

Tech Note (220816_01)

Date: August 16, 2022

Product: M³ Platform

Subject: Firmware Release 4.1.0 and Essentials Software Release 4.1.1

Note: To download these releases visit our website at <http://brtint.com/downloads.html>

Firmware Release 4.1.0:

This release is meant to accompany Essentials release 4.1.0. It contains improvements and optimizations that increase the robustness and configurability of the Control Module.

Features:

-Binary Value (BV) BACnet Points have been added to reflect each expected I/O Module's CAN status. If the IOM is not communicating, the Present Value property is 0. If the IOM is communicating as expected, the Present Value is 1. The timestamp of the last communication is included in read-only Description property. There is the option to enable/disable these points in Essentials. They are enabled by default.

-All BACnet Points have gained a Description property. Except for the Device Object Point these are read-only strings that convey the logical or physical location of the point. For example, a logical channel-related point will have: 1) The channel's AKA Name if present, 2) The channel's slot number in its zone, 3) The containing zone's AKA name if present, 4) The zone's number. In the case of the Device Object the Description Property is an editable string of up to 127 characters. Editable both over BACnet and via Essentials.

-Support for adjustable load status for Relays on RO04s & RE04s running firmware version 6 or higher and for RO224s & RE224s running firmware version 4 or higher.

-The number of times the Control Module has been booted since installing firmware 4.1.0 (and subsequent versions) is now tracked via EEPROM and visible in Essentials.

-The date and time of the latest boot is now noted and available as the property Time_Of_Device_Restart on the Device Object and is viewable in Essentials.

-The serial ID of the device is now viewable over BACnet as the property Serial_Number on the Device Object.

-The rate limited spacing of DO firings has been increased to 250ms (from 75ms) to better protect against accidental circuit overload due to inrush.

Bugfixes:

-Sequence bug fix: When the override timer is enabled for a channel and an On/Off button or Momentary On/Off Switch is present, but crucially, locked out from turning the channel Off in that mode, a press of the button/switch now tops up the override timer, counting it a user interaction in the space. This is analogous to an

occupancy timer being reset to its full time after an Occupancy Sensor is re-triggered amidst a vacancy countdown.

Upgrade Instructions: As is good practice with any upgrade, make sure to create a backup of the Controller's settings by doing a "Retrieve Settings" followed by a "Save As" of those settings into a separate file.

Essentials Release 4.1.1:

Bugfixes:

-A regression introduced in 4.1.0 was corrected. The issue was Essentials silent overwriting of the local settings of several the Control Module's parameters with the remote settings if the remote settings differed, but only when connected and viewing the details of Control Modules running firmware version 4.1.0. The affected parameters were the Control Module's BACnet name, BACnet number, Max Info Frames, Max Masters, Time Sync Policy, and IOM CAN Status BACnet exposure. These are now only overwritten with an explicit 'Retrieve Settings'.

Essentials Release 4.1.0:

This release is meant to accompany Firmware release 4.1.1. It contains logging and self-diagnostic improvements to allow Blue Ridge Technologies Tech Support to better assist customers.

Features:

-Supports for an Adjustable Load Status Threshold for Relays on RO04s & RE04s running firmware version 6 or higher and for RO224s & RE224s running firmware version 4. Threshold status settings can be synchronized with their remote counterpart while connected without needing to send additional settings. An indicator of the threshold setting's synchronization status is displayed for each output, as had been done for lock settings.

-Support for additional properties in the Control Module's general and communication settings sub-panels. The general settings panel now displays the boot time and boot count for those Control Modules running firmware 4.1.0 or higher. Additionally, the option to enable or disable the display of BACnet BV points for each of the Control Module's I/O Modules' CAN status, has been added. Finally, in the communications settings sub-panel there is an editable field for the Control Module's Device Object Description which mirrors that property on the Device Object BACnet point.

-The BACnet view tab functionality has been greatly expanded. One may now export the points residing on each Control Module to a CSV file that will be placed on the user's Desktop named with the Control Module's Device ID Number and the current timestamp. One may also choose to export not only those points that have been enabled but also those points that are unexposed (latent). Furthermore, the CSV contains additional metadata columns for each point to aid with further sorting and filtering. One of those columns being whether the point is exposed or unexposed. Finally, the entirety of the system can be exported as a collection of CSV files, one for each Control Module in the system, to a compressed ZIP folder placed on the user's Desktop.

-Drag and drop functionality on the logical tree has been improved. Zones may now be dragged from under the System Node to under an Area Node; from under an Area Node to under the System Node; and, from under one Area Node to under another Area Node. Similarly, Area Nodes themselves, along with their subtree, may now be dragged and drop in the following ways: From under the System Node to under another Area Node; from under an Area Node to under the System Node; and from under an Area Node to under another Area Node.

Bugfixes:

-Several GUI bugs that resulted in missing or stale information on the channel configuration panel or channel status menu have been fixed.

-The Channel Status timers now animate in a smooth and judder-free fashion.

-In switch and station button lockout options, the lockout function options are greyed out for the Maintained Input-as-lock case until a definite Maintained Input has been chosen. as until a Maintained Input is chosen, the lockout function options are not applicable.