



SPECIFICATION SHEET

Bluetooth low energy transceiver modul 2.4GHz

BLEM0288

Information

project number	0288.01
version	1.0
created	21.06.2022 / SAL
editet	23.06.2022
category	confidential
status	not released



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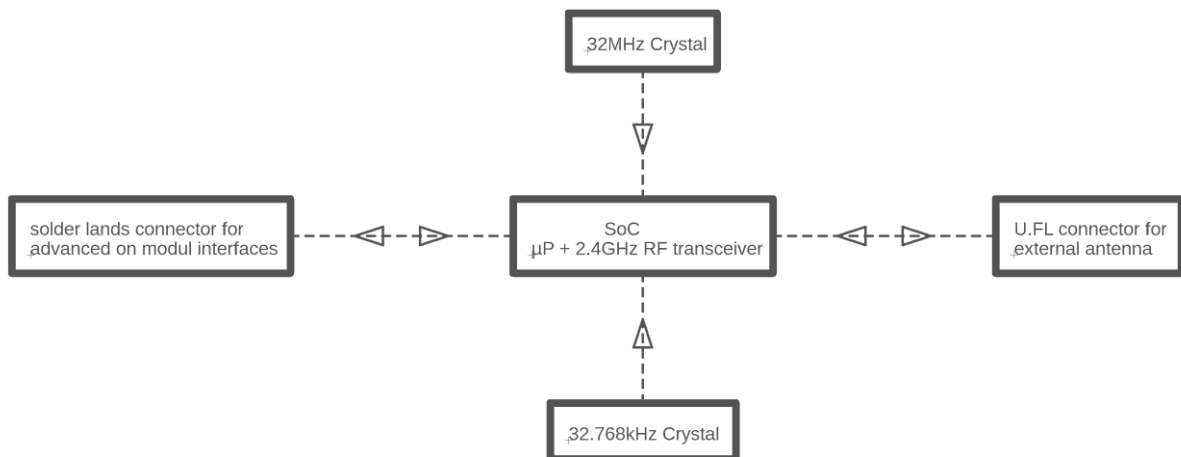
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1 Applicability

The BLEM0288 is a bluetooth low energy 2.4GHz transceiver modul. It is intended for the implementation of internal projects

2 Functional discription

2.1 Block diagram



BLEM0288 block diagram

2.2 Product discription

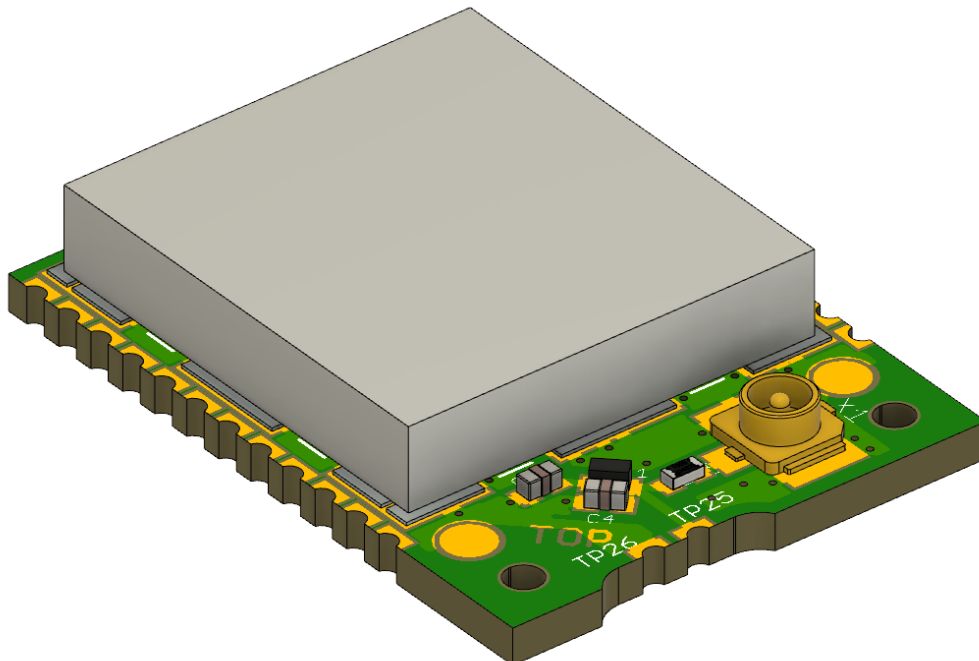
The module BLEM0288 is used to integrate bluetooth applicatios in new own products. It supports interfaces like USB 2.0, SPI, NFC-A tag, programmable peripheral interconnect and general purpose I/O pins.

3 Technical Specification

3.1 Electrical characteristics

supply voltage	2,5 – 3,6VDC
operating frequency	2.36 GHz - 2.5 GHz
bluetooth version	5.1
transmitter output power	+8 dBm max.
standby current	down to 1.5 μ A @ 3V
max. current consumption	40 mA @ 3V
interfaces	SPI USB 2.0 NFC-A tag U.FL connector for external antenna General purpose I/O pins
operating temperature range	-40°C to +85°C
dimension (L x B x H)	20,0mm x 14,8mm x 3,6mm

3.2 3D-illustration

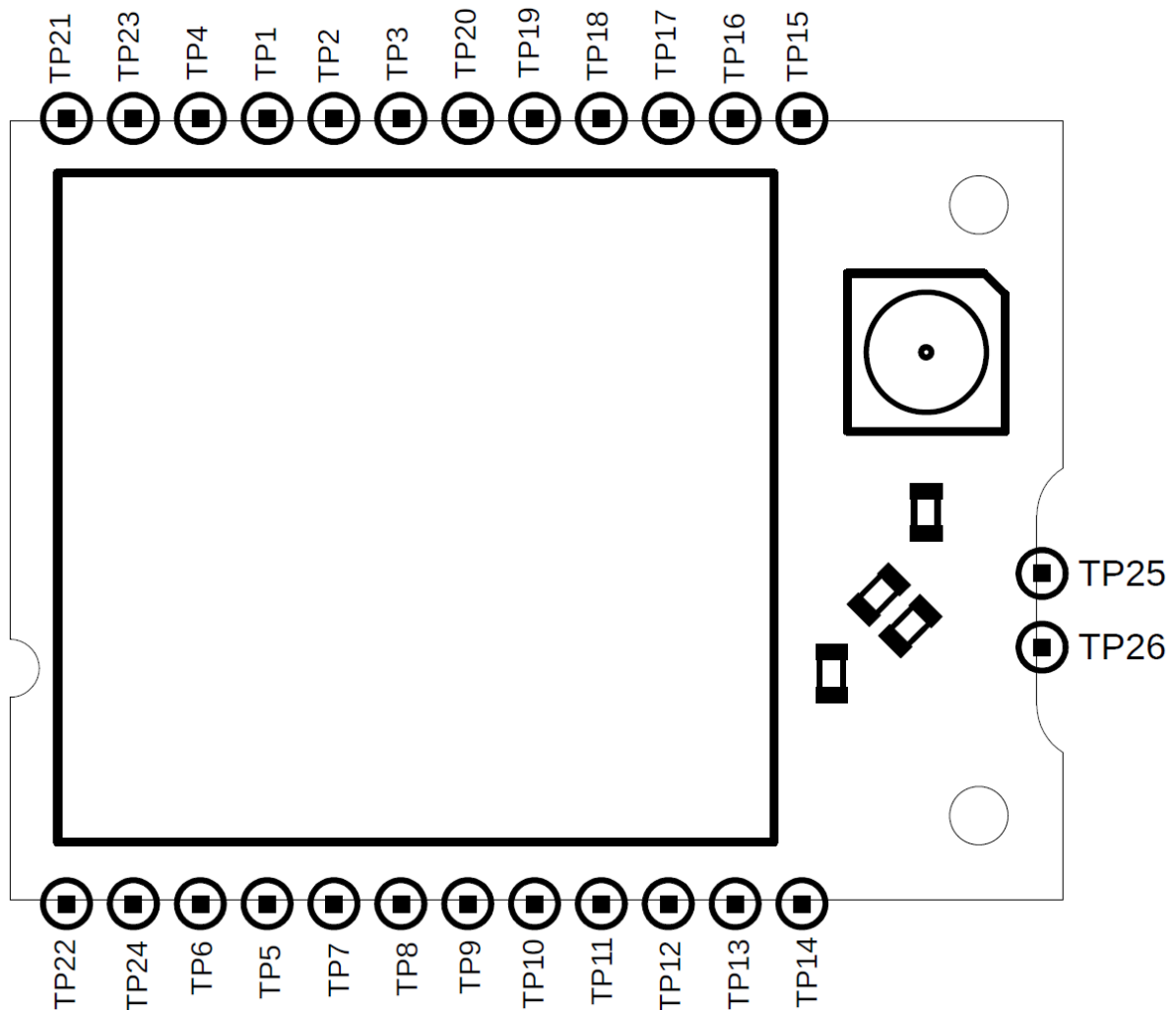


3.3 ESD precautions

ODEN-W16 series modules are Electrostatic Sensitive Devices (ESD) and require special ESD precautions typically applied to ESD sensitive components.

ESD precautions should be implemented on the application board where the module is mounted.

3.4 Pin assignment

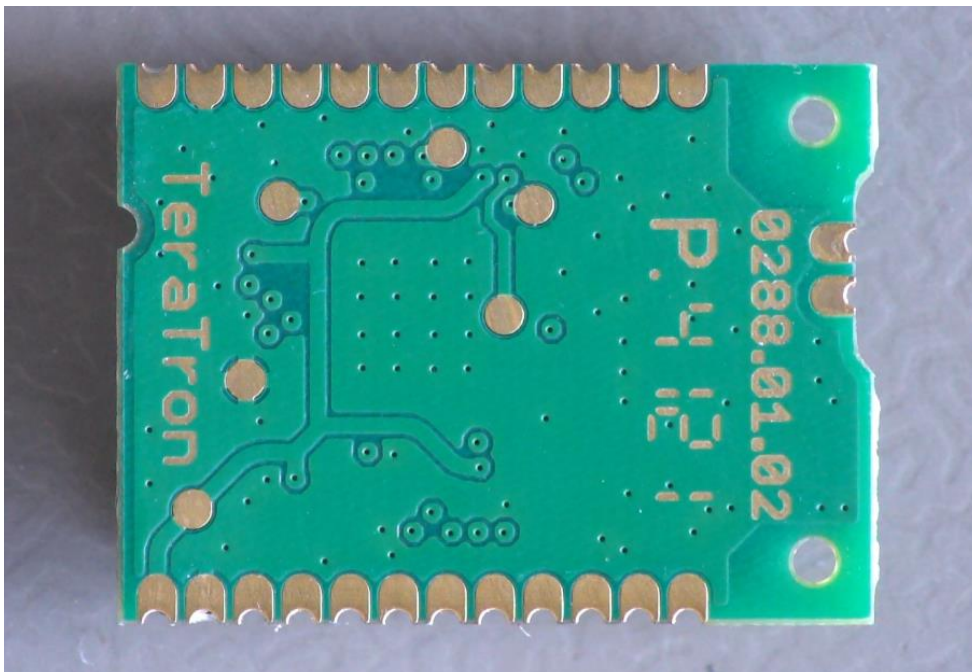


PIN	SIGNAL
TP1	NC
TP2	NC
TP3	optional input
TP4	bootloader input
TP5	NC
TP6	NC
TP7	TxD output
TP8	RxD input
TP9	Reset
TP10	NC
TP11	SWDIO
TP12	SWDCLK
TP13	NC
TP14	NC
TP15	NC
TP16	NC
TP17	NC
TP18	DTM EN IN
TP19	DTM RX IN
TP20	DTM TX OUT
TP21	VDD(H)
TP22	VBUS
TP23	VSS
TP24	VSS
TP25	ANT
TP26	VSS-ANT

3.5 Internal photos



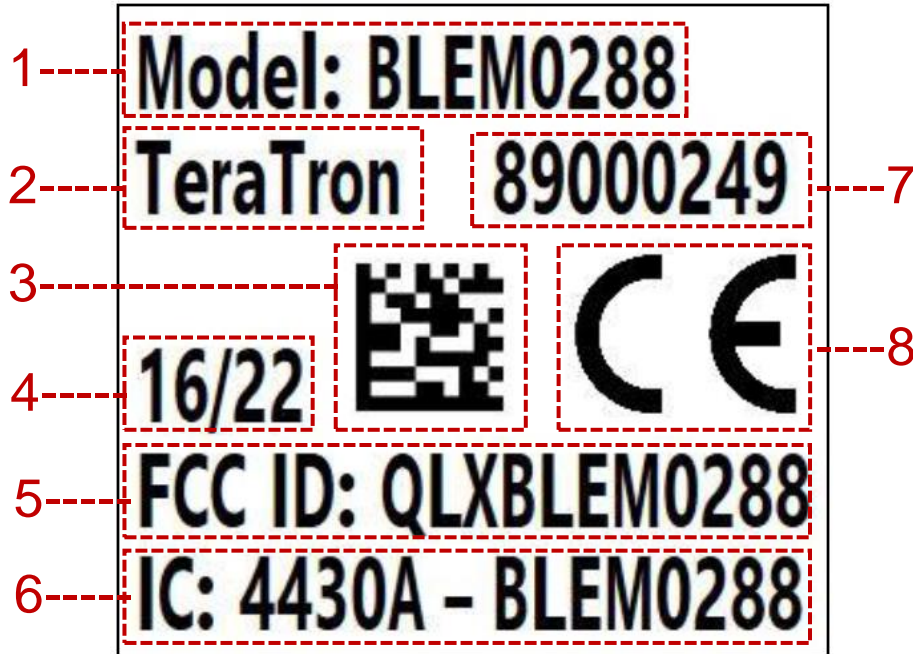
top view (and label location)



bottom view

4 Product labeling

The following label is shown as an example:



BLEM0288 modul label

Reference	Description
1	Product name ID
2	manufacturer
3	Data matrix code (unit serial number)
4	Date of unit production (week/year)
5	FCC ID number
6	ISED ID number
7	part number
8	CE marking

5 Compliance

5.1 FCC

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

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

5.2 ISED

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

6 Change Index

01	creation of specification sheet	SAL	22.06.2022