectional Optically Isolated and 2 High Speed	N/A	N/A
Digital Input	24 Volts DC	24 Volts DC	—	N/A	—	—
Current	5 mA	5 mA	—	5 mA	—	—
Impedance	4.9K $\Omega$	4.9K $\Omega$	—	4.9K $\Omega$	—	—
Min. "On"	15 Volts DC	15 Volts DC	—	15 Volts DC	—	—
Max. "Off"	5 Volts DC	5 Volts DC	—	5 Volts DC	—	—
Turn On/Off	10msec	10msec	—	10msec	—	—
Digital Outputs	8 NPN type (sink)	8 PNP type (source)	12 Relay	N/A	N/A	N/A
Current	5 mA	5 mA	2A	—	—	—
Capacity	500 mA max.	500 mA max.	230VAC/30VDC	—	—	—
Rated Load	500 mA@24VDC	500 mA@24VDC	230VAC/2A	—	—	—
Analog Inputs (12 bit)	N/A	N/A	N/A	N/A	4	2
Analog Input Specifications (Voltage mode)	—	—	—	—	Input Range: -10 V to +10V, 0-10V LSB Value: 2.44mV@0-10V, 4.88mV@+10V Impedance: 200K $\Omega$ Freq. Limit: 3.5KHz	Input Range: -10 V to +10V, 0-10V LSB Value: 2.44mV@0-10V, 4.88mV@+10V Impedance: 200K $\Omega$ Freq. Limit: 3.5KHz
Analog Input Specifications (Current Mode)	—	—	—	—	Input Range: 4mA-10mA, 0mA-20mA LSB Value: 3.906 $\mu$ A Impedance: 120 $\Omega$	Input Range: 4mA-10mA, 0mA-20mA LSB Value: 3.906 $\mu$ A Impedance: 120 $\Omega$
Analog Outputs (12 bit)	N/A	N/A	N/A	N/A	N/A	2
Analog Output Specifications (Voltage Mode)	—	—	—	—	—	Output Range: 0-10V LSB Value: 2.44mV Output Load: 1000 $\Omega$
Analog Output Specifications (Current Mode)	—	—	—	—	—	Output Range: 4mA-20mA, or 0mA-20mA LSB Value: 3.906 $\mu$ A or 4.8 $\mu$ A Output Load: 500 $\Omega$

\* Specifications subject to change without notice.