



Technical Bulletin

Symmetry™ EN1DBC+ / EN2DBC Firmware
November 2022

EN1DBC+ / EN2DBC Firmware

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This bulletin provides information for the release of V1.07 firmware for the EN1DBC+ / EN2DBC.

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Securing Your World

Introduction

It is our policy to continually improve and update products and firmware at regular intervals, adding innovative features and enhancements for system reliability, security, compatibility and more -based on customer feedback.

New firmware releases are cumulative and contain the functionality of all previous releases unless otherwise stated.

Summary of New Functionality and Issues Addressed

This release provides the following improvements over V1.06:

Released in V1.07T1:

1. Resolved issue with Wiegand formats > 160 bits.
2. Resolved issue with Wiegand fast PIN entry with HID readers.
3. Resolved issue with Wiegand LEDs and display while waiting for PIN entry on Javelin readers.
4. Resolved issue with unlock when door exit button pressed and door open.

Released in V1.07T2:

5. Resolved issue that caused spurious 'reader tamper' messages to be generated by Symmetry Blue Readers.

New in this release (V1.07T3):

6. Resolved issue with cards with incorrect Customer Codes wrongly being granted access
7. Resolved issue with inputs on the I/O board reporting wrong values in four and six state mode of operation

New in this release (V1.07):

8. Close Port 80 for Improved Network Security
9. Resolved Issue where some card are rejected with S939 Readers
10. Resolved Issue with compatibility with S939 Readers. The time is only sent to readers with LCD

Firmware Part numbers

The firmware part numbers in this release are:

Description	EN1DBC+ /EN2DBC
Part Numbers	
Boot	24451
Application	24461
Composite	24471
Version	V1.07

Known Issues

- When upgrading the application software the unit IP address changes
- When using node initiated connections the configuration of the secondary server does not take effect immediately. Workaround; send the configuration message twice or reset the node.

Firmware Installation

Important notes:

1. When the firmware is updated over the Ethernet the node will need to be isolated from Symmetry.
2. G4FlashNet can be used for firmware installation, version 1.12 or later must be used.
3. The computer used to program the firmware must be on the same subnet as the EN-1DBC+ / EN-2DBC.
4. If static I.P addresses are being used, the computer used to program the firmware must have the same I.P address range as the device that requires programming. Or if DHCP is being used it must be enabled on both devices.
5. If an EN device becomes 'lost' (that is, its I.P address is set to an unknown value and it can't be found in G4flashnet), reset the node I.P address settings by applying three successive hardware cold starts to the EN device.

Installation

Upgrading the Firmware using G4FlashNet Utility:

The firmware can be updated using the standalone G4FlashNet utility.
This utility can also be used to configure the device's network settings.

To use G4Flashnet to program the EN-1DBC+ / EN-2DBC:

1. Disconnect Symmetry from the EN-1DBC+ / EN-2DBC that is to be programmed.
2. Connect the EN-1DBC+ / EN-2DBC to the same subnet as the PC that is to run the G4FlashNet utility.
3. Start the G4Flashnet utility.

4. Find the device:

Any EN devices connected to the same subnet will appear in the 'Located Nodes' drop down menu. G4Flashnet will show the number of located nodes (in brackets) and display the message 'Please select from list below', as shown in fig 1.

Fig 1, find the device:

The screenshot shows the G4FlashNet application window. At the top, the title bar reads 'G4FlashNet'. Below it, a section titled 'Located Nodes (4)' contains a dropdown menu with the text 'Please select from list below' and an 'Update Nodes' button to its right. This entire section is enclosed in a red rectangular box. Below this, the 'IP Information' section includes fields for MAC Address, Current IP Address (with a checked 'DHCP' checkbox), New IP Address, Gateway IP Address, Subnet Mask (set to 255.0.0.0), Network Name (set to G4NetMultinode), Primary Port number (3001), Host IP Address from Node (10.234.24.40), Secondary Port number, Host IP Address (0.0.0.0), and a 'Rem Conn Value (Secs, 0 = Off)' field. There are 'Configure' and 'PC' checkboxes. Below this is the 'Firmware Versions' section with 'Boot' and 'Application' fields. The 'Upgrade filenames and details' section has a file selection area with 'Browse' and 'Upgrade' buttons, and radio buttons for 'Upgrade to a new APPLICATION' (selected) and 'Upgrade to a new BOOT'. The 'Remote Node Control' section has 'Warmstart', 'Coldstart', and 'Reset IP' buttons, along with a 'Use Direct IP addressing (Carel)' checkbox. The 'Encryption' section has a text input field, a 'None' dropdown, and a 'Send' button. A 'Help' button is at the bottom right.

5. Select the device:

Click on the down arrow at the right hand side of this box and select the EN device you wish to program from this drop down menu, as shown in fig 2.

Note - if the device you wish to program has just been restarted or re-connected to the network it can take up to five minutes to appear in this menu.

Fig 2, select the device:

The screenshot shows the G4FlashNet application window. At the top, there is a section titled 'Located Nodes (4)' which contains a list of four nodes. The first node is highlighted with a red rectangular box. To the right of this list is an 'Update Nodes' button. Below the list, there are several input fields for network configuration: Gateway IP Address, Subnet Mask, Network Name, Primary Port number, Host IP Address from Node, Secondary Host IP Address, and a checkbox for 'PC'. There is also a 'Rem Conn Value (Secs, 0 = Off)' field and a 'Configure' button. Below these are sections for 'Firmware Versions' (Boot and Application), 'Upgrade filenames and details' (with a 'Browse' button and 'Upgrade' button), and 'Remote Node Control' (with 'Warmstart', 'Coldstart', 'Reset IP' buttons and a checkbox for 'Use Direct IP addressing (Care!)'). At the bottom, there is an 'Encryption' section with a 'Send' button. The status bar at the very bottom shows 'Hardware code = 1100, Distributor code = 1' and a 'Help' button.

Located Nodes (4)

052, MAC=00-15-bd-00-d0-51, HC=1100, 24461 01.05(), 2DBC STD APP, HOST=10.234.24.40

Please select from list below

IP=010.234.024.051, MAC=00-15-bd-00-b2-21, HC=1100, 24461 01.05(), 2DBC STD APP, HOST=10.234.024.051

IP=010.234.024.052, MAC=00-15-bd-00-d0-51, HC=1100, 24461 01.05(), 2DBC STD APP, HOST=10.234.024.052

IP=010.234.024.054, MAC=00-15-bd-00-9f-d9, HC=1100, 24461 01.05(), 2DBC STD APP, HOST=10.234.024.054

IP=010.234.024.055, MAC=00-15-bd-00-cf-c5, HC=1100, 24461 01.05(), 2DBC STD APP, HOST=10.234.024.055

Update Nodes

0 . 0 . 0 . 0 0 . 0 . 0 . 0 EN2DBC_00_D0_51

Gateway IP Address Subnet Mask Network Name

Primary 3001 10 . 234 . 24 . 40 ☐ PC

Port number Host IP Address from Node

Secondary 0 0 . 0 . 0 . 0 ☐ PC

Host IP Address Rem Conn Value (Secs, 0 = Off)

Configure

Firmware Versions

Boot 24461 01.05() - 2DBC BOOT APP

Application 24461 01.05() - 2DBC STD APP

Upgrade filenames and details

Browse

☒ Upgrade to a new APPLICATION ☐ Upgrade to a new BOOT

Upgrade

Remote Node Control

Warmstart Coldstart Reset IP ☐ Use Direct IP addressing (Care!)

Encryption

None Send

Hardware code = 1100, Distributor code = 1

Help

6. Display selected device configuration:

When the device requiring programming has been selected, this device's MAC address and IP settings will be displayed. The current boot and application firmware version programmed into the device will also be displayed, as shown in fig 3.

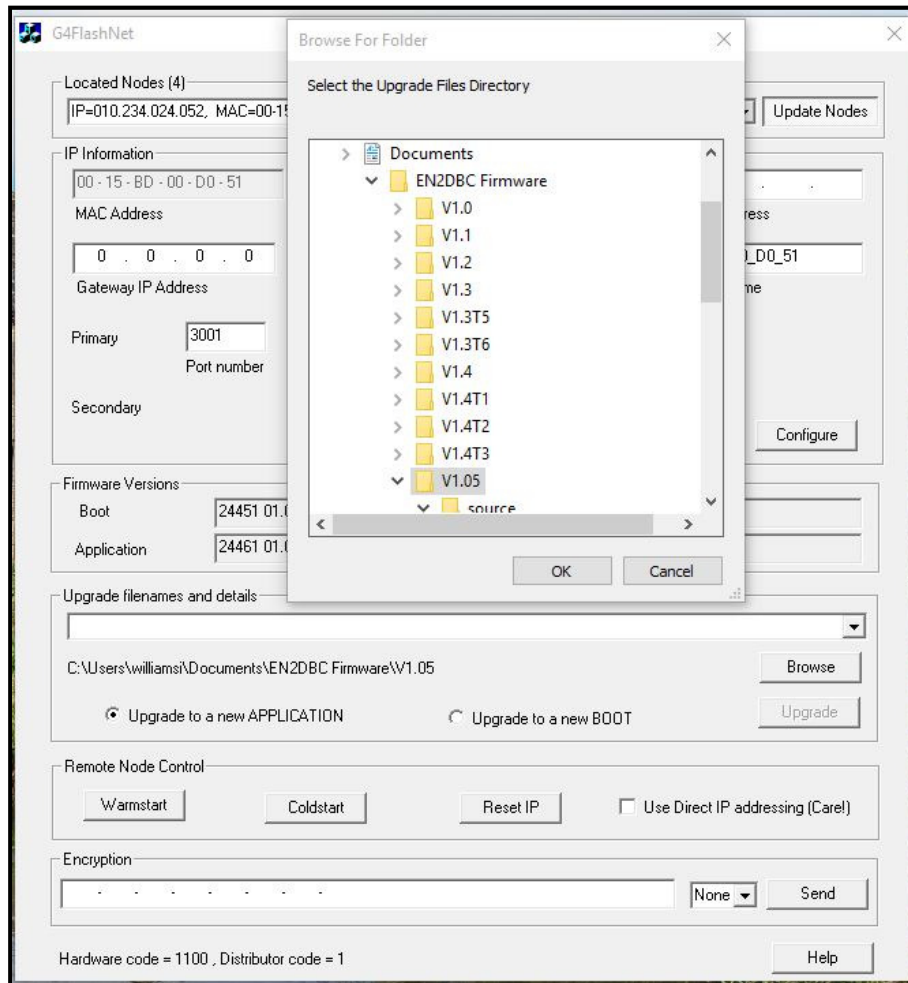
Fig 3, selected device configuration:

The screenshot displays the G4FlashNet software interface. At the top, the 'Located Nodes (4)' section shows a list of nodes with details like IP=010.234.024.052, MAC=00-15-bd-00-d0-51, and HC=1100. Below this, the 'IP Information' section is highlighted with a red box. It contains fields for MAC Address (00-15-BD-00-D0-51), Current IP Address (10.234.24.52), New IP Address, Gateway IP Address (0.0.0.0), Subnet Mask (0.0.0.0), Network Name (EN2DBC_00_D0_51), Primary Port number (3001), Host IP Address from Node (10.234.24.40), and Secondary Port number (0). The 'Firmware Versions' section is also highlighted with a red box, showing Boot (24451 01.05) and Application (24451 01.05) versions. Below these are sections for 'Upgrade filenames and details', 'Remote Node Control' (with buttons for Warmstart, Coldstart, and Reset IP), and 'Encryption'. The bottom of the window shows hardware and distributor codes and a Help button.

7. Select the firmware folder

In the 'Upgrade firmware and details' click the 'Browse' button and select the folder that contains the new firmware files, click 'OK', see fig 4

Fig 4, select firmware folder:



8. Program the application:

Note: The APPLICATION must be programmed first.

Select the 'Upgrade to a new APPLICATION' radio button and select the new firmware file required from the drop down menu then click 'Upgrade' see fig 5

Fig 5, program the application:

The screenshot shows the G4FlashNet application window. The 'Located Nodes (4)' section displays a list of nodes with details like IP, MAC, and HC. The 'IP Information' section contains fields for MAC Address, Current IP Address, New IP Address, Gateway IP Address, Subnet Mask, Network Name, Primary Port number, Host IP Address from Node, and Secondary Host IP Address. The 'Firmware Versions' section shows the current Boot and Application firmware versions. The 'Upgrade filenames and details' section features a dropdown menu for selecting a firmware file, a file path, and two radio buttons: 'Upgrade to a new APPLICATION' (selected) and 'Upgrade to a new BOOT'. The 'Remote Node Control' section includes buttons for Warmstart, Coldstart, and Reset IP, along with a checkbox for 'Use Direct IP addressing (Care!)'. The 'Encryption' section has a text input field and a 'Send' button. At the bottom, the hardware and distributor codes are displayed, along with a 'Help' button.

Located Nodes (4)
IP=010.234.024.052, MAC=00-15-bd-00-d0-51, HC=1100, 24461 01.05(), 2DBC STD APP, HOST: [v] Update Nodes

IP Information
MAC Address: 00-15-BD-00-D0-51
Current IP Address: 10-234-24-52
New IP Address: [v]
Gateway IP Address: 0-0-0-0
Subnet Mask: 0-0-0-0
Network Name: EN2DBC_00_D0_51
Primary Port number: 3001
Host IP Address from Node: 10-234-24-40
Secondary Host IP Address: 0-0-0-0
Rem Conn Value (Secs, 0 = Off): 0
Configure

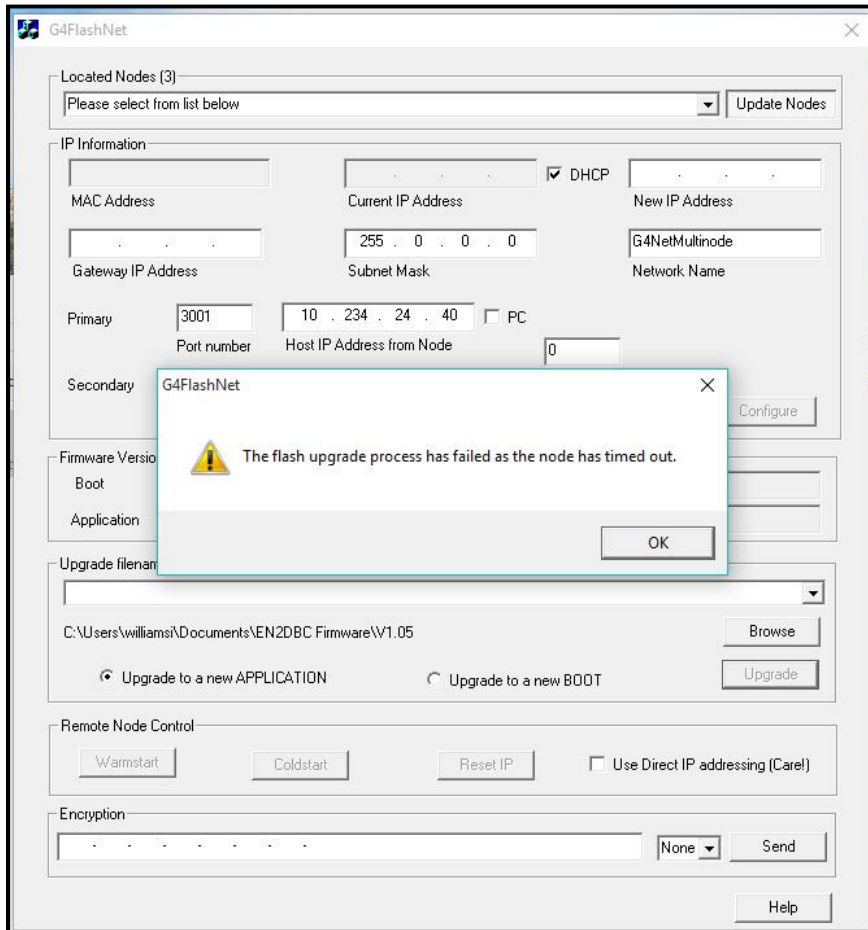
Firmware Versions
Boot: 24451 01.05() - 2DBC BOOT APP
Application: 24461 01.05() - 2DBC STD APP

Upgrade filenames and details
[2DBC STD APP, 24461, 01.05(), Hardware code = 1100, EN2DBC_APP_1_05.mot]
C:\Users\williams\Documents\EN2DBC Firmware\V1.05
Browse
Upgrade to a new APPLICATION (selected) Upgrade to a new BOOT
Upgrade

Remote Node Control
Warmstart Coldstart Reset IP Use Direct IP addressing (Care!)
Encryption: [v] None Send
Hardware code = 1100, Distributor code = 1
Help

Owing to configuration and timing constraints within the node the 'Upgrade' will often fail on the first attempt, the message 'The flash upgrade process has failed as the node has timed out' will be displayed, see fig 6.

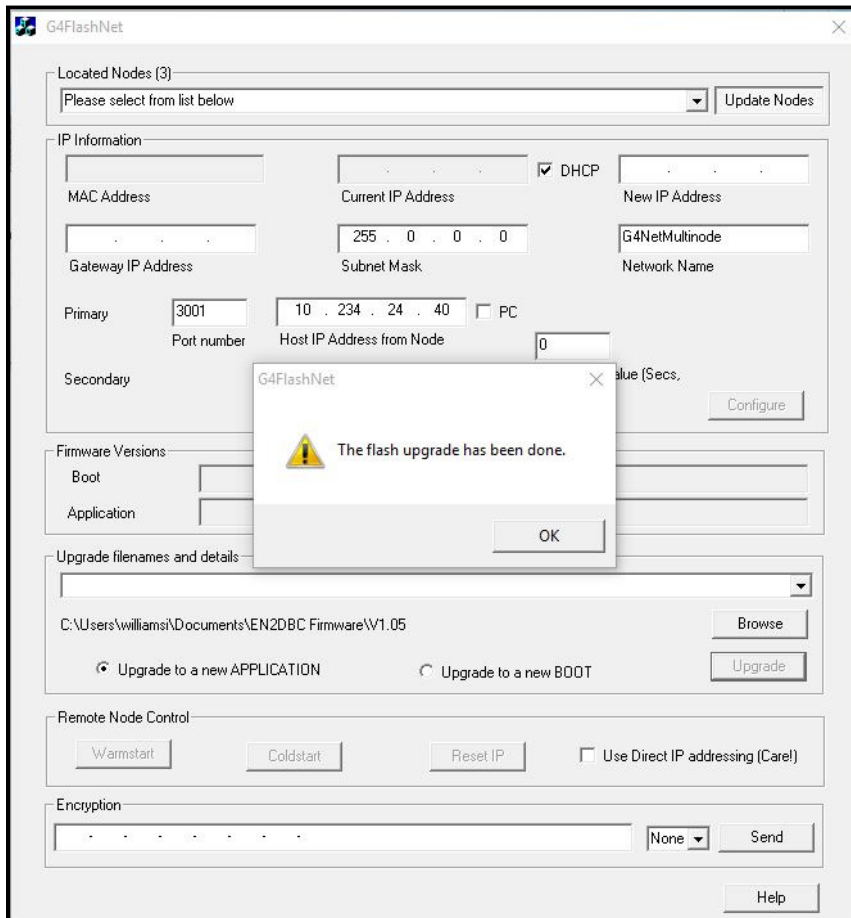
Fig 6, flash upgrade timeout screen:



This is expected behaviour, click 'OK' on the error message, re-start the process by reselecting the firmware file and clicking the 'Upgrade' button.

When the firmware has been upgraded the message 'The flash upgrade has been done' will be displayed as shown below in figure 7.

Fig 7, Flash upgrade has been done screen:



9. Wait for the device to restart:

The device will restart after programming, repeat section 4 'Find the device' and section 5 'Select the device'. The device has been restarted so it can take up to five minutes to appear in the located nodes menu. Once successfully selected check in the 'Firmware Versions' box that the device Application version has changed to the expected new version of firmware.

Note, if the device had firmware earlier than version V1.05T8 it will default to DHCP mode following re-programming of the application. This means that the device will now have an auto I.P. address starting in 169.x.x.x, follow the same selection and programming process using this address, once the boot has been re-programmed with the latest version then the original device settings will be restored (e.g. the original static I.P address).

10. Program the boot:

Note: The boot must be programmed after the application programming has been completed successfully.

Select the 'Upgrade to a new BOOT' radio button and select the new firmware file required from the drop down menu then click 'Upgrade'

When the firmware has been upgraded the message 'The flash upgrade has been done' will be displayed. See fig 7 (section 8 above).

11. Verify the upgrade (in G4Flashnet)

The device will restart after programming the boot, repeat section 4 'find the device' and section 5 'select the device'. The device has been restarted so it can take up to five minutes to appear in the located nodes menu.

Once successfully selected check in the 'firmware Versions' box that the device boot version has changed to the expected new version of firmware.

Note, the device Application and Boot must be at the same revision level for correct operation after the upgrade process has been completed.

12. Verify the update (In Symmetry)

After updating the node firmware, Symmetry software will display the following in the 'Maintenance/Access Control/Node Status' window:

Status: DCU = 24461 V1.07()

Detailed Change Breakdown

This has been released to provide the following improvements over V1.06:

Changes in V1.07 (from V1.06):

1. Resolved issue with Wiegand formats > 160 bits.
2. Resolved issue with Wiegand fast PIN entry on HID readers.
3. Resolved issue with Wiegand LEDs and display while waiting for PIN entry on Javelin Readers.
4. Resolved issue with unlock when door exit button pressed and door open.
5. Resolved issue with spurious 'reader tamper' messages and Symmetry Blue Readers.
6. Resolved issue with cards with incorrect customer codes wrongly being granted access
7. Resolved issue with inputs on the I/O board reporting wrong states in four and six state mode of operation
8. Closure of Network Port 80
9. Resolved Issue where some card are rejected with S939 Readers
10. Resolved Issue with compatibility with S939 Readers. The time is only sent to readers with LCD