

CONETTIX Plug-in Communicator Interface

B450

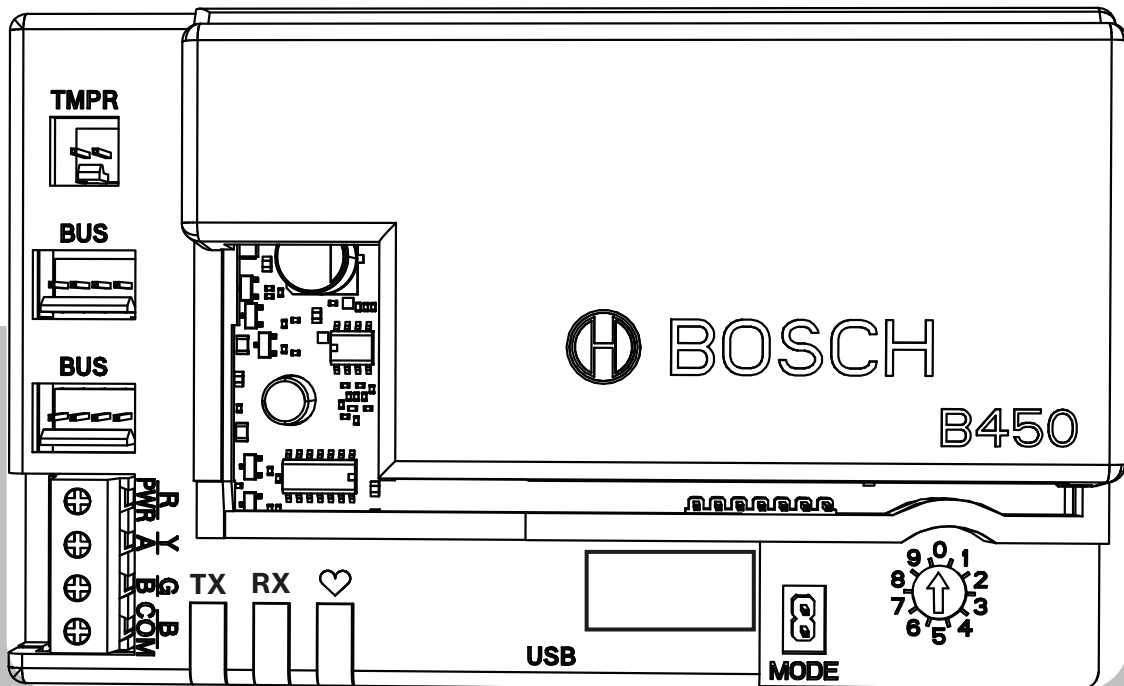


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1 Introduction

These *Release Notes* are for the B450 with firmware version 3.15.014.



Notice!

Firmware version 3.15.014 is exclusively for the B450 and B450-CHI only. Do not install this firmware version on the B450-M.

1.1 Requirements

B450 (with inclusion of a B44x Cellular Communicator module) supports the following control panels:

Compatible control panels

B9512G/B8512G /B9512G-E/B8512G-E
B6512/B5512/B4512/B3512
B5512E/B4512E/B3512E
D9412GV4/D7412GV4 (v2.xx+)
D9412GV4/D7412GV4 (v1.xx+)
D9412GV3/D7412GV3/D7212GV3
D9412GV2/D7412GV2/D7212GV2 (v7.07+)
FPD-7024 (v1.03+)
AMAX 2000/2100/3000/4000 (v1.5+)
CMS 6/8, CMS 40
Easy Series v3+
Solution 2000/3000

2 Firmware version 3.15.014

What's new

- *Remote firmware update capability, page 6*
- *Security improvements, page 6*

What's fixed

- *Cellular module show as "Unrecognized", page 6*
- *Expired TLS Certificate, page 6*

2.1 What's new

This section examines the new features of this firmware version.

2.1.1 Remote firmware update capability

This firmware release allows for future firmware revisions on the B450 to be installed without an on-site visit by a technician. Users will have access to an internal web page to install the latest firmware versions. The instructions for this procedure can be found here: [B450 Downloads Tab](#)

1. Select **Downloads tab**.
2. Select **Literature**.
3. Scroll down to locate the firmware update instructions.

2.1.2 Security improvements

- Configuration of minimum supported TLS version 1.2.
- Disable non-FIPS compliant TLS ciphers.
- Updated TLS and network stack libraries.
- Implemented lockout scheme for consecutive, invalid web page passcode entries. If 5 consecutive invalid passcode entries are made within a 10-minute period, subsequent passcode entries, whether valid or invalid, will be ignored until 10 minutes have elapsed since the first of the 5 invalid entries were made.

2.2 What's fixed

This section examines the corrections made in this firmware version.

2.2.1 Cellular module show as "Unrecognized"

The B450 USB menu shows B444-V, B444-A, or B444-G communicator modules as "Unrecognized" even though the module functions correctly. This has been corrected.

2.2.2 Expired TLS Certificate

This device might allow an expired TLS certificate. This has been corrected.

3 **Firmware version 3.13.xxx**

What's new

3.1 **What's new**

This section examines the new features of this firmware version.

3.1.1 **Remote firmware update capability**

This firmware release allows for remote firmware revisions to be installed on the B and G Series control panels as well as the GV4 control panel without an on-site visit by a technician. Users will have access to an internal web page to install the latest firmware versions.

4 **Firmware version 3.13.012**

What's fixed

- *Improved recovery from Cellular Network Updates, page 8*

4.1 **What's fixed**

This section examines the corrections made in this firmware version.

4.1.1 **Improved recovery from Cellular Network Updates**

This device now handles when updates are released on the cellular network that could affect connectivity in a faster and better manner. There have been updates that could require manual intervention, this has been reduced or eliminated.

5 Firmware version 3.13.010

What's new

– *B444-A2 and B444-V2 support, page 9*

5.1 What's new

This section examines the new features of this firmware version.

5.1.1 B444-A2 and B444-V2 support

The system now supports B444-A2 (AT&T LTE) and B444-V2 (Verizon LTE) Plug-in cell modules.



Caution!

Activate the B444-A2/B444-V2 SIM card before inserting. Failure to do so might result in failed communications to the control panel/module. Upon first power-up of the B444-A2/B444-V2, it might take up to 20 minutes for the activation process to be completed.

6 Firmware version 3.11.510

What's new

- *B444-A Plug-in Cellular Communicator Module is not recognized, page 10*

6.1 What's new

This section examines the new features of this firmware version.

6.1.1 B444-A Plug-in Cellular Communicator Module is not recognized

A small number of B444-A cellular modules may report as 'invalid' during installation and will not be recognized by the B450. This version of firmware allows the cellular host device to properly recognize these B444-A modules. See Technical Bulletin B444-A Plug-in Cellular Communicator Module Is Not Recognized for more information.

7 Firmware version 3.11.508

What's new?

- *Support for updated B450 certificates, page 11*
- *Improved connectivity to the Verizon network, page 11*
- *Update to the B444-A Cellular Communicator, page 11*
- *Modem Reset value will no longer be overwritten by the control panel, page 11*

7.1 What's new

This section examines the new features of this firmware version.

7.1.1 Support for updated B450 certificates

B450 firmware v3.11 introduces a new security certificate in advance of the current certificate expiration in April, 2022. This certificate is used for most automation (integration) and RPS TLS connections to the panel. RPS v6.11 has been updated to accommodate this new B450 security certificate automatically.

IMPORTANT:

Customers upgrading or installing firmware v3.11 must upgrade RPS to v6.11, and review other integrated applications (Bosch or 3rd Party) that need to use the new Bosch certificate, in order to maintain TCP connections to the panel after March 2022. Customers using RPS with B450 modules firmware v3.10 or older will not be affected by the certificate expiration and operations will continue without interruption.

7.1.2 Improved connectivity to the Verizon network

FW V3.11.5 improves the management of the Verizon APN when using the B444-V or B444 Cellular Communicators, resulting in enhanced connection reliability.

7.1.3 Update to the B444-A Cellular Communicator

This firmware release configures the B444-A to insure that LTE connectivity is not disrupted when the AT&T 3G network is discontinued.

7.1.4 Modem Reset value will no longer be overwritten by the control panel

Previously, it was possible for a B Series or G Series control panel to overwrite the Modem Reset value from the default value of "5" to a value of "0." This can cause a connectivity issue if the B450 module is subsequently used on legacy panels (GV4 or earlier, FPD-7024, etc.).

8 Firmware version 3.10

What's fixed

- *TCP Keep Alive Time value ranges, page 12*

8.1 What's fixed

This section examines the fixed issues of this firmware version.

8.1.1 TCP Keep Alive Time value ranges

The data value ranges differ between RPS and USB menus. This firmware version corrects the TCP KEEP ALIVE configuration values so that they are now consistent between RPS and USB configuration menu.

9 Firmware version 3.09

What's new

- *B444-A and B444-V support, page 13*

9.1 What's new

This section examines the new features of this firmware version.

9.1.1 B444-A and B444-V support

The system now supports B444-A Plug-in cell module, AT&T LTE and B444-V Plug-in cell module, Verizon LTE.

B444-A/B444-V SIM card activation



Caution!

Activate the B444-A/B444-V SIM card before inserting. Failure to do so might result in failed communications to the control panel/module. Upon first power-up of the B444-A/ B444-V, it might take up to 15 minutes for the activation process to be completed.

10 Firmware version 3.08

What's fixed

- *Updates to the bootloader, page 14*
- *Updates to TCP keep alive, page 14*

10.1 What's fixed

This section examines the fixed issues of this firmware version.

10.1.1 Updates to the bootloader

This firmware release contains updates to improve the performance of the bootloader.

10.1.2 Updates to TCP keep alive

This firmware release contains performance improvements related to maintaining connections to the cloud.

11 Firmware version 3.06

What's new

- Incoming RPS connections
- *B444 signal strength indication, page 15*
- *APN usage for B442 and B443, page 15*

What's fixed

- *Stabilization of cell card performance, page 15*

11.1 What's new

This section examines the new features of this firmware version.

11.1.1 Incoming RPS connections

In addition to answering incoming calls from RPS using UDP (User Datagram Protocol), incoming calls from RPS using TCP (Transfer Control Protocol) are also supported. RPS version 6.07 is required for this modified connection method.



Notice!

Only applicable when connected to a Bosch B Series, or G Series control panel with firmware version 3.07 or higher.

11.1.2 B444 signal strength indication

The B444 signal strength LED indication has been modified to more accurately represent performance. While LTE tower switching may still occur, their individual signal strength indications are more accurate.

11.1.3 APN usage for B442 and B443

The B442 and B443 plug-in cellular modules shall attempt connections using APNs in the following order:

1. Primary configured APN
2. gne
3. wyles.apn
4. wyles.com.attz

The plug-in cellular module will select and use the most appropriate APN.

If the APN is erroneous, the panel keypads may not display the details of this trouble condition.

11.2 What's fixed

This section examines the fixed issues of this firmware version.

11.2.1 Stabilization of cell card performance

Cell card stability enhancements are included within this firmware release.

12 Firmware version 3.05

What's new

- *Remote Connect Service support, page 16*
- *B444 LTE modem support, page 16*
- *Secure connections using TLS v1.1 and v1.2 now supported, page 16*
- *New cell library, page 16*
- *International character support, page 17*
- *Operational improvements, page 17*

12.1 What's new

This section examines the new features of this firmware version.

12.1.1 Remote Connect Service support

Remote Connect Service enables a secure control panel connection to mobile apps and remote programming software using Bosch Cloud services. The service allows a secure TLS connection to a control panel without specific port and router settings and without a static IP or DNS.



Notice!

North America only

Remote Connect Services and Bosch Cloud services are currently available in North America only.

12.1.2 B444 LTE modem support

B444 LTE modem support is now available on the Verizon network.

12.1.3 Secure connections using TLS v1.1 and v1.2 now supported

The firmware now supports secure connections, including personal notification email servers, using TLS v1.0 (strong ciphers only), v1.1, and v1.2. In previous versions of the firmware, control panel TLS connections required TLS v1.0 support.

12.1.4 New cell library

The new cell library improves the ability to send non-ASCII text characters. All Latin-1 characters available in the control panel are transmitted in text messages when using a B442/B443/B444. Additional character sets are supported but have not been tested.

Cellular modem compatibility table

Plug-in module	Firmware versions
B440/B440-C	15.00.021, 15.00.024, 15.00.026, and 15.00.027
B441/B441-C	18.01.022 and 18.02.022
B442	13.00.004, 13.00.006, 13.00.007, and 13.00.008
B443	12.00.024, 12.00.026, and 12.00.028
B444	4.3.3.0c

12.1.5 **International character support**

Support for sending international characters in SMS text format are now supported for B442, B443, and B444.

12.1.6 **Operational improvements**

This firmware release contains operational improvements related to the B444 plug-in cellular module.

12.2 **Known issues**

This section examines the known issues of this firmware version.

12.2.1 **B444 signal strength**

The signal strength LED indicators on the B444 Conettix Plug-in 4G VZW LTE Cellular Communicator module may vary under normal conditions and should be used as a general guideline regarding signal strength and performance. This is due to various factors including:

- Switching frequency bands
- Switching cell towers
- Environmental conditions
- LTE technology factors such as:
 - Modulation scheme
 - Multipath effects
 - Interference

13 Firmware version 3.03

What's new

- *Option bus configuration programming, page 18*
- *Updated B440/B441 support, page 18*
- *SIA DC09 event reporting support for AMAX control panels, page 18*
- *Reporting Delay for Low Signal Strength default change, page 18*
- *No Towers Reporting Delay default, page 18*

Corrections

- Signal strength
- Cellular reliability

System considerations

- *Increased ACK wait times, page 19*
- *RPS diagnostics not available, page 19*
- *Using 2 B450 IP communicators in RPS and GV4 Series control panels, page 19*

13.1 What's new

This section examines the new features of this firmware version.

13.1.1 Option bus configuration programming

Configuration programming from an AMAX 2100/3000/4000 control panel to a B450 module is now available through A-Link Plus only if the AMAX 2100/3000/4000 control panel is at firmware version 1.5 or higher.

13.1.2 Updated B440/B441 support

B450 firmware v3.04 supports the latest versions of the B440 and B441 plug-in cellular modules (B440 v15.00.026 and B441 v18.02.022). The latest B440/B441 firmware includes updated libraries to maintain Verizon certification, and a correction to show the correct MEID on keypads in the Installer menu.

To use a B440 v15.00.026 or a B441 v18.02.022, the connected B450 must have firmware v3.04 or higher.

13.1.3 Reporting Delay for Low Signal Strength default change

The Reporting Delay for Low Signal Strength parameter default value was changed to a state of disabled. The original default value was 1800 seconds. The new default value is zero.

When this value is set to zero seconds, this parameter is considered disabled.

13.1.4 No Towers Reporting Delay default

The Reporting Delay for No Towers parameter default value was changed to a state of being disabled. The original default value was 1800 seconds. The new default value is zero. When this value is set to zero seconds, this parameter is considered to be disabled.

13.1.5 SIA DC09 event reporting support for AMAX control panels

AMAX control panels now support SIA DC09 event reporting.

14 System considerations

This section examines system considerations of this version of firmware.

14.1 Increased ACK wait times

It is recommended to increase control panel ACK wait times as much as possible (up to 5 minutes) while retaining the required supervision time with the receiver. Doing so reduces the risk of COMM Fail conditions related to intermittent cellular network outages. The ACK wait time in RPS version 5.19.3 (with Service pack 1 installed) has been increased to a default value of 15 seconds to adjust for network delays, improving overall communication.

14.2 RPS diagnostics not available

RPS diagnostics is not currently available when the B450 is set to address switch 2, and connected to a GV4 series control panel. Diagnostic information can be obtained from the B450 when the address switch is set to address switch 1. Diagnostic information is also available through the USB port connection when local USB programming is enabled.

14.3 Using 2 B450 IP communicators in RPS and GV4 Series control panels

The settings in the B450 Cellular sub-menu within RPS (SDI2 MODULES ▢ IP Communicator ▢ B450 Cellular) share the module between address 1 and address 2. This occurs when using multiple B450s on the SDI2 bus with a GV4 series control panel. To apply different settings to one of the modules, you must disable control panel programming and use the USB or SMS configuration method.

15 Open source software 3.15.xxx

Bosch includes the open source software modules listed below in the firmware for this control panel. The inclusion of these modules does not limit the Bosch warranty.

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RSA data security

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The "RSA Data Security, Inc. MD5 Message-Digest Algorithm" is included in the control panel firmware.

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Bosch Security Systems B.V.

Torenallee 49

5617 BA Eindhoven

Netherlands

www.boschsecurity.com

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