

HONEYWELL SYSTEM INTEGRATOR TECH UPDATES



Submit a request to
SIAssist@honeywell.com

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CHAMP



HIGHLIGHTS

TECHNICAL UPDATE NEWSLETTER

The **Technical Update Newsletter** is published on a quarterly basis. This will provide updates about the Modular Systems product portfolio and the System Integrator Program. Below you will also find the important points of contact that can help you resolve your issues.



The **System Integrator Organization Survey 2022** has ended last month. This was conducted to understand the SI organization's expertise across different verticals and Honeywell Modular Systems. 146 SIs were selected for the survey. The response rate for the survey is 60%. Based on this, the qualified SI organizations have received industry and product badges as a recognition of their expertise. Each badge will be valid for 1 year.

System Integrators Assist (SIAssist) is set up to support SIs globally. Technical and P&E Support will be provided to **Authorized SIs** during Pre-Bid, Post-Bid and on Ongoing basis. The SIAssist team has expertise in executing projects in various verticals / domains and applications. You can reach out directly to the expert technical team at SIAssist@Honeywell.com for your various needs during the selling and execution of projects.

In 2022, SIAssist completed 227 requests and provided support to 52 System Integrators.

We have started the **P&E initiative** in September 2022 and more than 8 P&E requests have been served last year. Under this initiative the SIAssist team will support various types of Modular Systems proposals, ranging from small to large scale, from single product to multiple products, from single system to multiple systems.

Digital University

Digital University is a Honeywell Process Solutions new training platform primarily dedicated to the Channel Partners registered for CHAMP. Digital University contains HPS product and solution trainings developed to elevate the technical capabilities of the Channel Partners and it is designed to grow with new and refreshed content.



Seamless Single Sign On provides easy access without the need to remember another password:

Go on the HPS website process.honeywell.com > Sign In > SIGN IN TO MY HONEYWELL and enter your credentials > Select **Channel Portal** > Select **Digital University (Training Platform)** from the CHANNEL HOME QUICK LINKS menu located on the left side of the CHAMP homepage to get to the Digital University home page.

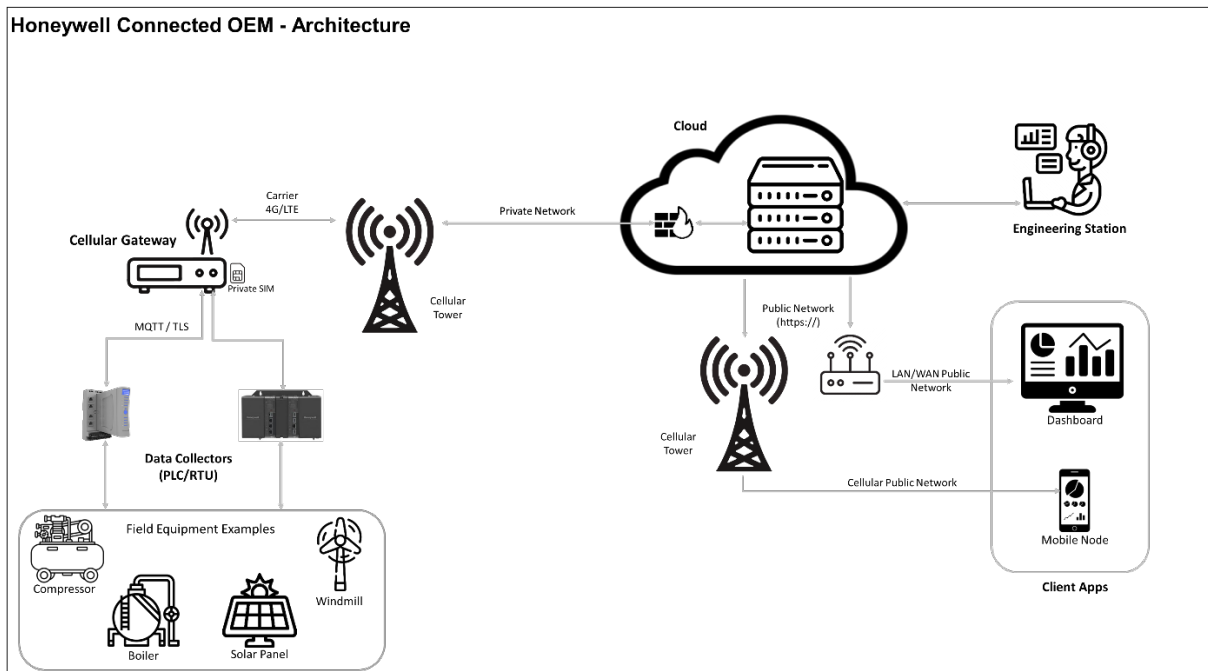
Watch this [QUICK DEMO VIDEO](#) for a quick tour!



PRODUCT UPDATES

CONNECTED OEM

Connected OEM R102.1 Program Launched and Available for Commercialization:



Connected OEM is Honeywell's industrial Internet of Things platform. It is a customizable solution to get assets online and deliver visibility of installed assets so OEMs can harness opportunities to cut costs, improve reliability, enhance performance, and drive incremental revenue.

Connected OEM is an easy to order and deployable offering developed with Honeywell's best-in-class global execution and services capabilities.

This Industry 4.0 / IoT offering is designed for OEMs or skid manufacturers and their end users, to remotely monitor their various assets, ranging from compressors and pumping stations to analyzer houses, skids, and more, installed globally. This is accomplished by connecting geographically dispersed assets to a cybersecure cloud-based central asset management system. It delivers user-friendly KPI dashboards, a mobile interface, push notifications for alarms and key events, and simplified data management.

The key features of Connected OEM include:

- End-to-end IoT solution delivered by Honeywell which includes Software, Hardware (Data Collectors, SIM cards with Data Plans, Communication Devices), Engineering Services.
- User-friendly and customizable KPI visualization dashboards.
- Desktop and mobile based KPI visualization dashboards.
- MQTT with sparkplug B cyber secured IoT Protocol.
- TLS 1.2 with mutual data certificate authentication between data collected and Honeywell cloud hosted servers.
- Asset / field device connectivity via Private Cellular Network (PCN) over private SIM.
- Flexibility to choose the right SaaS plan based on requirements.
- Data stored and historized in a cybersecure cloud, which allows for complex analytics, visualization, and rule-based alarms and notifications.
- Solution based on the Honeywell proven ControlEdge™ RTU/PLC and Experion® platform.
- Communication enclosure with the option of internal stick-on antenna, as well as external antennas for better connectivity.
- Designed and developed by Honeywell, a global leader in process automation for more than 40 years.

CONTROLEDGE™ PLC

ControlEdge™ R173 Program Launch - Support for extended operating temperature (-40 to +70 Deg C):

The ControlEdge 900 hardware (PLC/UOC) has been supporting an operating temperature range of 0 to 60 Deg C since inception. In the new release, ControlEdge PLC R173, we are introducing a new hardware revision supporting an extended operating temperature for Controller (CPM), IO Expansion module (EPM), 32 channel digital input module, 32 channel digital output module, racks / chassis for both controller and I/O, and power supply.



These new hardware model numbers are revised for supporting a temperature of -40 to +70 Deg C. The new models are completely backward compatible and can also be used as replacement / spare for old hardware models being phased out. The changes to hardware model numbers and the affected parts are as per table below.

For all new orders starting 1st August 2022, Honeywell recommends users to buy these new models for ControlEdge 900 hardware (PLC / UOC / HC900). The old models will be moved to **'Phase Out'** status in SAP / web-channel to restrict order entry, once the inventory is depleted at Honeywell factories, affiliates and HUBCO.

You can order the existing old models while their inventory lasts, post which all orders will be moved to new part numbers.

	Old Model Number (Phased out)	New Model Number (-40 to +70 Deg C)
CPM, Control Processor, ControlEdge 900	900CP1-0200	900CP1-0300
EPM, Expansion Processor, ControlEdge 900	900SP1-0200	900SP1-0300
Digital Input Module, 24VDC (32 channel)	900G32-0101	900G32-0301
Digital Output Module, 24VDC (32 channel)	900H32-0102	900H32-0302
4 I/O slot rack - Non redundant power	900R04-0200	900R04-0300
8 I/O slot rack - Non redundant power	900R08-0200	900R08-0300
8 I/O slot rack -redundant power	900R08R-0200	900R08R-0300
12 I/O slot rack - Non redundant power	900R12-0200	900R12-0300
12 I/O slot rack - redundant power	900R12R-0200	900R12R-0300
Redundant Controller rack (PLC/UOC/HC900)	900RR0-0200/ 900RR0-0101	900RR0-0300
1 I/O slot rack Non redundant	900R01-0100	900R01-0300
Redundant Power, Rack Extension Kit	900RPE-0200	900RPE-0300
Power Supply Module, 120/240VAC, 60W	900P01-0301	900P01-0701
ControlEdge Universal I/O Module	900U01-0100	900U01-0100 (*No change)
Power Status Module, Redundant	900PSM-0200	900PSM-0200 (*No change)
PLC SERIAL COMM MODULE	900ES1-0100	900ES1-0100 (*No change)

Key deliverables for ControlEdge PLC R174.1 release are:

- **Robust support for MasterLogic IO to increase resiliency for high performance applications e.g. discrete, equipment OEMs, water, infrastructure, migration of competitive PLC systems etc.**
 - Support DHCP, ML I/O adapter will get IP address from PLC downlink through DHCP server
 - Support Hot Swap, ML200 allows to replace modules on process
 - Support Dual Power, ML200 supports dual power for redundancy in one rack
 - Provide detail diagnostics on diagnostics page in CE Builder like 900 I/O

- **Enabling Asset Management for Redundant IO Systems with HART support, thus enabling cost-effective packaged solution selling such as PLC + FDM software**
 - Support HART communication with slave devices in the Redundant UIO module configuration ,i.e. HART communication continues even during single active mode in Redundant pair.

- **Improved Network Support for IIoT Applications like Connected OEM remote monitoring and Analytics (covers next 3 bullets):**

- **Support Multi-Gateway(Static Routing)**
 - Support setting different gateway for ETH1 and ETH2 ports in order to connect multiple configuration station

- **Support DNS function**
 - Support using domain name to connect remote server

- **Enhancement of MQTT protocol**
 - Support Store and Forward function to let the data can be backfilled to the SCADA in a dedicated time
 - Support connecting to a broker using domain name instead of direct IP address

- **Enhanced remote Communications with support for IEC60870-5-104 Outstation for SCADA Applications, especially benefitting regions like Middle East and Europe**
 - It is used to Telecontrol (supervisory control and data acquisition) in electrical engineering and power system automation applications
 - It enables communication between control station and substation via a standard TCP/IP network. The TCP protocol is used for connection-oriented data transmission
 - Supports reading for Binary & Analog Inputs point types
 - Supports writing for Binary & Analog Outputs point types
 - Supports Counters point types
 - Time Synchronization support
 - Multi master support
 - Channel Redundancy
 - Supports Various commands like interrogation/cyclic/spontaneous/control commands

- **Record data locally for standalone or as a backup-data source to a Historian or SCADA.**
 - Can use flash memory inside PLC or external SD card to store data in a dedicated time and upload to a CSV file

CONTROLEDGE OPERATIONS STATION



Honeywell's new ControlEdge Operations Station provides the full control room feel with a fraction of the footprint. It enables faster and more effective display navigation and operation, improves situational awareness for operators, increases engagement and reduces fatigue with the flexibility to operate either sitting or standing.

The key features of the ControlEdge Operations Station include:

- OSHA compliant, and especially designed and optimized for 24/7 operations, reducing operator's fatigue, improving alertness and user response to critical actions
- Four monitor arms to install two 55-inch or eight 27-inch monitors
- Arms articulate and move in x, y, z dimensions, and can also be positioned linearly via the slat system for left-right movement to accommodate larger screen widths
- VESA mounting options for either 75mm or 100mm
- Each pedestal is sized for a Dell T330 Server (*not included in the package)
- 150-Watt Power Draw for Actuators to lift desk
- Ventilation grills on the front-top panels of the CPU enclosures assist with the heat dissipation, helping servers' function at optimum temperature
- An integrated wire management system, with easy front and rear access, that makes adding or changing cabling quick and simple

- Wider and deeper cable raceways allow for more cables, in an organized manner
- Follows the latest ergonomic guidelines for operating position, screen location and workspace height
- Actuators can smoothly and quietly raise or lower the work surface and screens to preconfigured or manually selected heights

CONTROLEDGE UOC- SUPPORT FOR EXTENDED OPERATING TEMPERATURE (-40 to +70 Deg C):

Along with ControlEdge R173 hardware release, below UOC hardware model numbers are revised for supporting temperature of -40 to +70 Deg C. The new models are completely backward compatible and can also be used as replacement/ spare for old hardware models being phased out. The changes to hardware model numbers and the affected parts are as per table below.

	Old Model Number (Phased out)	New Model Number (-40 to +70 Deg C)
CPM, Control Processor, ControlEdge 900	900CP1-0200	900CP1-0300
EPM, Expansion Processor, ControlEdge 900	900SP1-0200	900SP1-0300
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1 I/O slot rack Non redundant	900R01-0100	900R01-0300
Redundant Power, Rack Extension Kit	900RPE-0200	900RPE-0300
Power Supply Module, 120/240VAC, 60W	900P01-0301	900P01-0701
ControlEdge Universal I/O Module	900U01-0100	900U01-0100 (*No change)
Power Status Module, Redundant	900PSM-0200	900PSM-0200 (*No change)
Note- The redundancy module of ControlEdge 900 hardware family (900E01-0100) is not yet released with extended temperature support.		

EXPERION® HS BUNDLES

As one of the steps under Honeywell’s Digital Transformation initiative, PMC has released Experion HS bundles. These bundles cover all key Experion SCADA licenses, interfaces and, features needed for typical SCADA projects. Some of the advantages with Experion HS bundle part numbers include-

- Hassle-free estimation experience, only Experion media kit, Windows OS and SQL parts need to be added and your bill of material is ready for ordering

- Optimized pricing that can help Experion HS compete effectively with other SCADA competitors

Model number summary-

HS Part #	Description	SCADA Pts	Stations	Engineering	Redundancy	Future Expansion/ Upgrade?
EP-HSBRT1	Experion HS Bundle Regular Non-Red	3,000	5	Yes	No	Yes
EP-HSBRD1	Experion HS Bundle Regular Red	8,000	10	Yes	Yes	Yes
EP-HSBRD2	Experion HS Bundle Max Pack	16,000	20	Yes	Yes	Yes
EP-HSBRD3	Experion HS Bundle Ultimate with 100K adder	100,000*	60	Yes	Yes	Yes

Refer Experion HS R520 bundles specification (EP03-060-520) document for more details and list of interfaces, features covered in the bundle.

EXPERION® PANEL PC (PPC) SUPPORT FOR EXPERION R520

Experion PPC hardware (Honeywell Part# MZ-PPCT01) comes pre-installed with Windows 10 Enterprise LTSC 2016 Edition (later referred as LTSB by Microsoft) operating system which is the qualified supported Windows 10 OS for Experion R500, R510 and R511. However, Experion PPC also supports and qualified with Experion R520. Supported Experion node types are

- Experion HS Server cum Station
- Experion HS Station
- Experion LX/PlantCruise Flex Station
- Experion LX/PlantCruise Direct Connect Station
- Experion PKS Flex Station

As Experion R520 uses different Windows 10 OS edition- Windows 10 Enterprise LTSB 2019 Edition, users need to reformat Experion PPC with R520 compatible Windows 10 operating system. You can buy this Windows 10 OS through Honeywell (part# MS-OSLW19). The pre-installed Windows 10 OS on Experion PPC can't be used with Experion R520. We plan to introduce newer generation Experion PPC with embedded Experion R520 support in 2Q 2023.

SAFETY MANAGER SC

Safety Manager R212.1 is a Functional release adding following functional enhancements:

- FC-SCNT02, Controller having increased memory to support DNP3 outstation functionality. (Controller FC-SCNT01 is discontinued).
- DNP3 protocol (only support for DNP3 outstation)
- SMSC-8488 - Support NTP/PTP on port B, C, and D: PTP/NTP time sync protocol to work on all C and D interfaces of S300
- Enhanced security:
 - Disable communication with Safety Builder over FTE ports
 - Launch of Safety Firewall SF9: This is to block communication between Safety station and S300 controller on supervisory network
- Safety Builder enhanced to have Standard / Custom display in Online View of FLDs



PROGRAM UPDATES

DEMO SYSTEMS

Demo applications are designed and developed for various applications and for products like Experion® LX/C300, Safety Manager SC, ControlEdge™ HC900, ControlEdge™ PLC, ControlEdge™ RTU, ControlEdge™ UOC, Experion® PPC.

These are available in three packages:

- Integrated Demo
- ICSS Demo
- Individual Demo.

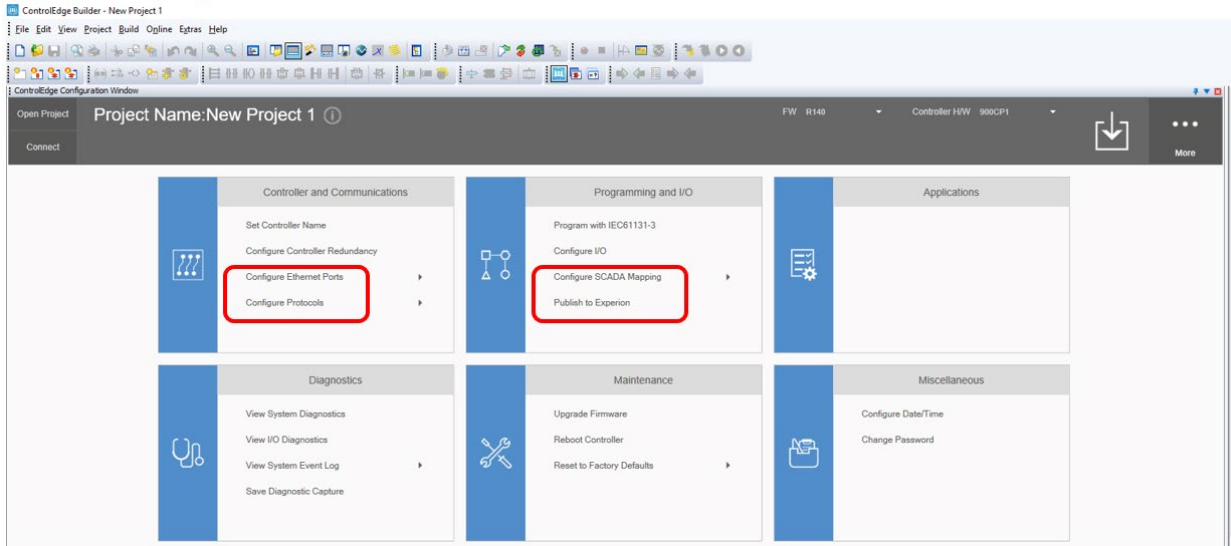
These demos support you in demonstrating and training customers on the Modular Systems portfolio. The applications and details are available with the SIAssist team. For more information, please contact SIAssist@Honeywell.com.



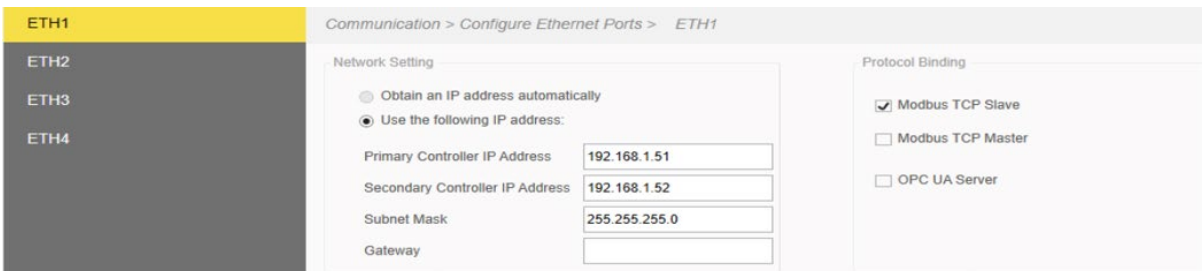
KNOWLEDGE ARTICLE

CONTROLEDGE™ PLC - SCADA MAPPING THROUGH MODBUS TCP

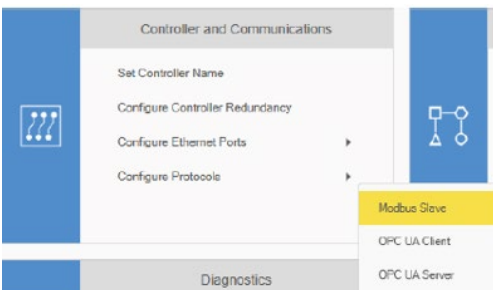
Create new / open project in ControlEdge Builder. Below Home Page will appear.



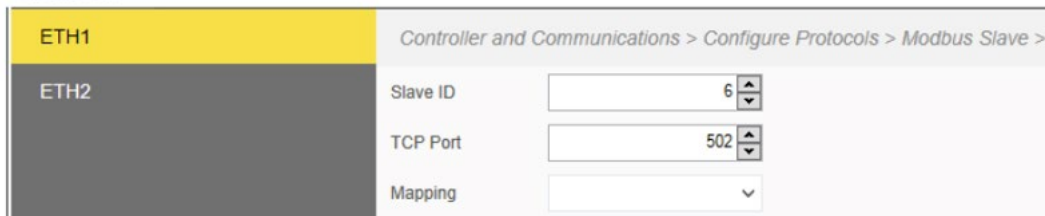
On the Home Page click on the 'Configure Ethernet Ports' for setting up the IP addresses for ETH1 and ETH2. Below page is showing the ETH1 IP address configuration. Select port as Modbus TCP Slave as being used to communicate with SCADA. Use consecutive IP addresses for Primary controller and secondary controller as indicated below. Save the configuration.



Go back to Home Page and click on the 'Configure Protocols' and select Modbus slave.

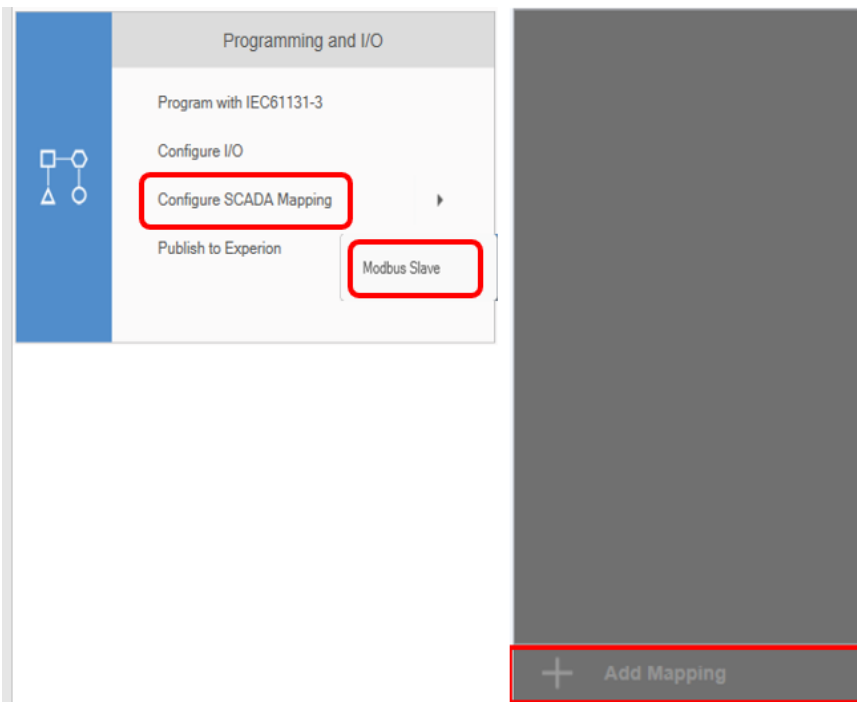


In the Modbus Slave Protocol, Configure the Slave ID as required and TCP Port as 502.

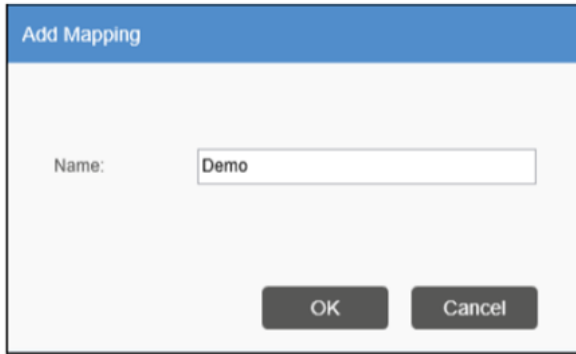


The screenshot shows a configuration page for a Modbus Slave. The breadcrumb trail is "Controller and Communications > Configure Protocols > Modbus Slave >". On the left, there is a sidebar with "ETH1" highlighted in yellow and "ETH2" below it. The main content area has three fields: "Slave ID" with a value of 6, "TCP Port" with a value of 502, and "Mapping" with a dropdown arrow.

On the Home Page, click 'Configure SCADA Mapping' to configure the mapping for Modbus Slave communication.

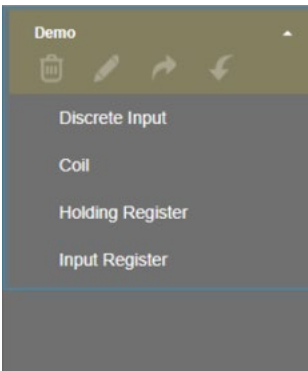


Click on 'Add Mapping' to add a new mapping table and assign a name in the pop-up window for this table.



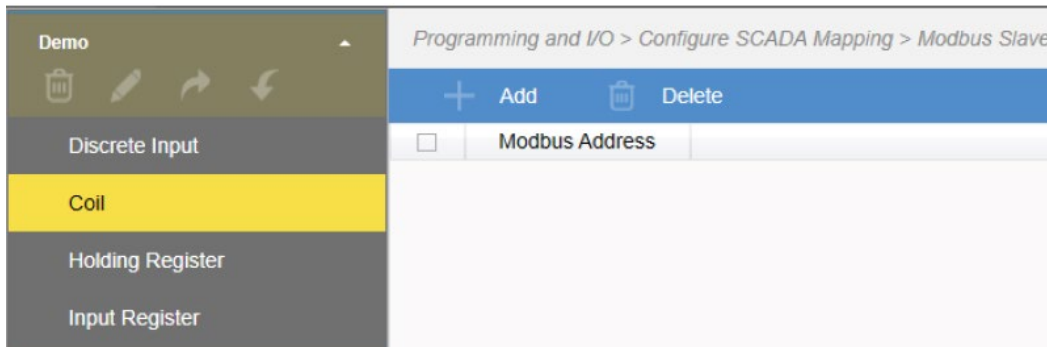
The image shows a dialog box titled "Add Mapping". It has a blue header bar with the text "Add Mapping". Below the header, there is a label "Name:" followed by a text input field containing the word "Demo". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

The new mapping table will be shown in the left panel. Select the desired function type to define the variable. In below example 'Coil' is selected



The image shows a vertical menu for selecting a function type. The menu is titled "Demo" and has a trash icon, an edit icon, a refresh icon, and a back icon. The options are: "Discrete Input", "Coil", "Holding Register", and "Input Register". The "Coil" option is highlighted in a darker grey color.

Once a specific function type is selected, related register assignment table will appear, click 'Add'.



The image shows a table for register assignment. The table has a header row with a checkbox and the text "Modbus Address". The table is currently empty. The "Coil" option from the previous menu is highlighted in yellow. The table is part of a larger interface with a breadcrumb trail: "Programming and I/O > Configure SCADA Mapping > Modbus Slave". There are "Add" and "Delete" buttons at the top of the table.

<input type="checkbox"/>	Modbus Address

In the pop-up window, assign the number of points to be mapped for the specific type.

Add More Points

Number of points to add:

OK Cancel

Once the number of points is defined, the table expands based on the setting. Click the rightmost icon to assign variables to the Modbus Addresses.

Programming and I/O > Configure SCADA Mapping > Modbus Slave

+ Add		Delete	
<input type="checkbox"/>	Modbus Address	Variable Name	
<input type="checkbox"/>	1		...
<input type="checkbox"/>	2		...
<input type="checkbox"/>	3		...
<input type="checkbox"/>	4		...

In the pop-up window, select a variable from the list and confirm, then this variable will be assigned to the selected address. Repeat this for all the Modbus addresses.

Select Variable

Filter: Search

Name	Description	Data Type
GlobalVariable		
System Variables		
Input ID Variables		
Controller		
Redundancy Local		
Redundancy Partner		
MODBUS MASTER		
MODBUS SLAVE		

OK Cancel

Once the configuration of the SCADA mapping table is complete, go back to step 3 and have this table bound to the Ethernet port by selecting Mapping as Demo.


ETH1	<i>I/O and Communications > Configure Protocols > Modbus Slave > ETH1</i>		
ETH2	Slave ID	<input type="text" value="6"/>	▲▼
	TCP Port	<input type="text" value="502"/>	▲▼
	Mapping	<input type="text" value="Demo"/>	▼
	Type	<input type="text" value="TCP"/>	▼

 **ESCALATION MATRIX FOR A SI ASSIST REQUEST**

Level of escalation	Escalation Timeline	GES Escalation Contact	Regional / Pole Leaders Contact	SI Program Contact
1	2 Days	Mukesh Chaudhari	Regional Product Business Leader	N/A
2	4 Days	Piyush Chaturvedi	Regional Business Leader	Swapnil Adkar
3	6 Days	Dipankar Rautray	Pole General Manager	Andrew Brodie



[Swapnil Adkar](#)
Sr. BDM Global SIs



[Mukesh Chaudhari](#)
Sr. Systems Engineer Supervisor

MODULAR SYSTEMS TECHNICAL SOLUTION CONSULTANTS

North EU Waqar Amin	South EU Maurro Vaccarino	Canada Dumar Jaramillo	USA Bob Kotoski	South AMER Raul Agundiz
India Bhavin Patel	China XueYong Shi	META Nikhilesh Muraleedharan	RoAP Mohd Zulfadli Hamzah Dicky Suryapranatha	