TCMI – Triconex UCN to EUCN Migration Solution

Solution Note

Triconex Communication Module Interface (TCMI) is new Honeywell hardware that connects Triconex systems to the Ethernet-based Enhanced Universal Control Network (EUCN). TCMI enables the migration of the Triconex systems coax UCN to Ethernet EUCN.

Developments in Industrial Automation Infrastructure
Coax-based technology (patented in 1880 in UK) has been extensively used as communication infrastructure for the industry in the second half of the 20th century. The Ethernet became the industry communication standard in 1989, leading to a rapid replacement of the coax infrastructure with Ethernet in all market sectors. As of today, all new industry solutions utilize Ethernet as communication standard.

Honeywell has extended the support of the coax infrastructure till 2025 enabling customers to migrate their coax-connected devices to the Fault Tolerant Ethernet (FTE), in place.

Commitment to Continuous Evolution
For more than 40 years, Honeywell has stood behind customer investments in its plant automation technology. Our commitment to continuous technology evolution enables industrial operations to modernize their legacy control assets step-by-step, to a new, modern automation system while at the same time retaining capital investments and protecting valuable intellectual property.

FEATURES & BENEFITS
- Enables Triconex communication migration from UCN to EUCN
- Extends Triconex communication support beyond 2025
- Checkpoint compatible with Triconex UCN configuration
- No changes in TPN/EPKS configuration
- No changes in TPN/EPKS displays
- No changes in TPN/EPKS applications
- Peer-to-peer capabilities with other (E)UCN controllers
- Compatible with Triconex V10.3 or higher

Figure 1. Honeywell ENB transitions controller’s modernization to a simple task

Figure 2. Triconex controller and TCMI
Unified Control Environment
The unified control environment between Total Plant Network (TPN) system and Experion® Process Knowledge System (PKS) system provides a sustainable FTE-based control infrastructure, integrating Honeywell control and safety equipment on a common physical hardware network.

With the unified control environment, all control-level devices are connected to common hardware infrastructure using FTE (Fault Tolerant Ethernet) technology. This unified control environment:

- provides significant increase of the longevity of operation of the control system,
- reduces the dependency on ageing workforce knowledge and technology materials,
- enables additional operational benefits applying integration with newest process controllers and features.

The Innovative Approach to Simplify Controllers Upgrade
Controller upgrade simplification is supported by on-process creation of the hybrid coax/FTE Universal Control Network (UCN).

Honeywell’s Enhanced Network Bridge (ENB) is specifically designed to temporarily enable dual citizenship on both coax and FTE control networks during the upgrade of the coax-based devices to FTE (Figure 1).

The ENB supports all functions of the Network Interface Module (NIM) with additional capabilities to enable peer-to-peer communications between coax- and FTE-based devices on the same logical UCN network.

Honeywell has developed migration solutions for all coax based controllers to FTE:

- PM and HPM controller migration to Enhanced High-performance Process Manager (EHPM, including true on-process HPM to EHPM migration
- Fail Safe Controller (FSC) migration to Safety Manager (SM)
- Logic Manager (LM) migration to C300 controller
- Triconex SMM migration to UCN using TCMI

After migration of all coax connected controllers to FTE, the ENB is transition to Enhanced Network Interface Module (ENIM) as the long term solution for support of the FTE control infrastructure.

![Figure 3. UCN after controller migration](image)

TCMI – Triconex Communication Module Interface
TCMI is the new Honeywell hardware that connects Triconex controllers via the Triconex TCM card with V10.3 or higher to the FTE-based UCN. It facilitates Triconex migration from UCN to UCN.

Minimum software requirements for TCMI
TCMI requires the TPN system to be upgraded to release R687.1 or higher. Hybrid TPN/EPKS systems with ENB additionally require minimum EPKS software release R432.1.

TCMI Benefits to Honeywell Customers
By using TCMI for Triconex UCN to UCN migration, Honeywell customers will:

- Ensure crucial system life extensions with minimal investment effort where control system configuration, data settings, custom applications and displays remain unchanged.
- Easily restart after migration applying checkpoint compatibility between Triconex SMM and TCMI.
- Better plant turnaround alignment with incremental migrations Triconex controllers on the hybrid UCN with ENB.
**Expert Support Around the World**

Honeywell is committed to lifecycle support and helping customer meet their business needs for automation planning. Our high-value services and support capabilities have more global reach and presence than any other supplier.

With Honeywell’s approach, linearity of capital investments, together with efficiency improvements is fully supportable using an incremental modernization and upgrade approach.

Currently, more than 8,000 Honeywell technicians use collective expertise to work for customers in 67 countries. Our support teams are driven to the highest standards develop by our Global Migration Center of Excellence to meet customer requirements for ease of use, effective maintenance and optimal use of customer’s engineering effort.

Honeywell also provides world-class customer support via our Global Technical Assistance Center (GTAC).

Honeywell provides a complete portfolio of service offerings to extend the life of your plant and provide a cost-effective path forward to the latest application technology. Honeywell services include:

- Software installation services
- On-site engineering services
- Migration services
- Scope expansion services
- Assessment services
- Performance baseline and tuning services
- Customized training

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**For More Information**

Learn more about how Honeywell’s TCMI – Triconex UCN to EUCN Migration Solution can help you migrate to the latest control technology, visit [honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell Account Manager.

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**Honeywell Process Solutions**

1250 West Sam Houston Parkway South
Houston, TX 77042

Honeywell House, Skimped Hill Lane
Bracknell, Berkshire, England RG12 1EB UK

Building #1, 555 Huanke Road,
Zhangjiang Hi-Tech Industrial Park,
Pudong New Area, Shanghai 201203

[www.honeywellprocess.com](http://www.honeywellprocess.com)

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