PRODUCT UPDATE BULLETIN

PUB-BAS-21-004   April 5, 2021

OPENBAS SYSTEM DESIGN STUDIO

Mircom is releasing upgraded Configurator software.
The new version number follows –

CONFIGURATOR SOFTWARE	COMPATIBLE FIRMWARE	VERSION
System Design Studio	All OpenBAS NX controllers, OpenBAS-HV-LEARN and OpenBAS-NWK-ETH3	1.2.0

OPENBAS FIRMWARE

Mircom is releasing upgraded firmware.
The new version number follows –

FIRMWARE	VERSION
All OpenBAS NX controllers, OpenBAS-HV-LEARN and OpenBAS-NWK-ETH3	3.09.0

*Note: Please read this **entire document** before upgrading systems to ensure all compatibility issues are addressed and to ensure correct upgrade procedures are followed.*

New Features

- Don't have a controller? No problem. Download, install and test your logic today using the new NX emulator
- Save money and simplify quoting with high accuracy support for thermistor-based temperature sensors from any manufacturer
    - Reuse existing sensors in retrofit projects
    - Shop around for the perfect option
- Quickly connect to controllers by Discovering any OpenBAS-NWK-ETH3 gateways on the network
- Spend less time searching for answers with a built-in auto-expanding and collapsible user guide
- Enjoy configuration of OpenBAS systems in your preferred language with support for Dutch, English, French, German, Hindi, Italian, Punjabi, and Spanish
- Save time with remote configuration of OpenBAS controllers when using the OpenBAS-NWK-ETH3 as a master of BACnet/MSTP or MODBUS/RTU field buses

Enhancements

- Improved Analog and Binary input calibration workflow
    - Analog and Binary input configurations moved into single *Universal input calibration* table to help quickly determine which Universal inputs are already in use
    - Input averaging settings are now automatically configured based on the selected input type
    - Bolded currently selected Universal input within *Universal input calibration* table to indicate higher present value refresh rate
    - Added typical wiring diagrams based on selected input type within the *Universal input calibration* table
- Added support for displaying long labels or comments in *Logic* tab when created in Script
- *Configure from script* window now remembers last used project folder based on the controller
- Added support for inverting Analog output logic and scaling
- Added warning when trying to add an already existing IP address to a project
- Added Export option to *Event log*
- Added support for custom script file prefixes, Ex. MyPrefix-script_1.txt
- Added Minute of Current year option to *Time mapping* section of the *Date and time* Sub-tab
- Select point by name when creating schedules or configuring trends
- Added "Enable BACnet Binary output priorities" checkbox to NX controller *Communication* Sub-tab
- Added BACnet/IP_ID mode setting to select between using last part of IP address or custom ID
- Added Backup to disk and Restore from disk support to the OpenBAS-NWK-ETH3

NX Emulator

The NX emulator is a Java based program that simulates an OpenBAS-HV-NX10D controller. After clicking the "+" Add controller button, select *NX-Emulator* from the *Device type:* dropdown and click Add. The actual emulator will launch in another window and a controller item will be added to the side panel.
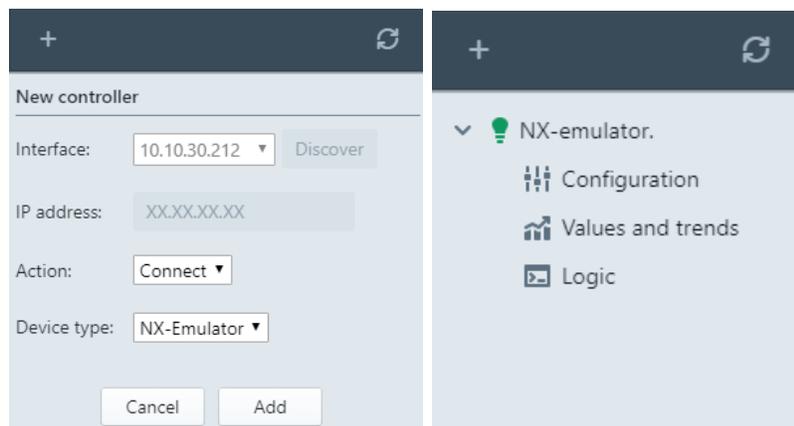
Commanding inputs

To Set Analog and Binary inputs to various values for testing, within the NX Emulator window, select the Object type and Channel, enter a value and click Set.
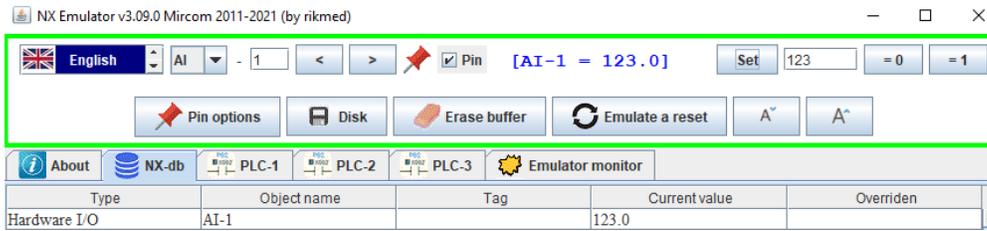
Save to disk and Restore from disk

Closing the NX Emulator will clear all configurations. To save your work and continue at a later time, click Disk followed by Save to disk, and choose an appropriate and memorable location. To restore a previously saved configuration, click Disk followed by Restore from disk, and browse to and select the appropriate backup *.ini file.
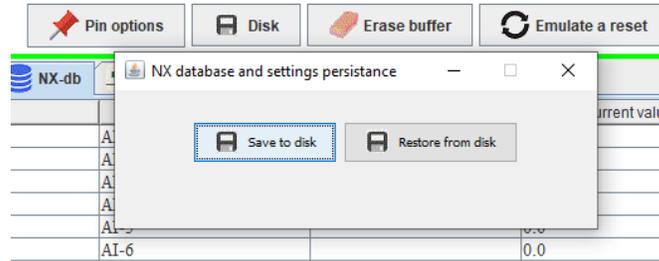
High Accuracy Thermistor Support (any manufacturer)

Up to 3 different types of thermistors can be used on any OpenBAS controller however no more than 8 thermistors total should be configured on any one controller. For more than 8 thermistors when using Slave expansions, instead of configuring the 9th to 40th Analog inputs as thermistors on the master controller, configure them on the respective Slave expansion controller, and use Remote points to read them into the master controller if necessary.

10K Type 3 Thermistors

For most 10K Type 3 thermistors, select the 10K Type 3 NTC Thermistor °C (or °F) option from the Type dropdown within the *Configuration->Inputs outputs->Universal input calibration* table. No other configurations are needed, however offset and Custom Input Averaging can be configured if required.

Custom Thermistors

When using up to two different NTC thermistors (aside from 10K Type 3 NTC thermistors), one of the Custom Thermistor A or Custom Thermistor B Types need to be selected within the *Universal input calibration* table and the A, B and C parameters need to be configured (Steinhart-Hart). To configure the A, B, and C parameters, go to *Configuration->Inputs Outputs->General* and select from a preset, calculate from a temperature/resistance chart or enter them directly. When selecting a Custom Thermistor type, "Ext. 12V" (externally powered) or "Int." (internally powered) refers to how the thermistor will be wired. It is recommended to use Ext. 12V for higher resolution even if it means purchasing a small 12V power supply for the few devices that do not have the 12V supply. Click the 🛈 button for a typical wiring diagram.

Discovering OpenBAS-NWK-ETH3 Gateways

After clicking the "+" Add controller button, select the IP address of the appropriate Interface that your PC is using to connect to the network (the OpenBAS-NWK-ETH3 gateways must be on the same subnet) and click Discover/Rediscover. Any detected OpenBAS-NWK-ETH3 controllers will be listed under the IP address text box with their Name and IP address. Select the gateway you want to connect to (or import a project from), select the remaining options accordingly and click Add.

Built-In User Guide

The user guide can still be found in the C:/OpenBAS/Documents/SDS Documents/ directory in *.PDF form after installation, however it is now also quickly accessible from the right side of any screen within the System Design Studio. The user guide has three modes which are collapsed/locked, expanded/locked, and hover mode. By default, the user guide will be in the collapsed/locked mode meaning it is not visible. To cycle modes, either click the left arrow button (near the right edge of the screen) or press CTRL+H. The next mode is the expanded/locked mode which means it is always visible. Finally, there is hover mode which means the user guide will automatically expand and collapse when the mouse cursor is moved to the right edge of the screen. Note that expanded/locked mode will shift on-screen elements to the left whereas hover mode will overlay the user guide on top of the on-screen elements. At the top of the user guide there is a bookmark selection dropdown and a search bar to quickly find what is needed.
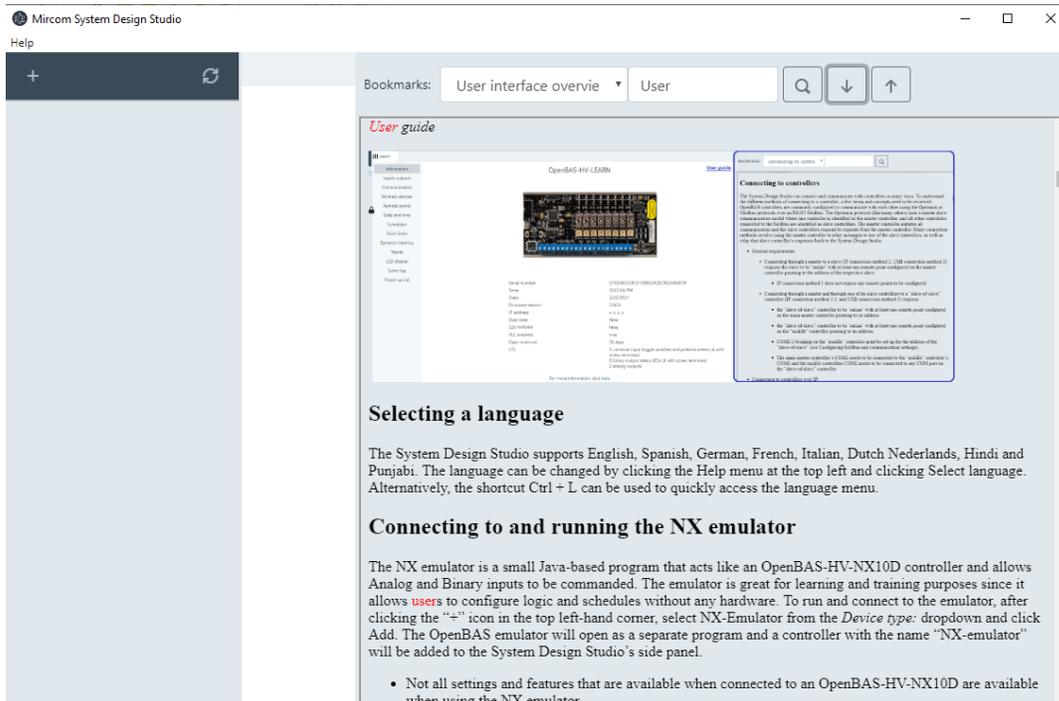
Language Selection

The language can be switched after opening the System Design Studio by clicking Help->Select language, choosing between Dutch, English, French, German, Hindi, Italian, Punjabi, and Spanish from the dropdown and clicking Ok. Alternatively CTRL+L will open the Set display language window at any time.
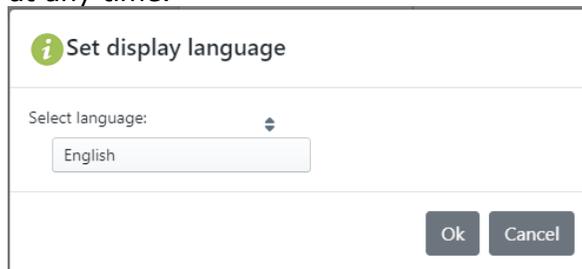
Remote Configuration of OpenBAS controllers when using the OpenBAS-NWK-ETH3 as a master of BACnet/MSTP or MODBUS/RTU field buses

The OpenBAS-NWK-ETH3 gateway has two COM ports with BACnet/MSTP support on COM1 and MODBUS/RTU Master support on both COM1 and COM2. When the OpenBAS-NWK-ETH3 is configured as a part of a BACnet/MSTP field bus using COM1, it will relay any IP communications from the System Design Studio to and from any OpenBAS "NX" controllers on the field bus. Similarly, when the OpenBAS-NWK-ETH3 is configured as a MODBUS master on COM1 or COM2, it will relay any IP communications from the System Design Studio to and from any OpenBAS "NX" controllers on either COM1 or COM2 fieldbus. Connecting to these controllers is no different than when connecting to OpenBAS controllers over Optomux field buses.
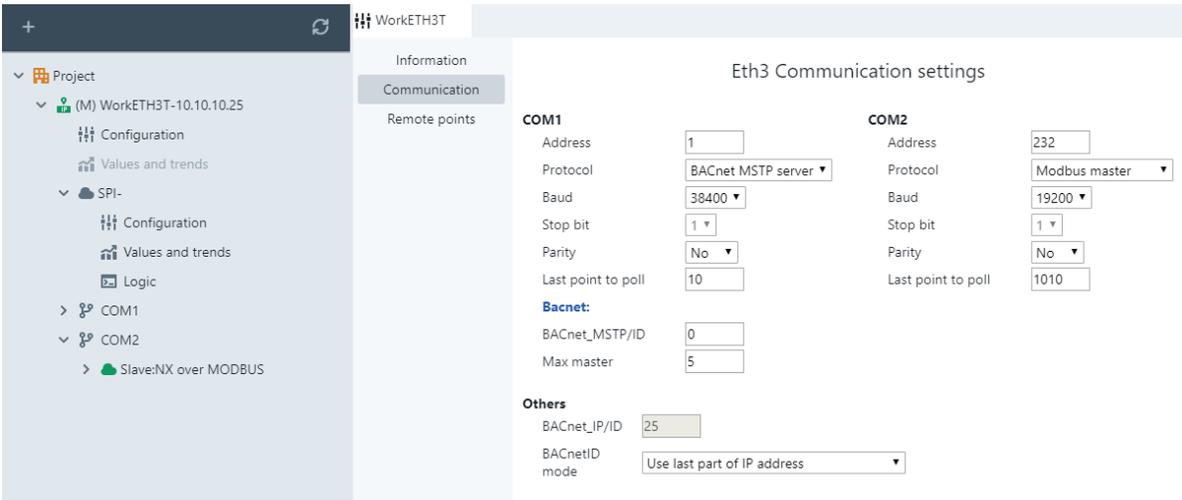
Compatibility Chart

Below table shows the System Design Studio compatibility with OpenBAS hardware.

SYSTEM DESIGN STUDIO	SUPPORTED CONTROLLERS	FIRMWARE VERSION MINIMUM	FIRMWARE VERSION SUPPORTED
1.2.0	All "NX" controllers (OpenBAS-xx-NXxxxx), OpenBAS-HV-LEARN	3.04.0+	3.09.0+
	OpenBAS-NWK-ETH3	3.06.0+	3.09.0+
1.1.0	All "NX" controllers (OpenBAS-xx-NXxxxx), OpenBAS-HV-LEARN	3.04.0+	3.04.0+
	OpenBAS-NWK-ETH3	3.06.0+	3.06.0+
1.0.2	All "NX" controllers (OpenBAS-xx-NXxxxx), OpenBAS-HV-LEARN	3.04.0+	3.04.0+
1.0.1	All "NX" controllers (OpenBAS-xx-NXxxxx), OpenBAS-HV-LEARN	3.04.0+	3.04.0+
1.0.0	All "NX" controllers (OpenBAS-xx-NXxxxx), OpenBAS-HV-LEARN	3.0.0+	3.0.0+

Known Issues

Blank Input Values
Selecting a Custom Thermistor A or B Type within the Universal input calibration table before configuring the respective A, B and C parameters within *Configuration->Inputs Outputs->General* will cause the specific Universal input's present values to be blank, and they will remain this way after later configuring the A, B and C parameters. To resolve, configure the A, B and C parameters and either power cycle the controller or temporarily set the Global input averaging and Custom input averaging settings to 0 (zero).

<u>Blocked Installation on PC/Laptop</u>
If you get the below warning while launching the System Design Studio installer, right click the installer, select properties, check the unblock button at the bottom and click OK. Launch the installer again.
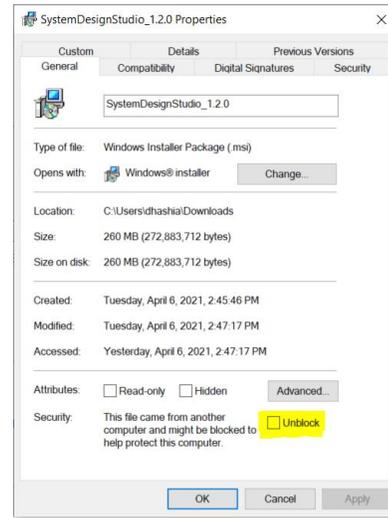
Other

While the new firmware is being released on the web site, shipped products may continue to have the existing firmware (See LT-6630 – Driver installation and Firmware Upgrade Procedures) , as the existing stock is depleted. Installers are encouraged to update new installations but are free to keep existing systems running at a previous version if they are simply replacing defective parts. Mircom strives to offer the highest quality products and services. On occasion, an issue may require field action and we regret when these issues arise. As part of our commitment to quality, we incorporate any findings into a continuous improvement process to better serve our customers in the future. As part of our support offering, please feel free to contact us with any inquiries or assistance you may require. If you have any questions or concerns, please visit the Mircom Technical Support Forum at https://mircom.com/technical-support/ or contact the Technical Support Department directly.

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- Project Wins & Losses
- Case Studies & Installation Photos
- Sales & Marketing Tools
- Anything else that help our business grow together

If you have any questions or comments, please contact us directly at:pm@mircomgroup.com