

Installation Manual

Radio Board H

Vers. 1.0, Dec. 11, 2019

The Radio Board H is developed to provide the communication for the rotating laser platform under usual construction site conditions. It establishes communication using the standard BLE protocol with a transmission power of +8 dBm. For the rotating laser platform it is 125 kbps for the communication with the receiver tool otherwise 500 kbps, 1 Mbps or 2 Mbps.

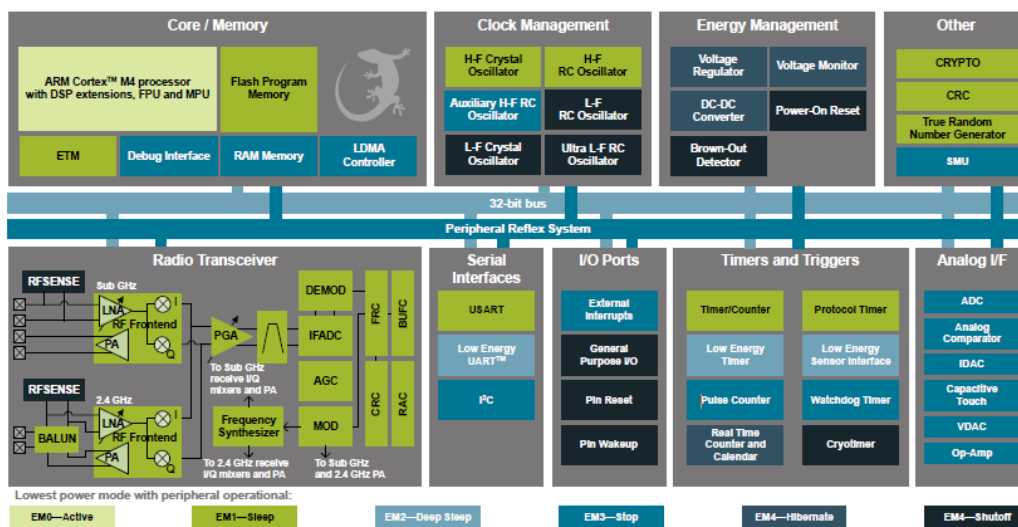
The Radio Board H is intended for Hilti internal use only. It is not for sale to third parties. Nevertheless, any modification of the Radio Board H is prohibited. In case of modifications, the Radio Board H will lose its certification.

The host product designer is responsible for compliance to all respective, relevant FCC rules. Additional measurements and certifications are needed for the host product incorporating the Radio Board H. At least module integration measurements shall be considered, e.g. with respect to RF exposure and radio transmission.

The Radio Board H is tested against and compliant with FCC 15.247 / RSS 247 and the respective human exposure requirements KDB 447498 / RSS102.

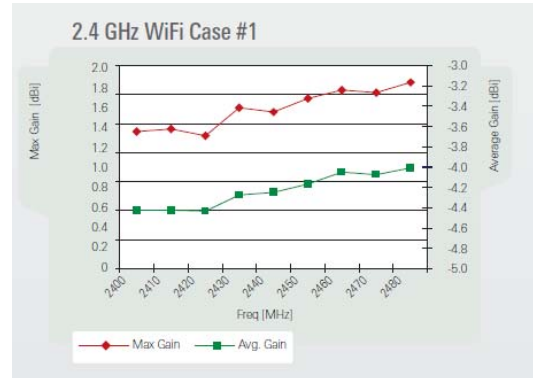
The Radio Board H can be used in a working temperature range from -20°C up to 60°C. The storage temperature shall be between -40°C and 125°C.

The Radio Board H uses a Silicon Labs-Chips EFR32BG13P732F512GM48. The block diagram of the chip is shown in the figure below.



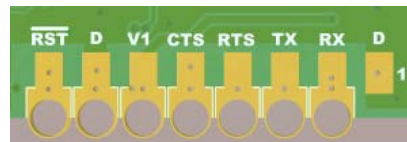
The clock X1 provides a frequency of 38.4 MHz.

The antenna used on the board is an integral surface mounted antenna: the ceramic antenna W3000 from pulse. For BLE frequency band the max. antenna gain is 1.9dBi.



The connections of the Radio Board H are the following

- RST (Chip) Reset line
- D (Digital) Ground
- V1 Operating voltage (3.3V)
- CTS Clear to send signal
- RTS Request to send signal
- TX Transmitted signal
- RX Received signal



For Canada, the minimum separation distance from a person's body has been calculated to be 15 mm.
 Pour le Canada, la distance de séparation minimale du corps d'une personne a été calculée à 15 mm.

The final product using the Radio Board H must be labeled with its model name and the respective FCC ID (SDL-PR5XM) and the ISED ID (5228a-PR5XM) on its housing.

Model name: "xxx"
 Contains FCC ID: SDL-PR5XM
 Contains IC: 5228A-PR5XM

Users of the radio board must follow these instructions:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. (FCC 15.21)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device. (FCC 15.19)

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes:

(1) Cet appareil ne doit pas causer d'interférences

(2) Cet appareil doit accepter toutes les interférences, y compris celles susceptibles de provoquer un fonctionnement indésirable de l'appareil. (RSS GEN Issue 5)