BRD4300B Reference Manual
MGM111 Mighty Gecko Module

The Silicon Labs MGM111 Mesh Networking module delivers a high-performance, low-energy, easy-to-use mesh networking solution integrated into a small form factor package.

MGM111 mesh networking modules and software are designed to help accelerate time to market and reduce development costs and compliance risks by providing a versatile, plug-and-play mesh networking solution.

Development and evaluation of the MGM111 module is possible by attaching the BRD4300B Radio Board to the Wireless Starter Kit (WSTK) Mainboard. This gives access to the WSTK display, buttons and additional features offered by using the available Expansion Boards.

RADIO BOARD FEATURES

- Mesh networking module: MGM111
- TX power: up to 10 dBm
- RX sensitivity: down to -99 dBm
- CPU core: 32-bit ARM® Cortex-M4
- Flash memory: 256 kB
- RAM: 32 kB
- Fully plug-in compatible with Silicon Labs Wireless Starter Kit Mainboards (BRD4001A)

1. BRD4300B Radio Board Description

The BRD4300B Radio Board contains the MGM111 Mighty Gecko Mesh Networking Module mounted on a carrier board with two connectors. The connectors on the carrier board are used for attaching the BRD4300B on to a Silicon Labs Wireless Starter Kit Mainboard BRD4001A.

2. Mainboard Connectors

BRD4300B contains two dual-row, female socket, 0.05" pitch polarized connectors (P/N: SFC-120-T2-L-D-A-K-TR) which provide the interface to the Wireless Starter Kit Mainboard. The Mainboard has the corresponding male header pin connectors (P/N: TFC-120-02-F-D-LC-ND).

2.1 Mainboard Connector Pin Associations

The figure below shows the pin mapping on the connector to the radio pins and their corresponding function on the Wireless Starter Kit Mainboard.

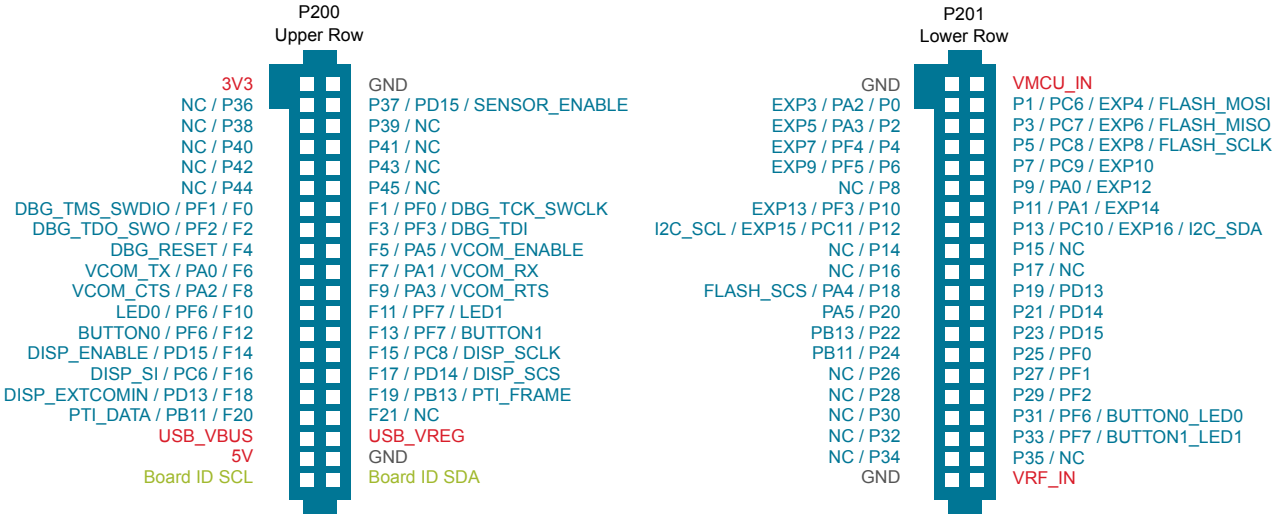

Figure 2.1. Radio Board Connectors

3. Mechanical Details

The mechanical layout of BRD4300B MGM111 Mighty Gecko Mesh Networking Module carrier radio board is illustrated in the figures below.

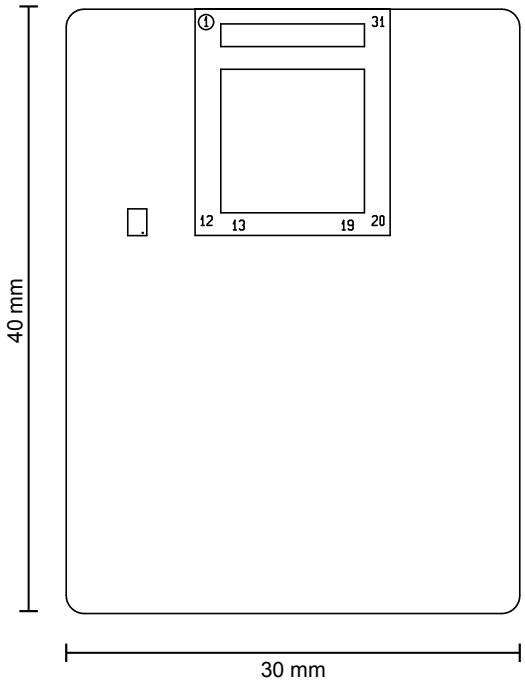

Figure 3.1. BRD4300B Top View

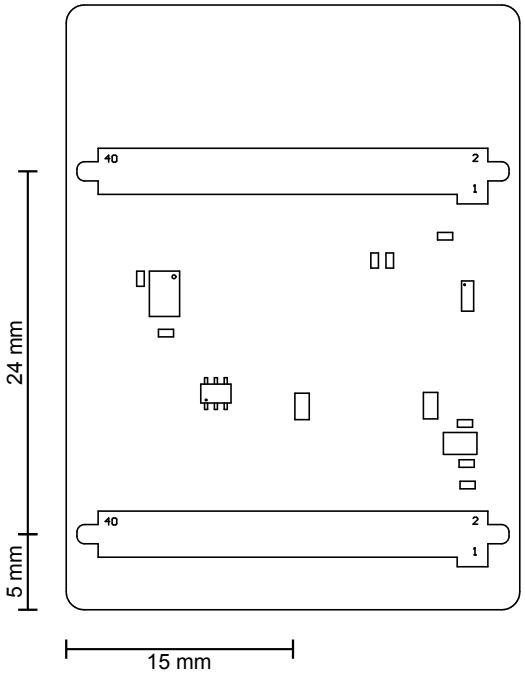

Figure 3.2. BRD4300B Bottom View

4. Board Revision History and Errata

4.1 Revision History

Radio Board revision is printed on the backside of the BRD4300A Radio Board.

Table 4.1. Radio Board Revision History

Radio Board Revision	Released	Description
A01	2016-08-03	Updated PCB revision to B01 with correct silk print.
A00	2016-07-04	Initial version.

4.2 Errata

Table 4.2. Radio Board Errata

Radio Board Revision	Problem	Description
A00	Silk print	"Blue Gecko" is printed on PCB top side. Should be "Mighty Gecko".

5. Document Revision History

Revision 1.01

2016-09-29

Corrected pin-out in Radio Board connector figure.

Revision 1.00

2016-09-23

Initial version.

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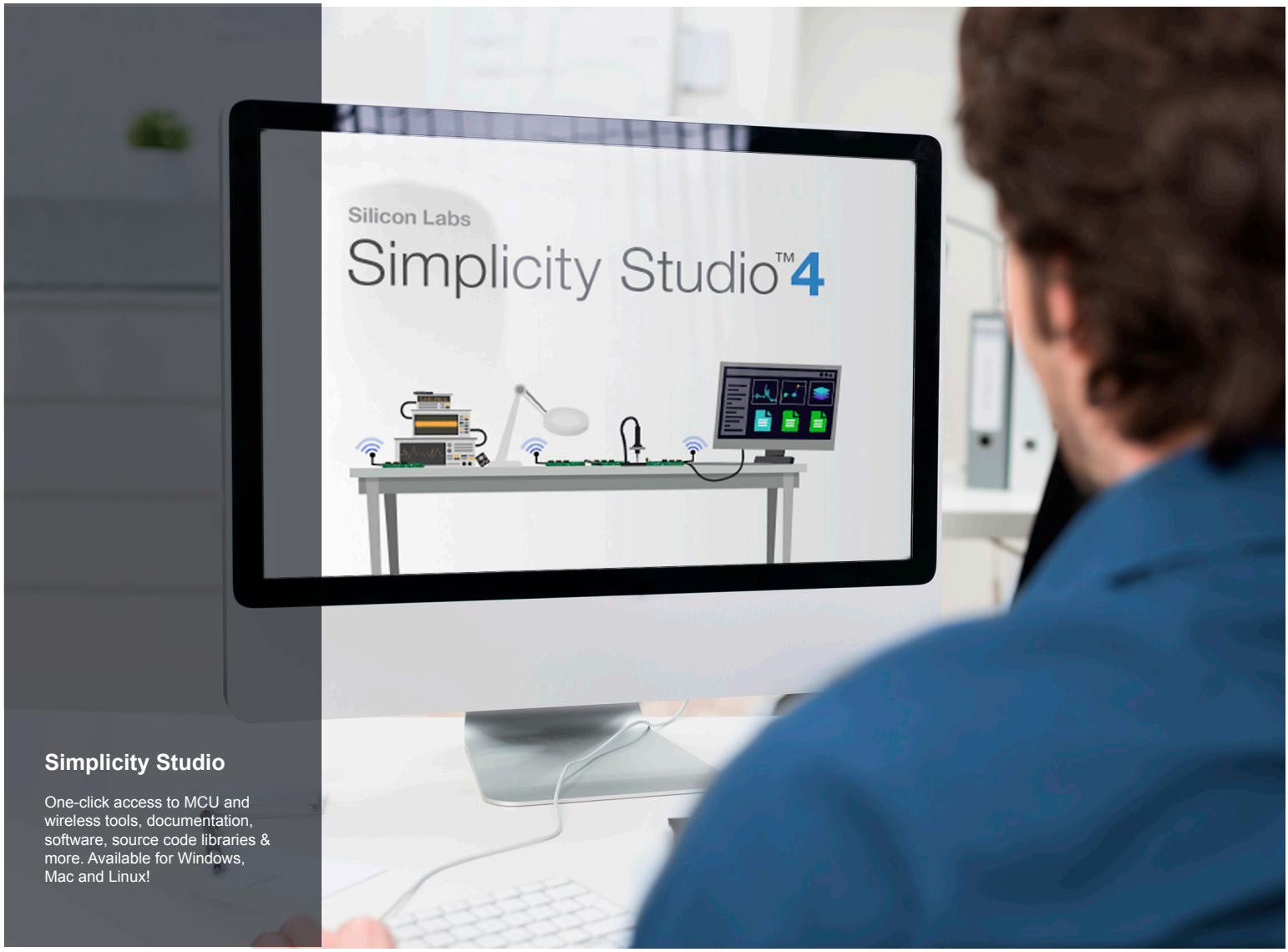

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