

OptoControl Commands

Digital Point

- Clear All Latches
- Clear Counter
- Clear Off-Latch
- Clear On-Latch
- Clear Quadrature Counter
- Generate N Pulses
- Get & Clear Counter
- Get & Clear Off-Latch
- Get & Clear On-Latch
- Get & Clear Quadrature Counter
- Get & Restart Off-Pulse Measurement
- Get & Restart Off-Time Totalizer
- Get & Restart On-Pulse Measurement
- Get & Restart On-Time Totalizer
- Get & Restart Period
- Get Counter
- Get Frequency
- Get Off-Latch
- Get Off-Pulse Measurement
- Get Off-Pulse Measurement Complete Status
- Get Off-Time Totalizer
- Get On-Latch
- Get On-Pulse Measurement
- Get On-Pulse Measurement Complete Status
- Get On-Time Totalizer
- Get Period
- Get Period Measurement Complete Status
- Get Quadrature Counter
- Off?
- Off-Latch Set?
- On?
- On-Latch Set?
- Set TPO Percent
- Set TPO Period
- Start Continuous Square Wave
- Start Counter
- Start Off-Pulse
- Start On-Pulse
- Start Quadrature Counter
- Stop Counter
- Stop Quadrature Counter
- Turn Off
- Turn On

Analog Point

- Calculate & Set Analog Gain
- Calculate & Set Analog Offset
- Get & Clear Analog Filtered Value
- Get & Clear Analog Maximum Value
- Get & Clear Analog Minimum Value
- Get & Clear Analog Totalizer Value
- Get Analog Filtered Value
- Get Analog Maximum Value
- Get Analog Minimum Value
- Get Analog Square Root Filtered Value
- Get Analog Square Root Value
- Get Analog Totalizer Value
- Ramp Analog Output
- Set Analog Filter Weight
- Set Analog Gain
- Set Analog Offset
- Set Analog Totalizer Rate
- Set Analog TPO Period

Miscellaneous

- Comment (Block)
- Comment (Single Line)
- Continue Timer
- Delay (mSec)
- Delay (Sec)
- Down Timer Expired?
- Generate Reverse CRC-16 on Table (32 bit)
- Get Length of Table
- Move
- Move From Table Element
- Move Table Element to Table
- Move to Table Element
- Pause Timer
- Set Down Timer Preset Value
- Set Up Timer Target Value
- Shift Table Elements
- Start Timer
- Stop Timer
- Timer Expired?
- Up Timer Target Time Reached?

I/O Unit

- Configure I/O Unit
- Get Digital I/O Unit As Binary Value
- Get Digital-64 I/O Unit As Binary Value
- Get Mixed I/O Unit As Binary Value
- I/O Unit Ready?
- Move Analog I/O Unit to Table
- Move Digital I/O Unit to Table
- Move Digital I/O Unit to Table Element
- Move Mixed I/O Unit to Table
- Move Table Element to Digital I/O Unit
- Move Table to Analog I/O Unit
- Move Table to Digital I/O Unit
- Move Table to Mixed I/O Unit
- Set Digital I/O Unit from MOMO Masks
- Set Digital-64 I/O Unit from MOMO Masks
- Set Mixed I/O Unit from MOMO Masks
- Set I/O Unit Configured Flag
- Set Number of Retries to All I/O Units
- Write I/O Unit Configuration to EEPROM

Controller

- Add User Error to Queue
- Add User I/O Unit Error to Queue
- Calculate & Store Strategy CRC
- Calculate Strategy CRC
- Caused A Chart Error?
- Caused An I/O Unit Error?
- Clear All Errors
- Clear PC Byte Swap Mode (ISA only)
- Disable I/O Unit Causing Current Error
- Enable I/O Unit Causing Current Error
- Error on I/O Unit?
- Error?
- Get Address of I/O Unit Causing Current Error
- Get Controller Address
- Get Controller Type
- Get Error Code of Current Error
- Get Error Count
- Get Firmware Version
- Get ID of Block Causing Current Error
- Get Name of Chart Causing Current Error
- Get Name of I/O Unit Causing Current Error
- Get Port of I/O Unit Causing Current Error
- Get RTU/M4IO Temperature
- Get RTU/M4IO Voltage
- Low RAM Backup Battery?
- Read Byte From PC Memory (ISA only)
- Read Byte From PC Port (ISA only)
- Read Word From PC Memory (ISA only)
- Read Word From PC Port (ISA only)
- Remove Current Error and Point to Next Error
- Reset Controller
- Retrieve Strategy CRC
- Set PC Byte Swap Mode (ISA only)
- Write Byte to PC Memory (ISA only)
- Write Byte to PC Port (ISA only)
- Write Word to PC Memory (ISA only)
- Write Word to PC Port (ISA only)

Chart

- Call Chart
- Calling Chart Running?
- Calling Chart Stopped?
- Calling Chart Suspended?
- Chart Running?
- Chart Stopped?
- Chart Suspended?
- Continue Calling Chart
- Continue Chart
- Get Chart Status
- Get Priority
- Get Priority Of Host Task
- Host Task Received A Message?
- Set Priority
- Set Priority Of Host Task
- Start Chart
- Start Default Host Task
- Start Host Task (ASCII)
- Start Host Task (Binary)
- Stop Chart
- Stop Chart on Error
- Stop Host Task
- Suspend Chart
- Suspend Chart on Error
- Suspend Default Host Task

Time/Date

- Copy Date to String (DD/MM/YY)
- Copy Date to String (MM/DD/YY)
- Copy Time to String
- Get Day
- Get Day of Week
- Get Hours
- Get Julian Day
- Get Minutes
- Get Month
- Get Seconds
- Get Seconds Since Midnight
- Get System Time
- Get Year
- Set Date
- Set Day
- Set Day of Week
- Set Hours
- Set Minutes
- Set Month
- Set Seconds
- Set Time
- Set Year

String

- Append Character to String
- Append String to String
- Convert Float to String
- Convert Hex String to Number
- Convert IEEE Hex String to Number
- Convert Number to Formatted Hex String
- Convert Number to Hex String
- Convert Number to String
- Convert Number to String Field
- Convert String to Float
- Convert String to Integer 32
- Convert String to Integer 64
- Convert String to Lower Case
- Convert String to Upper Case
- Find Character in String
- Find Substring in String
- Generate Checksum on String
- Generate Forward CCITT on String
- Generate Forward CRC-16 on String
- Generate Reverse CCITT on String
- Generate Reverse CRC-16 on String
- Get Nth Character
- Get String Length
- Get Substring
- Move From String Table
- Move String
- Move to String Table
- Set Nth Character
- String Equal to String Table Element?
- String Equal?
- Test Equal Strings
- Verify Checksum on String
- Verify Forward CCITT on String
- Verify Forward CRC-16 on String
- Verify Reverse CCITT on String
- Verify Reverse CRC-16 on String

Event/Reaction

- Clear All Event Latches
- Clear Event Latch
- Clear I/O Unit Interrupt
- Disable Interrupt On Event
- Disable Scanning For All Events
- Disable Scanning For Event
- Disable Scanning of Event/Reaction Group
- Enable Interrupt on Event
- Enable Scanning For All Events
- Enable Scanning For Event
- Enable Scanning of Event/Reaction Group
- Event Occurred?
- Event Occurring?
- Event Scanning Disabled?
- Event Scanning Enabled?
- Generating Interrupt?
- Get & Clear Event Latches
- Get Event Latches
- Interrupt Disabled For Event?
- Interrupt Enabled For Event?
- Read Event/Reaction Hold Buffer

OptoControl Commands

Mathematical

Absolute Value
Add
Arccosine
Arcsine
Arctangent
Clamp Float Table Element
Clamp Float Variable
Clamp Integer 32 Table Element
Clamp Integer 32 Variable
Complement
Cosine
Decrement Variable
Divide
Generate Random Number
Hyperbolic Cosine
Hyperbolic Sine
Hyperbolic Tangent
Increment Variable
Maximum
Minimum
Modulo
Multiply
Natural Log
Raise e to Power
Raise to Power
Round
Seed Random Number
Sine
Square Root
Subtract
Tangent
Truncate

Communication - I/O

Convert Mystic I/O Hex to Float
Convert Number to Mystic I/O Hex
Read Numeric Table from I/O Memory Map
Read Numeric Variable from I/O Memory Map
Read String Table from I/O Memory Map
Read String Variable from I/O Memory Map
Transmit/Receive Mystic I/O Hex String With Checksum
Transmit/Receive Mystic I/O Hex String With CRC
Transmit/Receive Optomux String
Write Numeric Table to I/O Memory Map
Write Numeric Variable to I/O Memory Map
Write String Table to I/O Memory Map
Write String Variable to I/O Memory Map

Communication - Network

Accept Session on TCP Port
ARCNET Connected?
ARCNET Message Address Equal to?
ARCNET Node Present?
Close Ethernet Session
Ethernet Session Open?
Get ARCNET Destination Address on Port
Get ARCNET Host Destination Address
Get ARCNET Peer Destination Address
Get Ethernet Session Name
Get Number of Characters Waiting on Ethernet Session
Open Ethernet Session
Receive N Characters Via ARCNET
Receive N Characters Via Ethernet
Receive String Via ARCNET
Receive String Via Ethernet
Receive Table Via ARCNET
Receive Table Via Ethernet
Set ARCNET Destination Address on Port
Set ARCNET Host Destination Address
Set ARCNET Mode Raw
Set ARCNET Mode Standard
Set ARCNET Peer Destination Address
Transmit String Via ARCNET
Transmit String Via Ethernet
Transmit Table Via ARCNET
Transmit Table Via Ethernet
Transmit/Receive String Via ARCNET
Transmit/Receive String Via Ethernet

Logical

AND
AND?
Bit AND
Bit AND?
Bit Clear
Bit NOT
Bit NOT?
Bit Off?
Bit On?
Bit OR
Bit OR?
Bit Rotate
Bit Set
Bit Shift
Bit Test
Bit XOR
Bit XOR?
Equal to Table Element?
Equal?
Get High Bits of Integer 64
Get Low Bits of Integer 64
Greater Than or Equal to Table Element?
Greater Than or Equal?
Greater Than Table Element?
Greater?
Less Than or Equal to Table Element?
Less Than or Equal?
Less Than Table Element?
Less?
Make Integer 64
Move 32 Bits
NOT
Not Equal to Table Element?
Not Equal?
NOT?
OR
OR?
Set Variable False
Set Variable True
Table Element Bit Clear
Table Element Bit Set
Table Element Bit Test
Test Equal
Test Greater
Test Greater or Equal
Test Less
Test Less or Equal
Test Not Equal
Test Within Limits
Variable False?
Variable True?
Within Limits?
XOR
XOR?

Communication - Serial

Characters Waiting At Serial Port?
Clear Receive Buffer
Configure Port
Configure Port Timeout Delay
CTS Off?
CTS On?
Get Active Interrupt Mask
Get Number Of Characters Waiting on Serial or ARCNET Port
Interrupt on Port0?
Interrupt on Port1?
Interrupt on Port2?
Interrupt on Port3?
Interrupt on Port6?
Receive Character Via Serial Port
Receive N Characters Via Serial Port
Receive String Via Serial Port
Receive Table Via Serial Port
Set End-of-Message Terminator
Transmit Character Via Serial Port
Transmit NewLine Via Serial Port
Transmit String Via Serial Port
Transmit Table Via Serial Port
Transmit/Receive String Via Serial Port
Turn Off RTS
Turn Off RTS After Next Character
Turn On RTS

PID

Clamp PID Output
Clamp PID Setpoint
Disable PID Output
Disable PID Output Tracking in Manual Mode
Disable PID Setpoint Tracking in Manual Mode
Enable PID Output
Enable PID Output Tracking in Manual Mode
Enable PID Setpoint Tracking in Manual Mode
Get PID Control Word
Get PID D Term
Get PID I Term
Get PID Input
Get PID Mode
Get PID Output
Get PID Output Rate of Change
Get PID P Term
Get PID Scan Rate
Get PID Setpoint
Set PID Control Word
Set PID D Term
Set PID I Term
Set PID Input
Set PID Mode to Auto
Set PID Mode to Manual
Set PID Output Rate of Change
Set PID P Term
Set PID Scan Rate
Set PID Setpoint

Pointers

Clear Pointer
Clear Pointer Table Element
Move From Pointer Table Element
Move to Pointer
Move to Pointer Table
Pointer Equal to NULL?
Pointer Table Element Equal to NULL?

Simulation

Disable Communication to All I/O Units
Disable Communication to Analog Point
Disable Communication to Digital Point
Disable Communication to Event/Reaction
Disable Communication to I/O Unit
Disable Communication to PID Loop
Disable Event/Reaction Group
Enable Communication to All I/O Units
Enable Communication to Analog Point
Enable Communication to Digital Point
Enable Communication to Event/Reaction
Enable Communication to I/O Unit
Enable Communication to PID Loop
Enable Event/Reaction Group
Event/Reaction Communication Enabled?
Event/Reaction Group Communication Enabled?
I/O Point Communication Enabled?
I/O Unit Communication Enabled?
IVAL Set Analog From Table
IVAL Set Analog Point
IVAL Set Counter
IVAL Set Digital Binary
IVAL Set Frequency
IVAL Set Off-Latch
IVAL Set Off-Pulse
IVAL Set Off-Totalizer
IVAL Set On-Latch
IVAL Set On-Pulse
IVAL Set On-Totalizer
IVAL Set Period
IVAL Set PID Control Word
IVAL Set PID Process Term
IVAL Set Quadrature Counter
IVAL Set TPO Percent
IVAL Set TPO Period
IVAL Turn Off
IVAL Turn On
PID Loop Communication Enabled?