



ECAT-1000 Version Info

▶ 09.15.2016

Firmware

- V5.300 Generic Serial release
- Added support to Generic Serial driver for handling leading '+' characters for ASCII decimal numbers.

▶ 08.15.2016

Firmware

- V5.200 release
- Fixed issue where the serial driver would not detect errors on the first byte of a packet.
- Fixed issues with using the USB Virtual COM port with Windows 10.
- Added support for 7 data bits to the USB Pass-Through Mode.

▶ 06.15.2016

Firmware

- V5.100 Generic Serial release
- Fixed issue with Generic Serial drivers where transactions with a large amount of variable sized packet data objects could cause the device to hang.
- Added support for the Database Matched Byte packet data object to Generic Serial drivers.
- Fixed issue where the serial driver would not detect errors on the first byte of a packet.

▶ 03.01.2016

Firmware

- V5.000 release
- Added Generic Serial Master protocol.
- Added Generic Serial Slave protocol.
- Added support for Internal Float (ADF), Internal Integer (ADI), and Internal Byte (BD) object types to Metasys N2 Slave.
- Modified Siemens FLN Slave driver's interpretation of non-zero intercept values so that the physical value sent on the network matches the database value for LAI and LAO points.
- Fixed USB connection issue where the device is sometimes not detected by the USB host when plugging in the USB cable to an already powered device.
- BACnet BTL Changes
 - Added data type checks to Present Value writes so that only the proper data type is allowed.



- Added support for configurable APDU Timeout.
- Added support for configurable Number of APDU Retries.
- Added support for APDU retries for confirmed requests.
- Made the following device properties network writable: APDU Timeout, Number of APDU Retries, and Max Master.
- Fixed issue with APDU Timeout timer where the timer started before the request was transmitted on the network.
- Added support for the Reliability property in all supported object types.
- Added support for configurable Number of States for Multi-state objects.
- Added support for Offset by One option for Multi-state objects for both Client and Server.
- Changed behavior of Multi-state Objects' Present Value property so that it cannot go outside of the range 1 - Number of States. If the database value is out of that range, the FAULT Status Flag is set and the Reliability will be either Under Range or Over Range.
- Added error code when accessing Priority Array and Relinquish Default properties for virtual objects, because these properties are not supported.
- Added feature to BACnet client to detect if a server device is no longer online and begin transmitting Who-Is requests to it instead of continuing to send read or write requests.
- Removed support for 4800 baud rate, since the BACnet specification states the minimum is 9600.
- Updated Revision to 12.
- Updated Object Types Supported Device object property.
- Fixed Number of States datatype for Multi-state objects.
- Improved error handling and error responses for error conditions when handling all packets.
- Fixed issue with the ReadPropertyMultiple ALL properties for the Device object.
- Corrected the properties reported for ReadPropertyMultiple ALL, OPTIONAL, and REQUIRED for all objects.
- Fixed issue when reading a Device object property using the wildcard instance number where the Object ID in the response used the wildcard instance number instead of the device's actual instance number.
- Fixed NPoll token count from 52 to 50.
- Added password to ReinitializeDevice.
- Fixed issue where device would respond to Confirmed Broadcast Request packets.
- Fixed issue where the device would ignore Data Expecting Reply packets targeted to the broadcast address.
- Fixed issue where the device would not properly ignore packets not for us by adding the Skip Data state to the receive state machine.
- Fixed EventCount handling error in MS/TP Master Node State Machine as described in addendum 135-2004d-8.
- Fixed poll for master to self issue in the DONE_WITH_TOKEN and PASS_TOKEN states.
- Added support to SubscribeCOV for the situation where the Lifetime argument is omitted from the request and should be assumed to be 0 (indefinite lifetime).
- Fixed issue where a COV could be issued after the COV has expired.



- Added support to initiate a COV notification after receiving a subscribe COV request.
- Fixed issue with reading the ACTIVE_COV_SUBSCRIPTIONS property of the device object.
- Fixed issue with reading the DEVICE_ADDRESS_BINDINGS property of the device object.
- Fixed issues with configured Relinquish Default value data type conversion.
- Fixed issue with Subscribe COV requests' Lifetime parameter not supporting the full Unsigned range.
- Fixed error code returned when a Subscribe COV request is received for the Device object.
- Fixed issue with DeviceCommunicationControl Time Duration timer not supporting the full Unsigned range.
- Fixed error code returned when a ReinitializeDevice request is received after a DeviceCommunicationControl DISABLE request is received.
- Fixed issue with COV Increment property's internal "unused" signifier value.
- Set maximum limit on Multi-state Number Of States property so that the internal reserved NULL value cannot be used.
- Added error reporting for BACnet Client when a Diagnostics object is used for Multi-state objects that have an invalid value.
- Fixed implementation of Device Instance wildcard value of 4194303 to be interpreted as if the device instance matches.
- Optimized performance for scenarios where the device is connected to a live BACnet network while powered on.
- Relaxed MS/TP timing parameters to ensure the specified times are never violated.

User's manual version

- 10757 January 1, 2016

► **04.01.2015**

Firmware

- V4.100 release
- Add Inverted, Auto Reset, and Bitmask trigger options to database logic enable triggers.
- Added Bit Copy, Indirect Copy, Flag Test & Set, Value Change Detection, Multiplexer, and Byte Reverse database logic operations.
- Fixed issue where received bytes could be dropped during critical sections when the receiver is disabled.
- Changed BACnet MS/TP Client static device destination address limit to 254 to support MS/TP slave-only addresses.
- Added Protocol Format setting for the USB Serial Sniffer Settings protocol.
- Improved receive logic of EtherCAT driver to better handle receive errors.
- Fixed issue where USB task may not be running if a fatal error occurs during startup.
- Added error code response to USB communications to prevent pipe stalls.
- Fixed packet corruption issue in USB serial sniffer when sniffer buffer overflows occur.
- Improved compiler optimizations.



User's manual version

- 10757 April 1, 2015

▶ **10.02.2014**

Firmware

- V4.000 release
- Added floating point as a native database data type.
- Added USB Virtual COM Port support.
- Added FLN Master protocol.
- Added Toshiba Computer Link Master protocol.
- Added USB Serial Sniffer Settings protocol to use for packet capturing.
- Added Trigonometric Operations to Database Logic.
- Added Random operation to Database Logic.
- Fixed issue where writing to FLN LDO points fails.
- Added ability to relinquish written values in BACnet Client.
- Removed 0xFF byte pad in BACnet MS/TP packets.
- Improved packet handling for DMX-512 Slave driver.
- Fixed issues in M-Bus Master driver when decoding and encoding string values.
- Fixed issue with device info string displaying extra characters.
- Fixed issue with Debounce Filter and Hysteresis Filter when using an enable trigger.
- Fixed issue with BACnet which could cause a duplicate packet to be sent 40 bit times after the first.
- Fixed issue in BACnet where the first reply to a poll for master was ignored if the last packet received was a partial packet.
- Fixed issue in Modbus when converting negative 32-bit integer values to floating point.
- Optimized startup order of all tasks.
- Fixed BACnet DeviceCommunicationControl service.
- Corrected BACnet Protocol_Services_Supported Device property flags.
- Added check in Modbus Slave to respond with an exception to requests spanning multiple incompatible register remaps.
- Various code optimizations

User's manual version

- 10757 October 2, 2014

▶ **09.27.2013**

Firmware

- V3.300 release
- Added database logic.



- Internal bug fixes.

User's manual version

- 10757 July 31, 2013

▶ **05.15.2013**

Firmware

- Modbus V3.100 release
- Added check to Modbus Master to compare received data bytes against the expected number of bytes.
- Metasys V3.100 release
- Fixed issue with Metasys Master writes with VMA devices.
- V3.000 release
- Optimized Metasys Slave COS checks to fix response delays when a large number of objects are mapped.
- Fixed issue in Metasys Slave driver which caused gateway to become non-responsive on some noisy networks.
- Added VMA device support for Metasys Master.
- Added Multi-state object support for BACnet Client and Server.
- Added range checking for writes for BACnet Server.
- Added ability to enable and disable the default mapping for Modbus Slave and BACnet Server.
- Added support for the ICC Configuration Studio.

User's manual version

- 10757 May 15, 2013

▶ **04.23.2012**

Firmware

- Modbus V2.400 release
- Changed Modbus Sniffer Reflect Status to not update Current Status on TX Counter increments
- Fixed Modbus Slave remap scaling issues

User's manual version

- 10757 January 15, 2012

▶ **01.18.2012**

Firmware

- Chillgard V2.400 release
- A.O. Smith V2.300 release



- Added A.O. Smith AIN and PDNP drivers
- Added support for different types of scaling for the concentration values including new % units in Chillgard
- Added support for more gas types in Chillgard

User's manual version

- 10757 January 15, 2012

▶ **08.15.2011**

Firmware

- V2.300 release
- Added DMX-512 Master and Slave drivers
- Added M-Bus Master driver
- Added function code 05 (Force Single Coil) support to Modbus Master driver
- Increased Service Object memory usage

User's manual version

- 10757 August 15, 2011

▶ **02.01.2011**

Firmware

- V2.200 release
- Added MSA Chillgard driver
- Added Metasys N2 Master driver
- Added Siemens FLN driver
- Added TCS Basys driver
- Fixed Modbus Master bug when Floating Point is checked and multiplier is 1, the value is now correctly converted as a floating point number
- Improved accuracy of Modbus multiplier scaling
- Updated Metasys Slave driver so that it won't reset the object configuration upon receiving the "F" command
- Fixed Modbus Slave remap object issues
- Added network timeout feature to EtherCAT protocol

User's manual version

- 10757 February 1, 2011



▶ **03.01.2010**

Firmware

- V2.100 release
- Added Sullair master driver
- Added Modbus sniffer driver
- Added Enron/Daniel 32-bit Modbus extension to Modbus master and slave drivers
- In Modbus RTU slave driver, holding registers and input registers can now be remapped independently, and can have multipliers applied
- Decreased object memory usage for BACnet objects in BACnet MS/TP server driver
- BACnet MS/TP client driver now sends "Who-Is" for all configured destination devices on startup, not just statically-bound ones
- Improved efficiency of service object handling in BACnet MS/TP client driver
- Fixed "Poll-For-Master to self" bug in BACnet MS/TP drivers
- Fixed "multiply by 1 rounding" issues

User's manual version

- 10757 March 1, 2010

▶ **11.10.2009**

Firmware

- V2.000 initial release

User's manual version

- 10757 October 30, 2009