Johnson Controls

Flash Sheet: LIT-2009F26
Issue Date: December 9, 2009

Flash Sheet

Affects: E-Link Gateway Release 1.0

Subject: E-Link Gateway Software Patch 1

Products

Patch 1 is now available for the E-Link Gateway Release 1.0 products listed in Table 1.

Table 1: Products

Product Code Number	Description
YK-ELNK100-0	E-Link Gateway with Serial Outputs (BACnet® Master-Slave/Token-Passing [MS/TP], Modbus® Remote Terminal Unit [RTU], and N2)
YK-ELNKE00-0	E-Link Gateway with Serial Outputs in an Enclosure

Releases Affected

E-Link Gateway Release 1.0

Patch Number

Patch 1

Method

☐ Software Installation
☐ Remote Desktop
☐ USB Stick Patch
☒ Other: Microsoft® Windows® HyperTerminal

CRs/PTs

Patch 1 resolves CR30644, CR34593, CR27869, and CR28816.

CR30644

Modbus scaling factor problems may occur on sites with the E-Link Gateway connected to chillers, where the chiller's accrued Run Hours or Number of Starts is in excess of the allowed display limit (that is, a 16-bit signed Modbus word [32,767] with the standard scaling factor multiplier of x10).

The E-Link Gateway provides a user report that allows you to adjust the scaling factor in the field; however, the scaling factor returns to the original setting after cycling power. This setting reverts to the original value because the Quick Start (QS) profile that configures the E-Link Gateway for a particular chiller contains the default Modbus scaling for that chiller type. When applying power, the E-Link Gateway runs the selected Quick Start profile and rewrites the default values.

After installing this patch, the Modbus scaling is set by the Quick Start routine for the various supported chiller types, and field modification of this setting via the user report prevails following a power cycle.

CR34593

Modbus scaling factor problems may occur on sites with the E-Link Gateway connected to York chillers equipped with a Variable Speed Drive (VSD), where the chiller's Kilowatt Hours are in excess of the allowed display limit (that is, a 16-bit signed Modbus word [32,767] with the standard scaling factor multiplier of x1). The same problem with Run Hours and Number of Starts occurs as described in the *CR30644* section of this flash sheet.

After installing this patch, the Modbus scaling is set by the Quick Start routine for the various supported chiller types, and field modification of this setting via the user report prevails following a power cycle.

CR27869

On a York Solid State Starter chiller with Metric units (YK SSS SI-G) and MS/TP protocol, point YT S01_P11 shows a percentage symbol for engineering units when no units should appear. Patch 1 resolves this problem by clearing out the engineering units.

CR28816

The Setpoint for the LONWORKS® configuration does not accept writes from the LONWORKS interface. The E-Link Gateway does not pass the write only value of nviYTS01P03 to Feature 54, Section 002. All other Network Variable Input (NVI) Standard Network Variable Types (SNVTs) function properly. A leading space in the descriptor in Quick Start 12 caused this problem. Patch 1 resolves this problem by removing the leading space.

Location

Johnson Controls® Field Support Center (FSC) Product Quick Patches page:
http://publish.cg.na.jci.com:9085/publish/controls/us/eng/fsc/hf/Metasys_Quick_Patches.html
(Products & Services > Delivery > Product/Service Field Support: Product Quick Patches > E-Link)

Instructions

To load the patch into the E-Link Gateway, you need a computer with Microsoft Windows® HyperTerminal communications software, and a Universal Serial Bus (USB) to RS485 adaptor.

To install this patch:

1. Go to the Quick Patches page, click the link for E-Link, and click the link for Patch 1.
2. Save the zip file to your computer, and extract the files to a convenient location.
3. Disconnect the Building Automation System (BAS) client from Port 1 of the E-Link, and disconnect Port 2 from the chiller.
4. Prepare the E-Link for a terminal session:
   a) Setting all Quick Start switches for group A and B to OFF.
   b) Set the T switch to ON.
   c) Press the reset button to restart the E-Link.

5. Connect the RS485 adaptor to Port 3 on the E-Link.
6. Start Windows HyperTerminal. Select the correct COM port for your adaptor, and configure the properties as shown in Figure 1 and Figure 2.

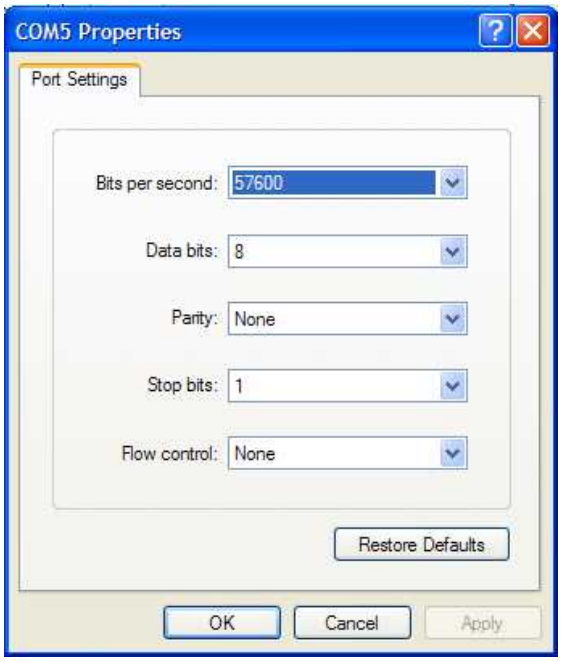

Figure 1: COM Properties

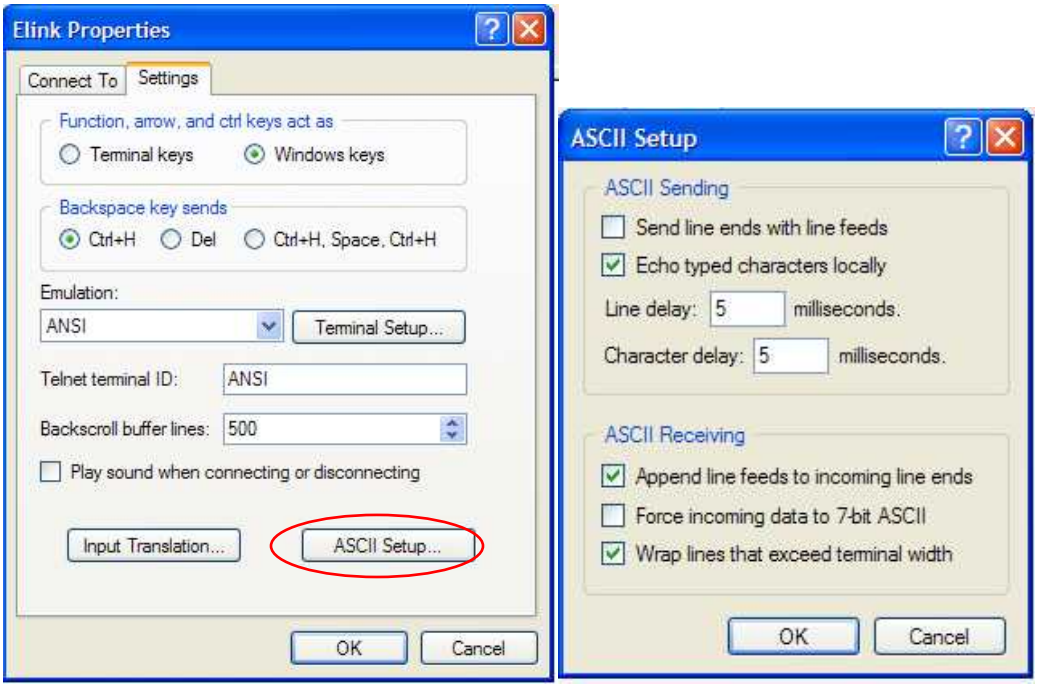

Figure 2: E-Link Properties and ASCII Setup

7. Save the changes as a HyperTerminal session file (.ht extension).

Note: You may need to restart HyperTerminal for the changes to take effect.

8. Before installing Patch 1, check the version of firmware installed on the target E-Link Gateway as follows:

   a) In the HyperTerminal window, type **logon** and press the Enter key. The E-Link responds with **PLEASE ENTER PASSWORD**.

   b) Type **4444** and press the Enter key. Then type **01** and press the Enter key. **FIRMWARE REV: 2.3.2.167** should appear. If not, refer to the *E-Link Gateway Commissioning and Troubleshooting Technical Bulletin (LIT-12011238)* for instructions on loading OCSX_2_3_2_167.elf firmware into the E-Link before attempting to add the patch CNF file.

9. In the HyperTerminal window, type **logon** and press the Enter key. The E-Link responds with **PLEASE ENTER PASSWORD**.

10. Type **5555** and press the Enter key. E-Link responds with **NO QS SET – SAT 01-JAN-2005 00:00**.

11. Type **xmodem database** and press the Enter key. E-Link responds with **READY TO RECEIVE FILE**.

12. From the Transfer menu, select Send File. The Send File dialog box appears. Click Browse and locate and select the **ENG_0001_009_V3.cnf** file. Click Open. See Figure 3.

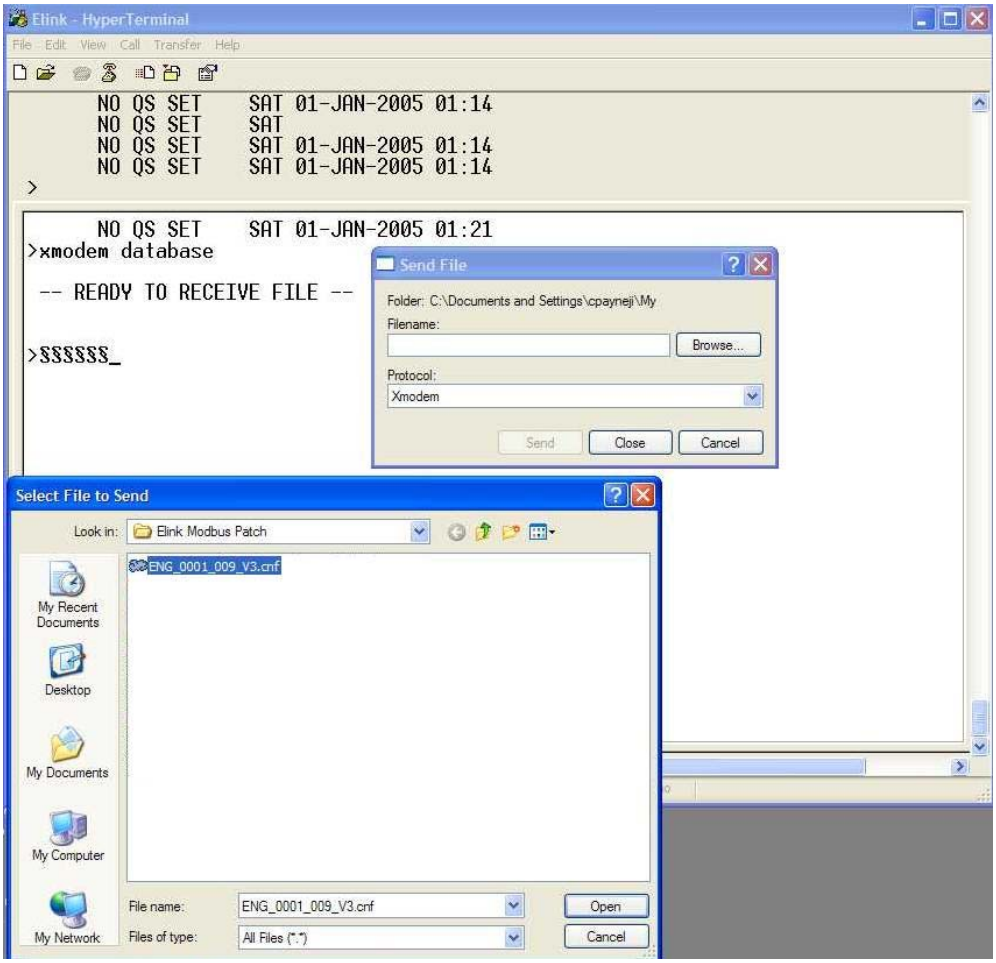

Figure 3: Send File Process

13. Click Send. The new database uploads to the E-Link. When the upload completes, the E-Link responds with **UPDATE SUCCESSFUL**, and then restarts. See Figure 4.

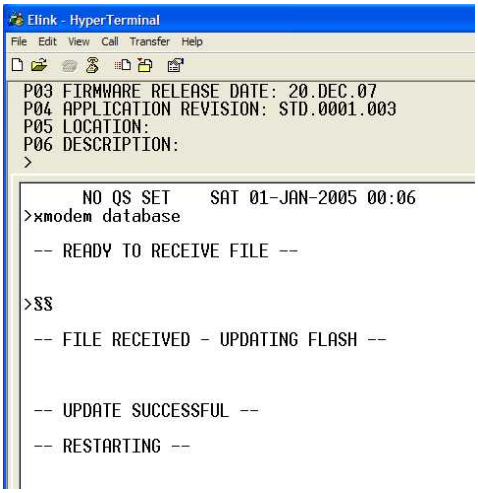

Figure 4: Successful Upload

14. Wait for the red status Light-Emitting Diode (LED) to start flashing, then reset the Quick Start switches to the required setting. Restart the E-Link by pressing the reset button.
15. Reconnect the BAS client and chiller.
16. Confirm the correct operation of the E-Link Gateway for your application:
    a) For the problems described by CR30644 and CR34593, verify that the Modbus values pass from the chiller to the Modbus client with a scaling factor of X1.
    b) For the problem described by CR27869, verify that the % engineering unit problem is resolved.
    c) For the problem described by CR28816, verify that the setpoint SNVT accepts writes.
17. If necessary, logon to the E-Link and access user report 2222. This report allows you to further adjust the Modbus scaling factors for the relevant points as required. **Make sure you advise the technician configuring the Modbus client of any changes you make to these scaling factors.**

    For additional information on using **xmodem** commands with the E-Link and the user reports, refer to the *E-Link Gateway Commissioning and Troubleshooting Technical Bulletin (LIT-12011238)*.

    This document resides at the following Johnson Controls® Portal addresses:

    http://cgproducts.johnsoncontrols.com//MET_PDF/12011238.PDF

Patch Contents

The E-Link Gateway Patch 1 zip file (OCSX_2_3_2_167Patch.zip) contains the following files:

- OCSX_2_3_2_167.elf
- ENG_0001_009_V3.cnf

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