

# **DK-EVAL-04**

**IQRF development kit**

**User's Guide**

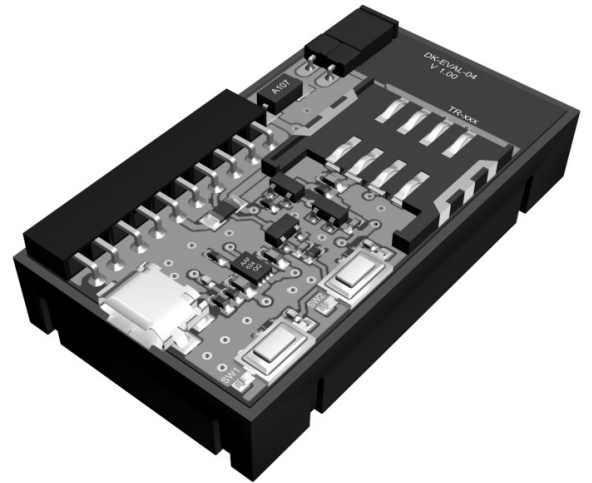


Simple way to smarter wireless solutions

## Description

DK-EVAL-04 is a universal development kit for IQRF wireless applications with transceiver modules. Very small size, accumulator and low cost make this kit ideal for use in network systems.

The user can realize specific functionality by software for internal TR module.



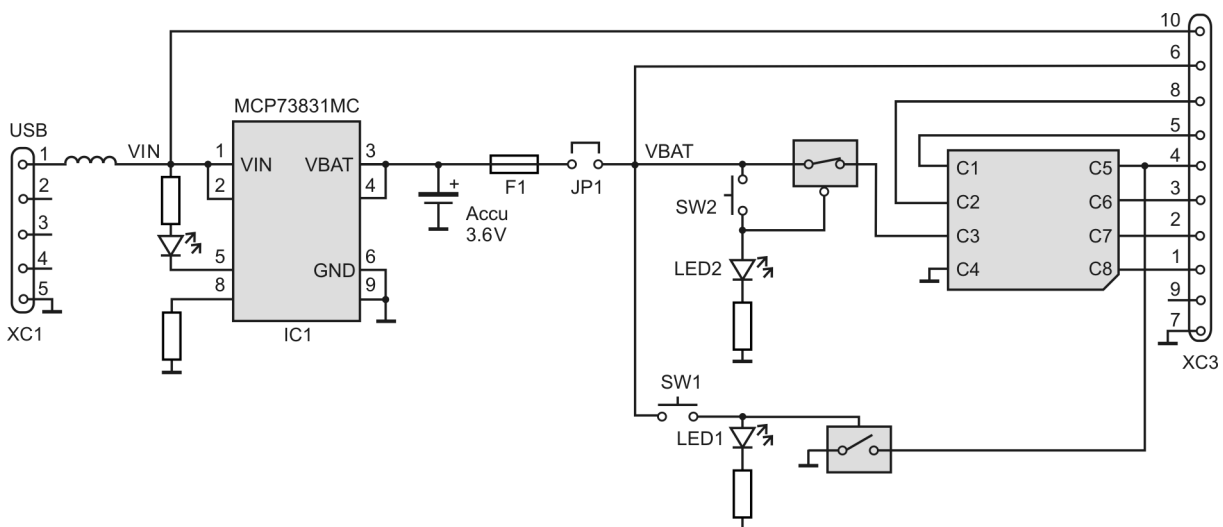
## Applications

- For TR-52B and higher
- Network development
- Huge IQMESH testing and debug
- Battery powered and portable wireless systems

## Key features

- Compatible with IQRF DDC kits (Development Daisy Chain)
- SIM connector for TR module
- 2 pushbuttons, wake-up on button press capability
- 3 indication LEDs
- 6 I/Os
- Accumulator and internal charger
- Charged via microUSB connector
- Voltage output to supply low power peripherals, sensors etc.
- Optional DK-PWR-01 power supply board to support operation and charging up to 5 kits available
- Space saving

## Simplified schematics



## Electrical specifications

(typical values unless otherwise stated)

Power supply	
accumulator	LIP552240, 3.7 V, 400 mAh
external source / charger	5.0 V to 6.0 V DC via micro USB connector
Supply current	
operational	< 100 nA (without TR module, not charged)
charging	50 mA max.
Temperature range	0 °C to +70 °C
Supported TR modules	TR-52B and higher, in SIM card format
Dimensions	48 mm x 27 mm x 11 mm
Weight	17 g

## Absolute maximum ratings

Stresses above those values may cause permanent damage to the device. Exposure to maximum rating conditions for extended periods may affect device reliability.

Supply voltage:	6.0 V
Storage temperature:	-40 °C to +85 °C

## Hardware

### Power supply

DK-EVAL-03 is supplied from accumulator or from external power source which also serves as a charger. The TR module is supplied when the JP1 jumper is set. Charging is indicated by LED3.

### Interface connector

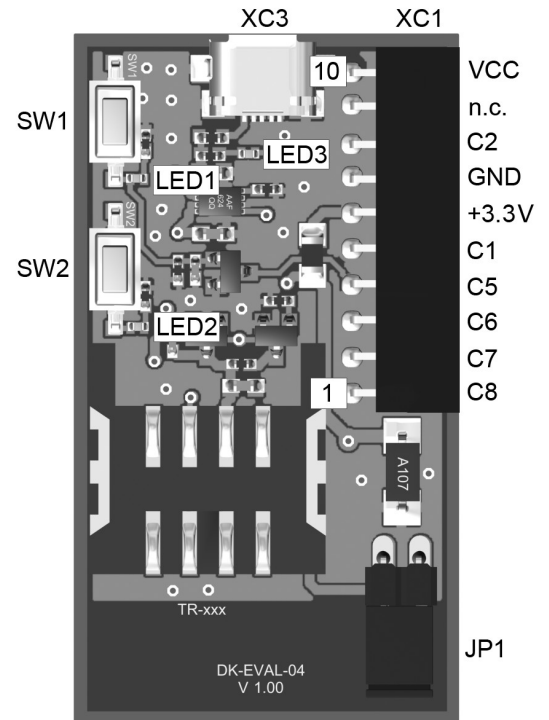
The XC3 female connector for square 0.635 mm, 2.54 mm pitch pins is intended for I/O and power supply.

### Pushbuttons

- User pushbutton SW1 is available on the C5 pin of the TR module. It is active low and weak pull-up should be provided by the TR module inserted in SIM connector. Therefore, the TR module should have the C5 pin configured as input with internal pull-up. It is arranged by OS by default. Wake-up on change on this pin can also be configured by user software.
- Reset pushbutton SW2 TR module is disconnected from power supply when the SW2 pushbutton is pressed.

### LEDs

- LED1 and LED2 are on when the appropriate pushbutton is pressed
- LED3: charging indication. LED3 is on during charging.



**Caution:** The TR module can be plugged / unplugged into / from the SIM connector while powered off only.

**Tip:** Use the SW2 pushbutton for this. The TR module is not powered while the SW2 pushbutton is held.

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**Pack list**

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- DK-EVAL-04 board (without a TR-module)
- Accumulator (soldered)
- 1 jumper (power on switch)

**Recommended options**

- MI-TY-A6-microUSB      Switching power supply with microUSB connector
- DK-PWR-01                Power supply board (to supply and charge up to 5 kits)

**Ordering code**

- DK-EVAL-04                IQRF universal development kit, low cost

**Document history**

- 110210                        First release

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# Sales and Service

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## Partners and distribution

Please visit [www.iqrf.org/partners](http://www.iqrf.org/partners)

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## Quality management

*ISO 9001 : 2000 certified*

*Complies with ETSI directives EN 30279 V.1.2.1:99, ETS 30683:97, ETSI EN 301489-1:00,  
ETSI EN 300220-1:00, ETSI EN 300390-2V.1.1.1:00*

*Complies with FCC directives FCC CFR, Title 47, Part 15, Section 15.209, FCC CFR, Title 47, Part 15, Section 15.249*

*Complies with Directive 2002/95/EC (RoHS)*



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