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ICP DAS DCON Serial Master Driver

Information Sheet for Crimson v2.0

Compatible Devices

- I-7000 DIO Modules
- I-7021, I-7022, I-7024 Modules

Verified Device

I-7021, I-7024, I-7045D, I-7051D

Accessing Data

NOTE: Care should be taken to avoid writes of invalid values. Also, actions based upon the Watchdog Module Status should be taken to avoid invalid writes during a watchdog timeout condition. Any exception received to a write attempt will result in a CommsError. Upon CommsError, the system will retry the write attempt.

Select the appropriate registers/commands compatible with the target device.

| Prefix | Description | Type | Access | Target Device Notes |
|--------|----------------------------|------|------------|-----------------------|
| AOx | Channel Analog Output Data | Real | R/W | Multi-channel analog |
| AIx | Channel Analog Input Data | Real | Read only | Multi-channel analog |
| DOx | Digital Output Data | Bit | R/W | Digital IO |
| DIx | Digital Input Data | Bit | Read only | Digital IO |
| DCx | Digital Input Counter | Word | Read/Reset | Digital IO |
| SVx | Channel Safe Value | Real | Read Only | Multi-channel analog |
| PVx | Channel PowerOn Value | Real | Read Only | Multi-channel analog |
| SSx | Set Channel Safe Value | Bit | Write Only | Multi-channel analog |
| SPx | Set Channel PowerOn Value | Bit | Write Only | Multi-channel analog |
| AO | Single Analog Output | Real | R/W | Single channel analog |
| AI | Single Analog Input | Real | Read Only | Single channel analog |
| LL | DI Low Latched Status | Word | Read Only | Digital IO |
| HL | DI High Latched Status | Word | Read Only | Digital IO |

| Prefix | Description | Type | Access | Target Device Notes |
|--------|---------------------------|-----------|------------|-----------------------|
| CL | Clear Latched DI Status | Bit | Write Only | Digital IO |
| Addr | Module Address* | Byte | R/W | |
| Baud | Module Baud rate* | Byte | Read Only | |
| Dir | Counter Update Direction | Bit | R/W | Digital IO |
| SumE | Checksum Enabled* | Bit | R/W | |
| Code | Type Code | Byte | R/W | |
| WHOK | Watchdog Host OK | Bit | Write Only | |
| WdgS | Watchdog Module Status | Byte | Read/Reset | |
| WdgT | Watchdog Timeout | Byte | R/W | |
| WdgE | Watchdog Timeout Enable | Bit | R/W | |
| PVal | PowerOnValue | Long/Real | Read Only | |
| SVal | Safe Value | Long/Real | Read Only | |
| PSet | Set Digital PowerOnValue | Bit | Write Only | Digital IO |
| SSet | Set Digital Safe Value | Bit | Write Only | Digital IO |
| AnaP | Set Single Analog PowerOn | Bit | Write Only | Single channel analog |

*See Communication Settings

Communication Settings

DCON module communications settings may be set by the Addr and SumE registers provided. Please follow all instructions and settings provided by the appropriate ICP DAS module manual. Please note: Data format of Engineering Units should be used in the ICP DAS module. Digital IO modules also have access to CDir which defines the counter direction. Please be sure that the module is in the appropriate INIT state when writing to these registers.

Device settings for the drop number and checksum status may also be changed within the Red Lion application. Use Crimson's DevCtrl() function 1 to change the drop number and function 4 for the checksum status.

Cable Information

| Red Lion RS485 Port | ICP DAS DCON Module |
|---------------------|---------------------|
| Pin 1 | (Y)DATA + |
| Pin 2 | (G)DATA – |
| Pin 6 | GND |

Revision History

11/09/09 - Created