

# HONEYWELL SYSTEM INTEGRATOR TECH UPDATES



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## 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.

Like last year, we have initiated the **2023 System Integrator Organization Competency Survey** on 29-Jun-23. This is being conducted to understand the SI organization's expertise across different verticals and Honeywell Modular Systems. Based on this survey, the SI organization will receive industry and product badges as a recognition of its 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](mailto:SIAssist@Honeywell.com) for your various needs during the selling and execution of projects.

This year, SIAssist completed more than 100 requests by end of Jun 2023 and provided support to more than 40 System Integrators.

**P&E initiative** is progressing well, so far 40 P&E requests have been served till Q2-2023. Under this initiative the SIAssist team will support various types of Modular Systems proposals, ranging from small to large scale.



 **PRODUCT UPDATES**

**Digital University**

Honeywell Academy offers its channel partner a quality learning experience designed to empower to advance education. Discover our digital training materials.

Go on the HPS website [process.honeywell.com](https://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!

**Fundamental Trainings:**

Product	Training Description	DURATION
ControlEdge PCD	Fundamentals, first connect, basic configuration and programming, communications between controllers, display creation	2h
ControlEdge PLC	First connect, basic software configuration and programming, communications between controllers and Experion integrations	2h
ControlEdge RTU	First connect, basic software configuration and programming, communications between controllers and Experion integrations	2.5h

ControlEdge UOC	Basic and advanced software configuration and programming	2h
Series8 C300	Basic and advanced software configuration and programming	1h
Safety Manager SC	Fundamentals, first time software configuration and programming, integration with Experion.	2h
Honeywell VFDs	Fundamentals, how to select and use software	0.5h
Experion HS	Fundamentals, installation, display creation, controller integrations, historization and batch processing.	5h
Experion LX	Fundamentals, installation, display creation, controller integrations, historization and batch processing.	6h
Experion LX Webinars	Webinars featuring capabilities, demonstration included	6h

### ControlEdge PCD:

Course Name	Course Description	Module Name
ControlEdge PCD Fundamentals – Overview	ControlEdge PCD features, hardware, and software components	PCD - System Overview
ControlEdge PCD Basic - Software Configuration	Software configuration for basic tasks: connect, configure modules, factory reset, firmware updates	PCD - Configure and Connect to Controller
		PCD - Configure IO modules
		PCD - Factory Reset
		PCD - Firmware Update
ControlEdge PCD Advanced - Software Configuration	Software configuration for advanced tasks: Networking and Cybersecurity settings, users' management	PCD - Networking and Security
		PCD - Users Management
ControlEdge PCD Basic - Logic Programming	Create and monitor logic blocks, basic troubleshooting	PCD - Create and monitor logic blocks
ControlEdge PCD Advanced - Controller Communications	PCD Communications to Controllers on various protocols	PCD - Modbus between Controllers
ControlEdge PCD Basic – Web Editor Editing	Enable Webserver in controller and create displays to access them from any web browser.	PCD - Web Server configuration
		PCD - Web Server Basic Display Editing

### ControlEdge PLC:

Course Name	Course Description	Module Name
ControlEdge PLC Basic - Software Configuration	Basic Software configuration tasks: first connect, configure modules	CEPLC – Configure Controller and first connect
ControlEdge PLC Basic - Logic Programming	Advanced logic programming for PID, Function Blocks, Troubleshooting Techniques	CEPLC - Configure 900 IO Modules
		CEPLC - Programming PID blocks and Basic Troubleshooting
		CEPLC - Function Blocks and Advanced Troubleshooting
ControlEdge PLC Advanced - Controllers Communication	Data exchange between controllers over networks	CEPLC - Modbus communication between Controllers
ControlEdge PLC Basic - Experion Integrations	Experion Integrations over various protocols	CEPLC - Integration to Experion over DNP3

		CEPLC - Integration to Experion over CDA
ControlEdge PLC Advanced - Experion Integrations	Experion Integrations over advanced protocols: MQTT	CE PLC - MQTT protocol

### ControlEdge UOC:

Course Name	Course Description	Module Name
UOC - Basic Software Configuration and Logic	Software Configuration for basic tasks: connect, add modules and control modules, factory defaults, firmware updates, convert firmware from CE PLC to UOC	vUOC - Software Configuration and Basic Logic Editing
		UOC - Add CE900 IOMs to UOC
		vUOC - Convert CE PLC firmware to UOC
UOC Advanced - Software Configuration and Logic	Advanced Software Configuration and Logic: retention restart, Batch Processing	UOC - Retention Restart - from R511
		UOC - SCM Introduction
		UOC - SCM - configure batch process

### C300:

Course Name	Course Description	Module Name
C300 Basic - Software Configuration	Add C300 IO modules to ControlBuilder	S8C - Add C300 IO Modules
C300 Basic - Logic Programming	Control Modules programming, PID loop example	S8C - Control Modules: PID loop
C300 Advanced - Logic Programming	Sequential Control Module for batch process	S8C - SCM for Batch Process

### Safety Manager SC:

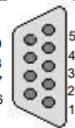

Course Name	Course Description	Module Name
SMSC Fundamentals - Overview	Safety Introduction, SMSC overview, architecture and hardware	Safety Introduction
		SMSC Architecture
		SMSC Hardware
SMSC Basic - Installation and Licensing	Software Installation steps and requirements, Licenses	SMSC Installation and Licensing
		SMSC Step by Step Video
SMSC Basic - Software Configuration	Safety Builder Software Configuration	Safety Builder Project Configuration
		Safety Builder IO Configuration
SMSC Basic - Logic and Programming	Safety Builder Logic editing and online environment	Safety Builder Logic
		Safety Builder Online Environment
		Interactive Practice
SMSC Basic - Integrations	Integrations to Experion over various protocols	Experion LX Integration over CDA
		Experion HS Integration over Modbus TCP

### Technical Tip on ControlEdge™ HC900 - Null Modem Cable

Null Modem Cable used with 900C70R (Model no. 50004820-501) is not available for ordering.

Null modem cable used to connect the Controller to the PC. This now you can make it by yourself. Please note below the connector types and connection details.

Null Modem Cable Connections

9-pin D female connector		3-plug connector		
				
Signal Name	Pin No.	Connection	Signal Name	Plug No.
DCD	1	None		
RXD	2	Connects to	TXD	2
TXD	3	Connects to	RXD	3
DTR	4	None		
GND	5	Connects to	GND	1
DSR	6	None		
RTS	7	None		
CTS	8	None		
RI	9	None		



## 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](mailto:SIAssist@Honeywell.com).



## KNOWLEDGE ARTICLE

### ControlEdge™ PLC - SCADA Mapping through DNP3 Protocol in CE RTU

- In ControlEdge builder Enable DNP3 protocol in Eth1 configuration.

- Enable DNP3 protocol in Eth2 if want to use this network also for DNP3 communication.

Controller and Programming > Configure Ethernet Ports > Eth1

Network Setting

Obtain an IP address automatically

Use the following IP address:

IP Address:

Subnet Mask:

Gateway:

Enable DHCP Server

Start IP Address:

End IP Address:

Protocol Binding

DNP3

Controller Configuration Protocol

HART-IP

Modbus Slave

Modbus TCP Master

Enron Modbus Slave

Wireless I/O

Create a DNP3 SCADA mapping file.

- Add measuring and control variable as per the object.
- Available DNP3 objects are: Binary Inputs/Outputs, Double Bit Inputs, Analog Inputs/Outputs, Counters
- DNP3 address is configurable.
- A class can be assigned to different DNP3 objects.
- Dead Band configuration is available for Analog objects.

I/O and Communications > Configure SCADA Mapping > DNP3 Slave

+ Add		Delete	
<input type="checkbox"/>	DNP3 Address	Variable Name	Class
<input type="checkbox"/>	1000	@GV.CNTRLR_ETH1_IPCONFLICT	Class 0
<input type="checkbox"/>	1001	@GV.CNTRLR_ETH2_IPCONFLICT	Class 0
<input type="checkbox"/>	1002	@GV.MBSLV_ONLINE	Class 0
<input type="checkbox"/>	1	SCADA_DNP3_1S.DI_BOOL_50	Class 1
<input type="checkbox"/>	2	SCADA_DNP3_3S.DI_BOOL_50	Class 2
<input type="checkbox"/>	3	SCADA_DNP3_5S.DI_BOOL_50	Class 3

## General configuration

- Add a master in configuration window to which outstation will communicate.
- Enter TCP port, master address, outstation address.
- Available Mapping files can be selected for data communication.

Click Configure Protocols > DNP3 Slave tab and select the target Ethernet ports which you want to bind. Then select Master index number.

In the General tab, configure the TCP port number. It should be the same as the DNP3 master. Enter Master address and outstation address.

In the Data Link configuration, configure corresponding parameters as required.

The screenshot shows the 'General' configuration tab. It contains several fields for configuration:

- TCP Port: 21101
- Master Address: 31101
- Data Link Confirmation: Never
- Mapping: Exerion\_DNP3ETH1
- Controller Outstation Address: 5
- Data Link Retries: 3
- Enable Self Address
- Data Link Retry Timeout: 2000

Below the main configuration area, there are two expandable sections: 'Application Layer' and 'Default Variation'.

## Application layer configuration

- Unsolicited responses can be enable/disable as per requirement.

The screenshot shows the 'Application Layer' configuration tab. It contains several settings:

- Enable Unsolicited Responses
- Unsolicited Response Settings
  - Send NULL Unsolicited Response on Reconnect
  - Maximum Hold Delay for Class1: 5000 msec
  - Maximum Hold Count for Class1: 5
  - Maximum Hold Delay for Class2: 5000 msec
  - Maximum Hold Count for Class2: 5
  - Maximum Hold Delay for Class3: 5000 msec
  - Maximum Hold Count for Class3: 5
  - Unsolicited Response Retries: 3
  - Unsolicited Response Retry Delay: 5000 msec
- Delete Oldest Event on Event Overflow
- Validate Controller Outstation Address
- Keepalive Interval: 5000 msec

If you select Enable Unsolicited Responses, the controller sends event data to SCADA without any request from SCADA. Unsolicited Response is an operation mode in which the outstation spontaneously transmits a response without a specific request for the data.

### Application layer configuration

- DNP3 time synchronization can be enabled/disabled with sync time settings.

<input type="checkbox"/> Enable DNP3 Time Synchronization	DNP3 Time Synchronization Period: <input type="text" value="1"/> min
Solicited Response Confirmation Timeout:	<input type="text" value="10000"/> msec
Unsolicited Response Confirmation Timeout:	<input type="text" value="10000"/> msec
Select Before Operation (SBO) Timeout:	<input type="text" value="5000"/> msec
EFM Data Class:	<input type="text" value="Class 1"/>

### Default Variation configuration

- Object variation available with default configuration
- User can change object variation as per requirement
- Object reports data in selected variation only

Default Variation			
Binary Input:	<input type="text" value="Value with flags"/>	Binary Input Event:	<input type="text" value="Value with absolute time"/>
Double-Bit Binary Input:	<input type="text" value="Value with flags"/>	Double-Bit Binary Input Event:	<input type="text" value="Value with absolute time"/>
Binary Output:	<input type="text" value="Status with flags"/>	Binary Output Event:	<input type="text" value="Status with time"/>
Binary Output Command Event:	<input type="text" value="Status with time"/>	Counter:	<input type="text" value="32-bit integer with flag"/>
Frozen Counter:	<input type="text" value="32-bit integer with flag, time"/>	Counter Event:	<input type="text" value="32-bit integer with flag, time"/>
Frozen Counter Event:	<input type="text" value="32-bit integer with flag, time"/>	Analog Input:	<input type="text" value="Single-precision float with flag"/>
Analog Input Event:	<input type="text" value="Single-precision float with time"/>	Analog Input Deadband:	<input type="text" value="Single-precision float"/>
Analog Output Status:	<input type="text" value="Single-precision float with flag"/>	Analog Output Event:	<input type="text" value="Single-precision float with time"/>
Analog Output Command Event:	<input type="text" value="Single-precision float with time"/>		





## 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	<a href="#">Mukesh Chaudhari</a>	Regional Product Business Leader	N/A
2	4 Days	<a href="#">Piyush Chaturvedi</a>	Regional Business Leader	<a href="#">Swapnil Adkar</a>
3	6 Days	<a href="#">Dipankar Rautray</a>	Pole General Manager	<a href="#">Carlos Villa Rodriguez</a>



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



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

### MODULAR SYSTEMS TECHNICAL SOLUTION CONSULTANTS

North EU <a href="#">Waqar Amin</a>	South EU <a href="#">Maurro Vaccarino</a>	Canada <a href="#">Dumar Jaramillo</a>	USA <a href="#">Bob Kotoski</a>	South AMER <a href="#">Raul Agundiz</a>
India <a href="#">Bhavin Patel</a>	China <a href="#">XueYong Shi</a>	META <a href="#">Nikhilesh Muraleedharan</a>	RoAP <a href="#">Razizuddin Razali</a> <a href="#">Permadi Sandi</a>	