

# Product Change Notification

PCN #: 5C-2018

DATE: 10<sup>th</sup> May 2018

## 1 PRODUCTS AFFECTED

Laird Part Number	Description
BL652-SA-01	Bluetooth v5 Module + NFC (Integrated Antenna)
BL652-SC-01	Bluetooth v5 Module + NFC (External Antenna)
BL652-SA-01-T/R	Bluetooth v5 Module + NFC (Integrated Antenna) – Tape & Reel
BL652-SC-01-T/R	Bluetooth v5 Module + NFC (External Antenna) – Tape & Reel
DVK-BL652-SA-01	Development Kit - Bluetooth v5 Module + NFC (Integrated Antenna)
DVK-BL652-SC-01	Development Kit - Bluetooth v5 Module + NFC (External Antenna)

## 2 DESCRIPTION OF CHANGES

The BL652 Series of modules and associated development kits utilise the Nordic Semiconductor nRF52832-QFAA silicon. Starting from the **Build Code 1820** listed on each module's individual product label, Laird will be utilising the new E00 revision of the Nordic nRF52832-QFAA silicon inside the module.

There is no Form, Fit, Function, Quality or Reliability change in this PCN.

### 3 REASON FOR CHANGE

The BL652 Series of modules and associated development kits utilise the Nordic Semiconductor nRF52832-QFAA silicon. Nordic have recently announced via their 'Information Notice' programme (Notice no: IN-105, rev 1.0) that they are updating their Device version / Build Code from B00 to E00.

The Information Notice states the following:

#### Description of change:

New revision of the IC with the following key changes.

#### Fixes of anomalies

The new IC revision includes fixes for the following anomalies reported in nRF52832 Rev 1 Errata v1.6.

- #102 RADIO: PAYLOAD/END events delayed or not triggered after ADDRESS
- #106 RADIO: Higher CRC error rates for some access addresses
- #107 RADIO: Immediate address match for access addresses containing MSBs 0x00

nRF52832 Rev 2 will have its own Errata, nRF52832 Rev 2 Errata v1.0, which includes an updated list of anomalies.

In order to be drop-in compatible with current B00 / B10 build codes, the fix introduced is opt-in.

#### Impact: Does the change affect product:

- |                           |   |  |
|---------------------------|---|--|
| 1. Form                   | <input checked="" type="checkbox"/> No    | <input type="checkbox"/> Yes – describe: |
| 2. Fit                    | <input checked="" type="checkbox"/> No    | <input type="checkbox"/> Yes – describe: |
| 3. Function               | <input checked="" type="checkbox"/> No    | <input type="checkbox"/> Yes – describe: |
| 4. Quality or Reliability | <input checked="" type="checkbox"/> No    | <input type="checkbox"/> Yes – describe: |
| Classification of change  | <input checked="" type="checkbox"/> Minor | <input type="checkbox"/> Major           |

#### Reason for change:

Fixed anomalies in affected devices.

#### Consequences of change:

##### Hardware

The new device versions are drop-in compatible with the current versions.

##### Software:

The new device versions are software compatible with the current revision, but note the following:

- For the fix of anomalies to take effect, re-compilation with MDK version 8.15.1 and later is necessary
- It is also possible to manually enable the fix as described in nRF52832 Rev 2 Errata v1.0x, #182
- Note that SoftDevice S132 versions 4.0.2 until version 5.x have workarounds for the #102, #106 and #107 anomalies implemented.
- SoftDevice S132 version 6.x will apply the fix (according to Errata #182) for Rev2.

##### Teleregulatory and Bluetooth certification

- The new revision has no impact on RF performance
- The new revision inherits all Bluetooth QDIDs and requires no re-qualification for existing products

## 4 ANTICIPATED IMPACT OF THE CHANGE

- None

## 5 METHOD OF IDENTIFYING THE CHANGED PRODUCT

The change can be identified by reviewing the **Build Code** number that is present on the individual module, reel label and carton label. The images below identify where this **Build Code** is located on each of those labels.

A Build Code that starts with **1820**, and all subsequent incremental numbers, indicates that the nRF5283-QFAA-E00 silicon is utilised.

Label examples shown are for the -SA versions, all -SC versions follow the same format.

### 5.1 Module Label

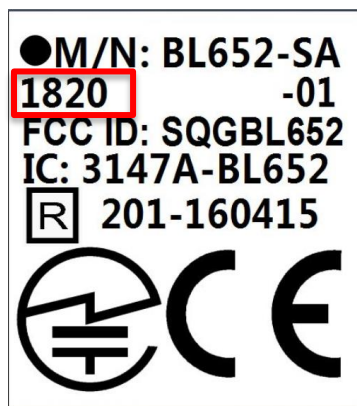


Figure 1: Module label

### 5.2 Reel Label

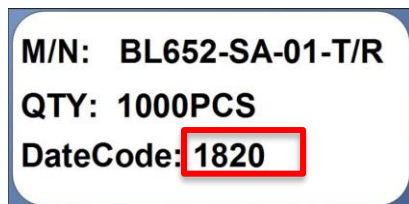


Figure 2: Reel label

## 5.3 Carton Label

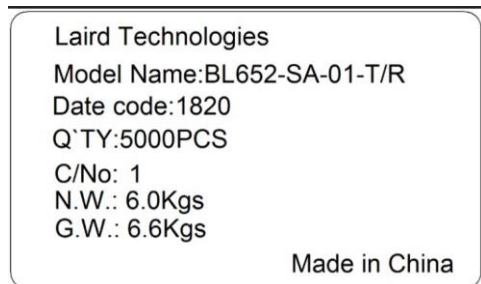


Figure 3: Master carton package label

## 6 FACTORY EFFECTIVITY DATE

This change has been implemented as a running change into Laird manufacturing of the BL652 Series modules. Production builds utilizing the new silicon revision will start from May 15<sup>th</sup> 2016 for BL652-SA parts and June 10<sup>th</sup> for BL652-SC parts. It is envisaged it will take some months for these modules to proliferate out into the global distribution channels.

## 7 CONTACT INFORMATION:

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