

C O N T R O L L E R I N F O R M A T I O N S H E E T

Maple Model(s)	PLC or Controller
HMI5000 Series	Compumotor Gemini GV6 Series



Summary

Maple Systems' Silver HMI5000 Series Operator Interface Terminals (Maple HMIs) communicate with the Gemini GV6 Controllers using the Compumotor 6000 and 6K Series protocol. When configured **with** EZware-5000, the Maple HMI is the Master in a point-to-point single master, single slave format.

Compatible PLCs

Controller Family	Controller Model
Gemini	GV6

Communications Cable

The Maple HMI should be connected to the RS-232/RS-485 serial communications port on the Compumotor controller. A list of communications cables offered by Maple Systems as well as cable assembly instructions to assist you in assembling your own communications cable are available on our website at www.maplesystems.com.

WARNING *If your communications cable is not wired exactly as shown in our cable assembly instructions, damage to the HMI or loss of communications can result.*

PLC Settings

Name	Setting	Options	Important Notes
Serial Port I/F:			The Controller has DIP switches to select the RS232 or RS485 settings.
COM1, AUX	RS232	No options	
COM2	RS232	RS485	
Baud Rate:	9600	1200, 2400, 4800, 9600, 19200	Must match the HMI <i>Configuration</i> setting. Use the fastest baud rate supported by both.

Name	Setting	Options	Important Notes
Data Bits:	8	No options	Must match the HMI <i>Configuration</i> setting.
Parity:	None	No options	Must match the HMI <i>Configuration</i> setting.
Stop Bits:	1	No options	Must match the HMI <i>Configuration</i> setting.

Use the following code in the Gemini controller:

```
ECHO1 ;ECHO ON
EOT13,10,62 ;DEFINE 'END OF
TRANSMISSION' CHARS ERBAD13,10,63,0 ;DEFINE 'ERROR' PROMPT
ERROK13,10,62,0 ;DEFINE 'GOOD' PROMPT
ERRLVL3 ;ERROR LEVEL 3
```

This code should be at the top of the Gemini program.

Accessible Controller Commands and Memory

The following tables list the Controller commands and memory ranges that Maple's HMIs are able to access: (Please note that your Controller's memory range may be *smaller* or *larger* than that supported by Maple Systems' HMIs.)

Register Memory

The following table lists the controller's register memory ranges that Maple HMIs are able to access.

Controller Register	Address	Format	Access	Data Range
VAR	1-225	BIN, 2-word	R/W	<u>±</u> 999,999,999.99999999
VARI	1-225	BIN, 2-word	R/W	<u>±</u> 2,147,483,648

Discrete Memory

The following table lists the controller's discrete memory ranges that Maple HMIs are able to access.

Since the HMI can address a maximum of 16 bits per register, the VARB's 32 bit registers are split into two (High and Low) 16 bit registers. The VARB(H)1-125 and VARB(L)1-125 are 125x16x2=4000 bit registers. This is the same quantity as VARB1-125 (125x32=4000).

The address number must specify both the register and the bit:

VARB(L) 12300 = VARB123, bit 0

VARB(L) 12315 = VARB123, bit 15

VARB(H) 12300 = VARB123, bit 16

VARB(H) 12315 = VARB123, bit 31

Controller Register	Address	Format	Access	Data Range
VARB (H)	100-12515	dddbb	R/W	0 = On, 1 = Off
VARB (L)	100-12515	dddbb	R/W	

Run Command:

The Maple HMIs have the ability to run programs that are stored in the Compumotor controller. Using EasyBuilder's Set Word object, select "RUN PRG" for the Device Type, 0 for the Device Address, and select "BIN" for format. For the Attribute, select "Set Constant" for style and enter the number 1 to 999 that refers to the program's name (prefixed by "PRG") stored in the Compumotor. When pressed during operation, the program of the same name in the Compumotor will run.

Controller program	Program #	Format	Comments
PRG (RUNPRG)	1-999	RUNPRG, BIN, SetConstant=1	Use "PRGxxx"(xxx=1- 999) as controller program name.

Important Memory Considerations

If your PLC's memory range is smaller than the range supported by the Maple HMIs, it is possible to configure the HMI to monitor a PLC memory address which does not exist. Since this can cause unpredictable results, when you configure the HMI please ensure that all selected PLC memory addresses are valid for your PLC model.

Do not configure the HMI to write to any PLC memory address which should only be written to by the PLC.

If the controller is busy while the HMI is requesting information, it may prevent communications and cause a communications error to be displayed on the HMI.

EZware Settings

The following table lists the communications settings that must be configured in EZware. These settings can be found in the *Edit-System Parameters* menu under the *Device* tab. Please note:

- The **Recommended Settings** column provides the recommended setting based upon the default settings most commonly used in the Compumotor devices.
- The **Options** column lists EZware's options; your PLC may not support every option.

Name	Recommended Settings	Options	Important Notes
Name:	Compumotor		Description label
HMI or PLC	PLC		
Location	Local	Local, Remote	Select <i>Local</i> if PLC directly connected to HMI, <i>Remote</i> if PLC connected thru another HMI.
PLC type	Compumotor		
PLC I/F:	RS232	RS-232, RS-485 2W, RS-485 4W, Ethernet	Must match the PLC port setting.
PLC default station no.:	1	0-255	Must match the default station no. assigned to the PLC.
Settings:	COM 1	COM1-COM3	Serial port of HMI connected to PLC.
Settings: Baud rate:	9600	9600, 19200, 38400, 57600, 115200	Must match the PLC's port setting. Use the fastest baud rate supported by the PLC.
Settings: Data bits:	8	7 or 8	Must match the PLC's port setting.
Settings: Stop bits:	1	1 or 2	Must match the PLC's port setting.
Settings: Parity:	None	Even, Odd, None	Must match the PLC's port setting.
Settings: Timeout (sec)	3.0	0.1 to 25.5	Adjust if longer timeout is required.
Settings: Turn around delay (ms)	0	0-1000	Timeout period between HMI polls.
Settings: Send ACK Delay:	0		Not Applicable
Settings: Parameter 1:	0		Not Applicable
Settings: Parameter 2:	0		Not Applicable
Settings: Parameter 3:	0		Not Applicable

Name	Recommended Settings	Options	Important Notes
Interval of block pack words	0	0-512	See <i>HMI5000 Series Programming Manual</i> (Maple p/n 1010-1007)
Max. read-command size (words):	2		Not Adjustable
Max. write-command size (words):	2		Not Adjustable