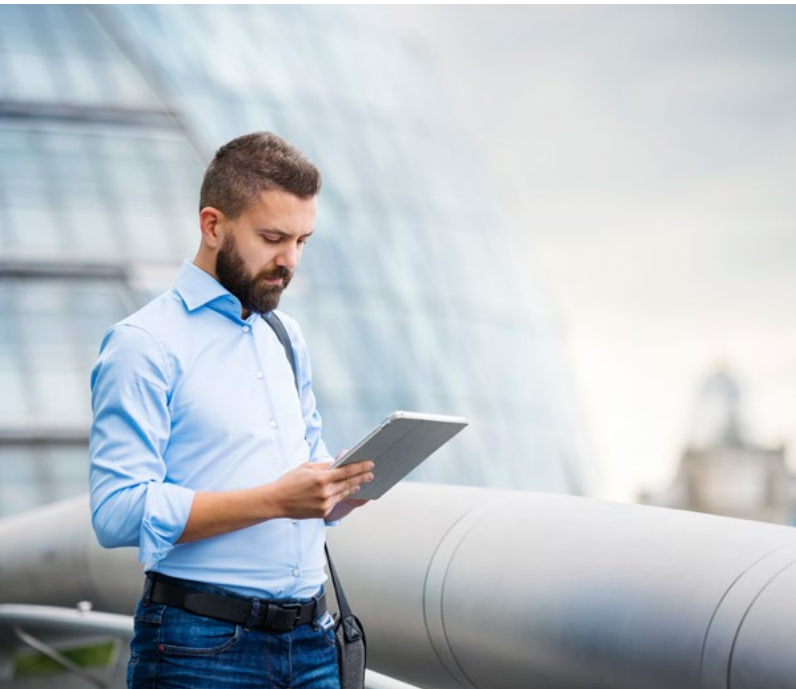# VERASYS®

Introducing Verasys Release 4.2

Johnson Controls is pleased to announce a new release of the Verasys platform. Keeping a building's environment consistently comfortable and safe through different functions, schedules, and challenges is a complex job. Verasys leverages Smart Equipment and advanced technology to provide building control solutions for the light commercial market that are predictive, proactive, and preventative.

Verasys provides an intuitive user interface to deliver building control intelligence which you can use to design, control, and optimize your building ecosystem in a single building or across your enterprise.

Verasys simplifies the user experience to provide the most efficient and secure controls applications across the vast range of intelligent equipment for buildings.

Key highlights

TMR Wireless Router

The TMR Wireless Router (TMR) is a component of the Verasys Controls System which provides wireless connectivity to BACnet® MS/TP controllers, including Verasys Simplicity Smart Equipment Rooftops, VAC, VEC, TEC, VZC, ZEC, and third-party controllers, over a wireless mesh network on the Verasys System and Zone buses. A single TMR can function as a wireless network coordinator, a router, or a stand-alone repeater (see Figure 1).

The Verasys Smart Building Hub (SBH) automatically recognizes and configures an attached TMR as a wireless network coordinator on the Verasys System Bus. Similarly, the Verasys Zone Coordinator (VZC) automatically recognizes and configures the TMR as a wireless network coordinator on the Verasys Zone (CS) Bus. The SBH and VZC can also simultaneously support both physically wired and wireless devices on their respective System and Zone buses.

Each TMR network can support up to 35 MS/TP controllers. You can use additional repeaters without adding to the device limit. The TMR draws power from its associated controller, thus eliminating the need for batteries that require regular maintenance.
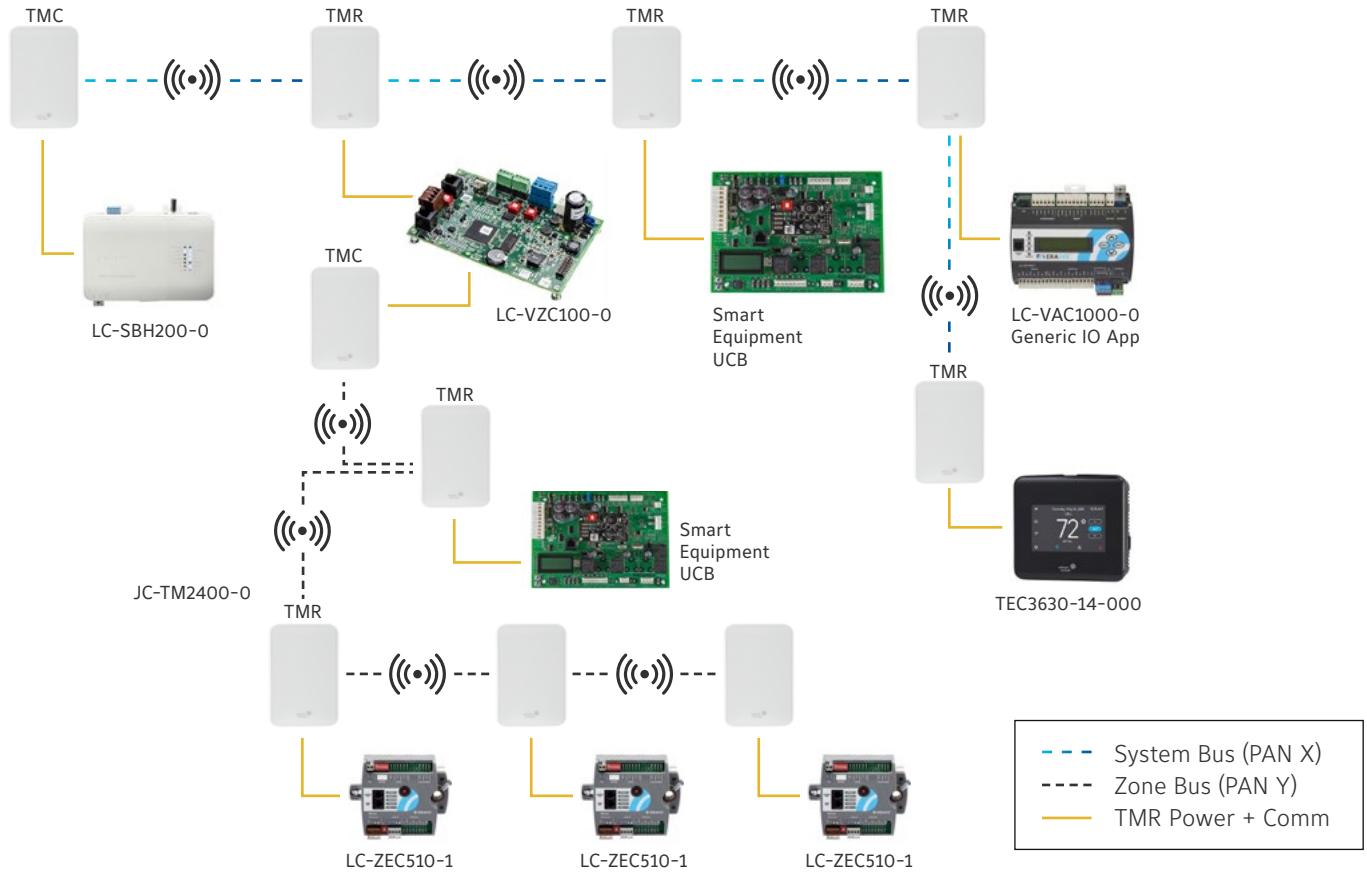
The following table outlines the TMR transmission range:

Table 1: TMR transmission range

Range type	TMR to TMR transmission distance
Optimal performance	250 ft (75 m)
Maximum line of sight	1000 ft (300 m)
Maximum through multiple hops	2000 ft (600 m)

A separate accessory kit is available with the release of the Verasys TMR that includes a NEMA 3R enclosure and weatherproof piping for installation of the TMR on the exterior of a rooftop unit. To prevent a significant drop in wireless transmission, do not mount the TMR on the interior of a rooftop unit.

Figure 1: Verasys TMR Wireless Router

Legend:
- – – – System Bus (PAN X)
- - - - Zone Bus (PAN Y)
- ——— TMR Power + Comm

Labels in figure:
TMC — LC-SBH200-0
TMR — LC-VZC100-0
TMR — Smart Equipment UCB
TMR — LC-VAC1000-0 Generic IO App
TMC
JC-TM2400-0
TMR — Smart Equipment UCB
TMR — TEC3630-14-000
TMR — LC-ZEC510-1
LC-ZEC510-1
LC-ZEC510-1

Smart Building Hub Panel

The 20 in. x 24 in. x 9.5 in. NEMA 1 enclosure includes a Verasys Smart Building Hub, power supply with a 5A circuit breaker, 96 VA 120/24 VAC transformer, and two 120 VAC outlets. Knockouts of various sizes provide for a simple installation. A DIN rail is available with space for mounting a VAC1000 Application Controller or up to two Verasys Zone Coordinators (VZCs).

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VAC Simple Boiler Application
The Verasys Boiler Controller is an application-specific controller for commercial heating that resides on the Verasys VAC1000 Application Controller. Table 2 shows the applications the controller supports.

Table 2: Supported applications for the Verasys VAC1000 Application Controller

Application	Support
Verasys schedule integration	Yes
Support for 1 or 2 staged boilers	Yes
Support to enable/disable individual boilers	Yes
Equal runtime and dedicated lead/lag options on equipment	Yes
Support for dedicated pump control (both constant or variable speed type)	Yes
Reset return water temperature based on outside air temperature	Yes
Support for sequencing based on hot water return temperature or outdoor air temperature	Yes
Support for a bypass valve flow control with a loop differential pressure sensor	Yes
Ability to share sensor values to other devices	Yes
Support for multiple resistance-based sensors	Yes
Support for boiler maintenance	Yes

Post-sales and equipment support
Post-sales support teams can assist contractors with any technical questions that may come up during installation, wiring, and commissioning.

· For all post-sales support, contact our Johnson Controls Field Support Center: **1-866-663-6105**
· For all Smart Equipment rooftop support, contact our Commercial Unitary equipment support: **1-866-523-9670**

8 a.m. – 4 p.m. CST
Monday–Friday

You can also submit a question to: BE-VerasysSupport@jci.com

Succeed with Verasys
Verasys is, first and foremost, an equipment and controls product. The bundled solution drives your sales by not only providing the technological advantages and feature sets of Smart Equipment technology, but by also providing the most competitive cost structure for project labor and materials.

Verasys also drives sales through the integration of individual controls to meet all the requirements of a light commercial project. Retrofit projects benefit from integrating individual controls by providing zoning systems when there are long-term logistics on Variable Air Volume (VAV) or zone damper boxes.

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You can install Verasys individual controllers on all third-party, single-zone rooftop units, heat pumps, or split systems. Verasys also supports integration of any third-party zoning system, on both VAV and Changeover Bypass (COBP) systems. Install all zone controllers individually, including zone damper controllers and VAV controllers, on any manufactured VAV box or zone damper.

The key to success for Verasys comes from design build and driving the specification for plan and spec projects in the light commercial market. Other key competitive advantages include remote connectivity, fault detection diagnostics, and partnerships with local mechanical contractors that provide the means to sell this bundled solution.

Documentation

Table 3: Related documentation

Document title	Document number
Verasys TMR Series Wireless Router Installation Guide	LIT-12014167
Verasys System User's Guide	LIT-12012371
Verasys Tenant User Guide	LIT-12013613
Verasys System Product Bulletin	LIT-12012342
Verasys Alarms Summary Technical Bulletin	LIT-12013648
Verasys BACnet MS/TP Integration Technical Bulletin	LIT-12013606
Verasys Enterprise Product Bulletin	LIT-12013647
Verasys Enterprise Configuration and User Guide	LIT-12012995
Verasys Enterprise Security and IT Guide	LIT-12013026

Note: New and/or updated documents will become available over the next six to eight weeks.

For more information, please visit **www.verasyscontrols.com**