



# Technical Bulletin

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Symmetry™ EN-1DBC+ / EN-2DBC V1.05 Firmware  
October 2017

## EN-1DBC+ / EN-2DBC Firmware

### October 2017

This Technical Bulletin provides information for release V1.05 firmware for the EN-1DBC+ / EN-2DBC. This is a full production firmware release.

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Securing Your World

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## 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 has been released to provide the following improvements over V1.04:

1. Resolves database corruption problem with Site Code database following a cold start.
2. Improvements to Ethernet Link behavior.
3. Resolves network connectivity problem following power interruption.
4. New feature, the ability to disable the reader sounders at the start of a door pre-held transaction has been added.
5. New feature, added support for extended door timers.
6. Resolves missed Door Forced transactions following reconfiguration and restart under certain circumstances.
7. Resolved defect, when changing card permission settings for a given card, a defect in the firmware could cause the subsequently numbered card to be removed from the node in error.
8. Prevents Wiegand reader failure when second reader port is not used or IO module is fitted.

## Firmware Part numbers

The firmware part numbers in this release are:

<b>Description</b>	<b>EN-1DBC+ / EN-2DBC</b>
Part Numbers	
<b>Boot</b>	24451
<b>Standard</b>	24461
<b>HSE</b>	24461
<b>Version</b>	1.05

## Known Issues

To enable extended door timer and door pre-held transactions you must have Symmetry 8.1 SP1 (or later).

## 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.

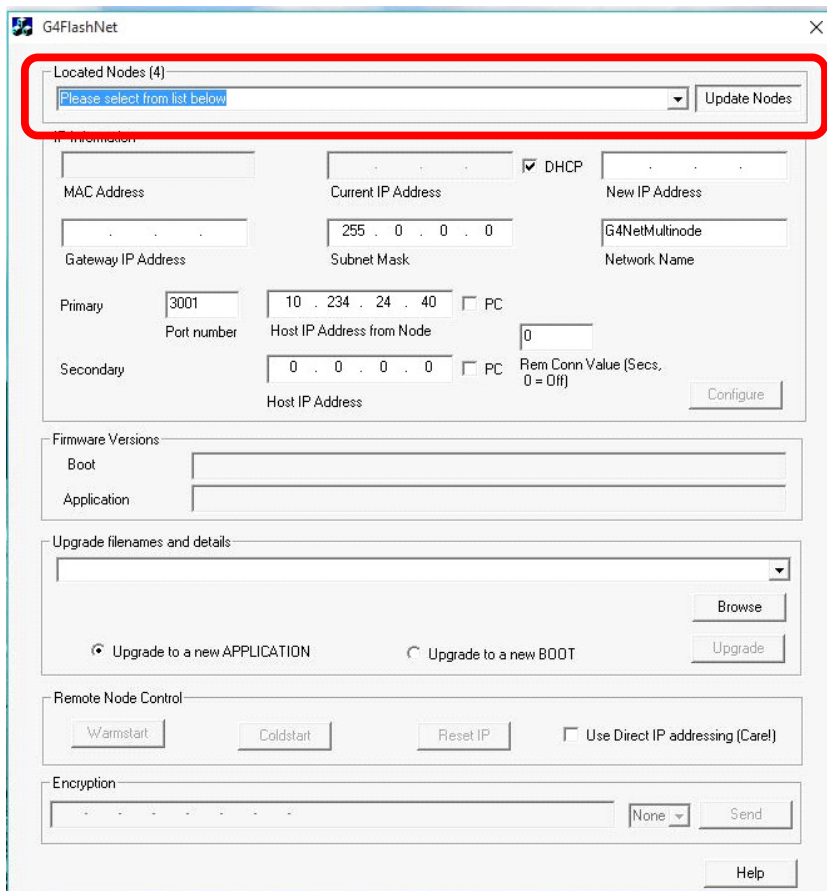
To use G4Flashnet to program the EN-1DBC+ / EN-2DBC:

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:



## 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 software window. At the top, there is a 'Located Nodes (4)' section with a list of four nodes. The first node is highlighted with a red box and a red circle around its selection arrow. The list contains the following information for each node: IP address, MAC address, HC (Hardware Code), and the device name. Below the list, there is a 'Please select from list below' prompt. The configuration section below the list includes fields for 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. The 'Firmware Versions' section shows 'Boot' and 'Application' versions. The 'Upgrade filenames and details' section has a 'Browse' button and an 'Upgrade' button. The 'Remote Node Control' section has buttons for 'Warmstart', 'Coldstart', and 'Reset IP', and a checkbox for 'Use Direct IP addressing (Care!)'. The 'Encryption' section has a 'Send' button. At the bottom, there is a 'Help' button and a status bar showing 'Hardware code = 1100, Distributor code = 1'.

IP	MAC	HC	Device Name
052	00-15-bd-00-d0-51	1100, 24461 01.05	2DBC STD APP, HOST=10.234.24.4
010.234.024.051	00-15-bd-00-b2-21	1100, 24461 01.05	2DBC STD APP, HOST=10.234.024.051
010.234.024.052	00-15-bd-00-d0-51	1100, 24461 01.05	2DBC STD APP, HOST=10.234.024.052
010.234.024.054	00-15-bd-00-9f-d9	1100, 24461 01.05	2DBC STD APP, HOST=10.234.024.054

## 6. Display selected device configuration:

When the device requiring programming has been selected, this devices 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.

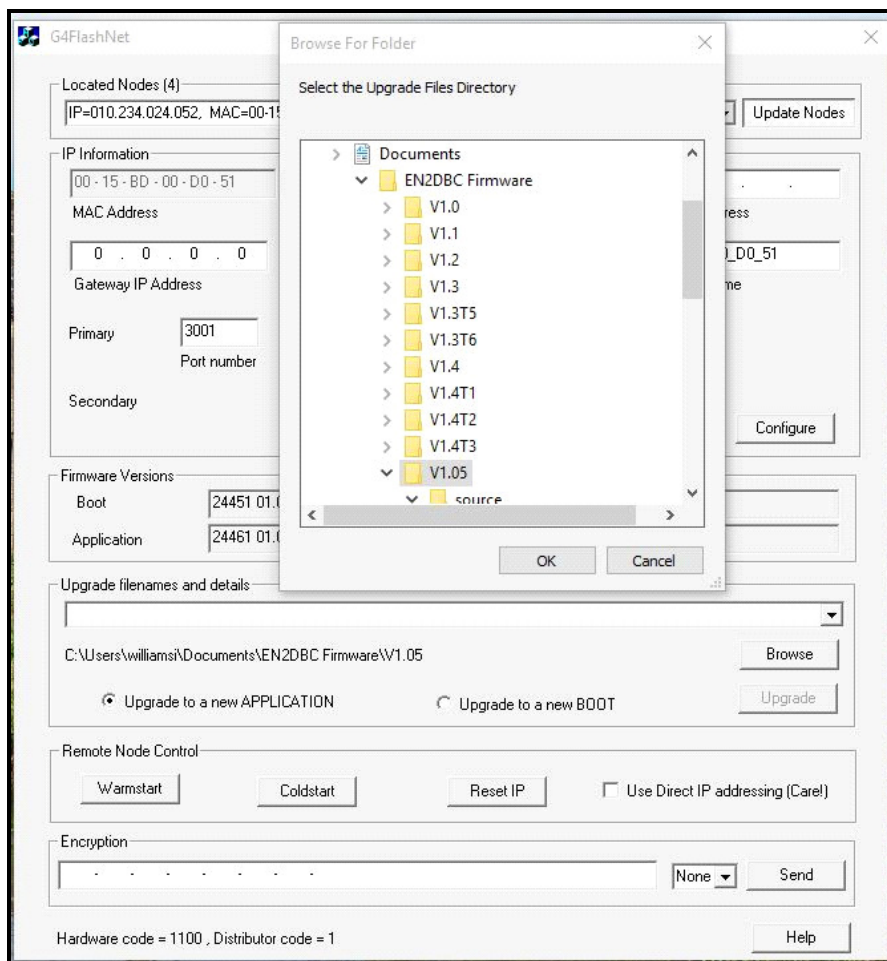
Fig 3, selected device configuration:

The screenshot displays the G4FlashNet software window. At the top, a 'Located Nodes (4)' list shows a selected node with IP=10.234.024.052, MAC=00-15-bd-00-d0-51, and HC=1100, 24461 01.05( ). 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, Subnet Mask, 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( ) - 2DBC BOOT APP) and Application (24461 01.05( ) - 2DBC STD APP). Other sections include 'Upgrade filenames and details' with a 'Browse' button, 'Remote Node Control' with 'Warmstart', 'Coldstart', and 'Reset IP' buttons, and 'Encryption' with a 'Send' button. The bottom status bar shows 'Hardware code = 1100, Distributor code = 1'.

## 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

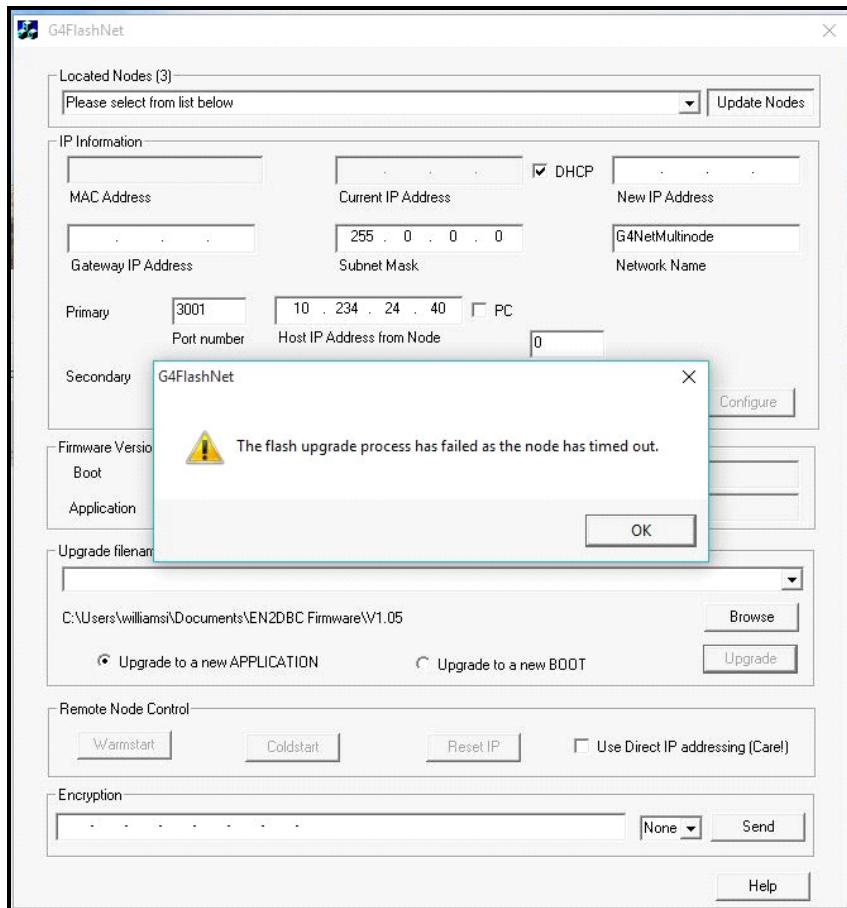
Fig 5, program the application:

The screenshot shows the G4FlashNet application window. The 'Located Nodes (4)' section at the top displays a list of nodes with details like IP, MAC, and HC, and an 'Update Nodes' button. The 'IP Information' section contains fields for MAC Address, Current IP Address, New IP Address, Gateway IP Address, Subnet Mask, Network Name, Primary/Secondary Port numbers, Host IP Address from Node, and checkboxes for DHCP and PC. A 'Configure' button is at the bottom right of this section. The 'Firmware Versions' section shows 'Boot' and 'Application' versions, both set to '24451 01.05( ) - 2DBC BOOT APP' and '24451 01.05( ) - 2DBC STD APP' respectively. The 'Upgrade filenames and details' section features a dropdown menu showing the selected file '2DBC STD APP - 24451\_01.05( ) - Hardware code = 1100 - EN2DBC\_APP\_1\_05.mot', a file path, and two radio buttons: 'Upgrade to a new APPLICATION' (selected) and 'Upgrade to a new BOOT'. An 'Upgrade' button is present. The 'Remote Node Control' section includes 'Warmstart', 'Coldstart', and 'Reset IP' buttons, along with a checkbox for 'Use Direct IP addressing (Carel)'. The 'Encryption' section has a text input field, a 'None' dropdown, and a 'Send' button. At the bottom, it displays 'Hardware code = 1100, Distributor code = 1' and a 'Help' button.



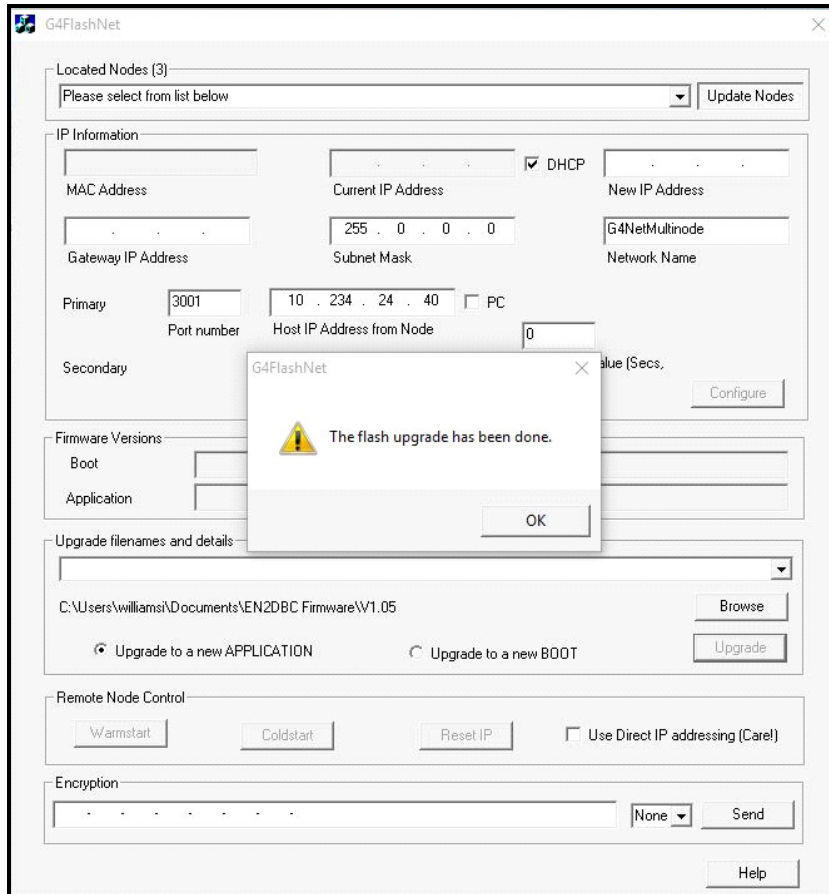
Due to configuration and timing constraints within the node the 'Upgrade' will fail on the first attempt, the message 'The flash upgrade process has failed as the node has timed out' will be displayed, see fig 6.

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. See fig 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 V0105( )**

## Detailed Change Breakdown

This has been released to provide the following improvements over V1.04:

Changes in V1.05T7 (from V1.04):

1. Resolves database corruption problem with Site Code database following a cold start.
2. Improvements to Ethernet Link behavior.
3. Resolves network connectivity problem following power interruption.

Changes in V1.05T9 (from V1.05T7):

4. New feature, the ability to disable the reader sounders at the start of a door pre-held transaction has been added (this feature requires Symmetry version 8.0.2 SP1 HSE 150802; Patched to 170507).
5. New feature, added support for extended door timers (this feature requires Symmetry version 8.1 SP1).
6. Resolves missed Door Forced transactions following reconfiguration and restart under certain circumstances.

Changes in V1.05 (from V1.05T9):-

7. Revised 'disable the reader sounders' (item 4) feature (not supported in current Symmetry release).
8. When changing card permission settings for a given card, a defect in the firmware could cause the subsequently numbered card to be removed from the node in error.
9. Prevents Wiegand reader failure when second reader port is not used or IO module is fitted.