CONTROLLER INFORMATION SHEET

Compumotor

Gemini GV6 Series

Overview

Maple Systems' Silver Series/HMI500 Series Operator Interface Terminals (Maple OITs) communicate with the Gemini GV6 Controllers using the Compumotor 6000 and 6K Series protocol. When configured **with** EZware-500, the Maple OIT is the Master in a point-to-point single master, single slave format.

Compatible Controllers

Controller Family	Controller Model
Gemini	GV6

Communications Cable

The Maple OIT should be connected to the RS-232/RS-485 serial communications port on the Compumotor Controller. Refer to Technical Note 1061 for information on communication cable part numbers and cable assembly instructions. If you will be assembling your own communications cable, cable assembly instructions are also available on our web site at www.maple-systems.com.

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

Controller 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 OIT Configuration setting. Use the fastest baud rate supported by both.
Data Bits:	8	No options	Must match the OIT Configuration setting.
Parity:	None	No options	Must match the OIT Configuration setting.
Stop Bits:	1	No options	Must match the OIT Configuration setting.

Use the following code in the Gemini controller:

```
ECHO1                    ;ECHO ON
EOT13,10,62              ;DEFINE 'END OF TRANSMISSION' CHARS
ERRBAD13,10,63,0         ;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 OITs are able to access: (Please note that your Controller's memory range may be ***smaller*** or ***larger*** than that supported by Maple's OITs.)

Register Memory:

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

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

Discrete Memory:

The following table lists the controller's discrete memory ranges that Maple OITs 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 OITs 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 (RUN PRG)	1-999	RUN PRG, BIN, SetConstant=1	Use "PRGxxx"(xxx=1-999) as controller program name.

Important Controller Memory Considerations

If your controller's memory range is smaller than the range supported by Maple's OITs, it is possible to configure the Maple OIT to monitor a memory address, which does not exist. Since this can cause unpredictable results, when you configure the Maple OIT please ensure that all selected memory addresses are valid for your controller model.
Do not configure the Maple OIT to write to any memory address, which should only be written to by the controller.
If the controller is busy while the OIT is requesting information, it may prevent communications and cause a communications error to be displayed on the OIT.

EZware-500 Settings

The following table lists the communications settings that must be configured in EZware-500. These settings can be found in the Edit-Set System Parameters menu under the PLC tab. Please note:

- The **Recommended Settings** column lists EZware-500's recommended setting; your controller's default may be different
- The **Options** column lists EZware-500's options; your controller may not support every option

Name	Recommended Settings	Options	Important Notes
PLC Type:	Compumotor 6K		
Serial Port I/F:	RS232	RS232, RS485	
Data Bits:	8	7, 8	Must match the controller's configuration settings.
Stop Bits:	1	1, 2	Must match the controller's configuration settings.
Baud Rate:	9600	9600, 19200, 38400, 57600, 115200	Must match the controller's configuration settings. Use the fastest baud rate supported by both.
Parity:	None	Even, Odd, None	Must match the controller's configuration settings.
HMI station No:	0		Does not apply to this protocol.
PLC station No:	1	1, 2	Must match the controller port #.
Multiple HMI:	Disable	Disable, Master, Slave	Use for multiple OITs.
HMI-HMI link speed	38400	38400, 115200	Use for multiple OITs
PLC time out constant:	3.0	1.5 to 5.0	Adjust if longer time out is required
PLC block pack:	0	0-10	See Silver Series Installation and Operation Manual.