

DK-PGM-02

IQRF Universal Development kit

User's Guide

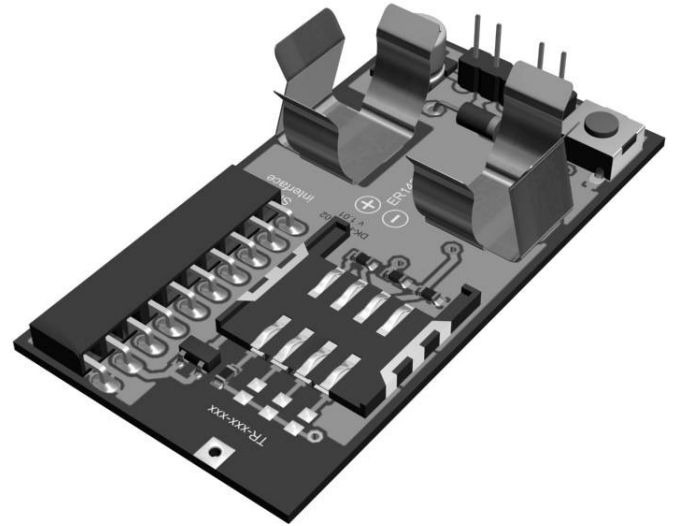


Simple way to smarter wireless solutions

Description

DK-PGM-02 is an IQRF universal development and debugging kit. It is primarily intended for development but it can also serve as a final device for some applications. This portable kit supplied from battery also allows easy RF range testing.

DK-PGM-02 is compatible with IQRF application examples.



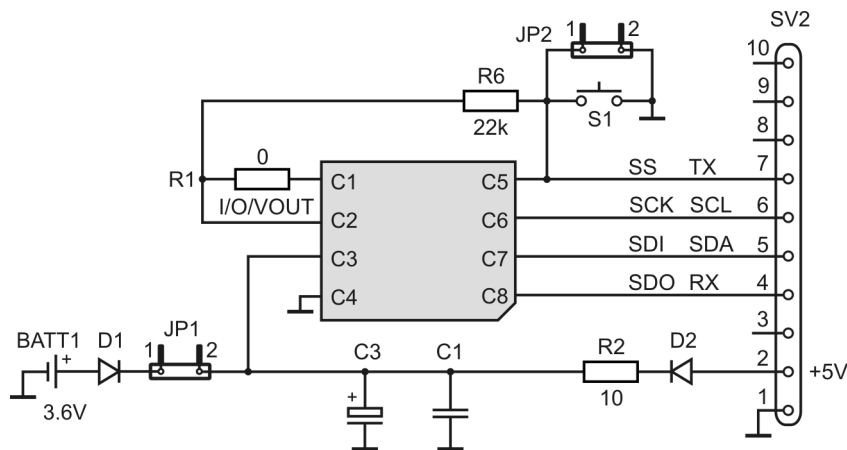
Applications

- IQRF application development
- IQRF examples execution
- Portable kit for range testing

Key features

- SIM connector for IQRF TR module
- Interface to CK-USB-02 (including power supply, SPI and programming capability)
- Supplied from battery or from external 5 V source
- Power on jumper
- Low cost

Simplified schematics



Electrical specifications

(typical values unless otherwise stated)

Power supply	3.6 V DC battery, ½ AA sized (via the battery holder) or 3.3 V to 5.5 V DC via the SV1 connector (typically 5 V from CK-USB-02)
Supply current	< 100 nA (without TR module)
Temperature range	0 °C to +70 °C
Supported TR modules	All TR modules in SIM card format
Dimensions	55 mm x 30 mm x 20 mm
Weight	10 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:	5.6 V
Storage temperature:	-40 °C to +85 °C

Hardware

Power supply

DK-PGM-02 should be supplied from ½ AA battery 3.6V, the BL-ER14250 or BL-ER14250M is recommended. For TR-52B modules only the BL-ER14250M (with higher drain current and lower capacity) is suitable. The battery is connected when the JP1 jumper is set. Alternatively, the kit can be connected to the CK-USB-02 kit via the SV1 connector and supplied from it (5 V).

The kit is delivered without a battery.

Pushbutton

User pushbutton S1 is available on the SS pin (C5) of the TR module. It is active low and weak pull-up is provided by the TR module inserted in SIM connector. Therefore, the TR module should have the LDO output enabled or the C2 pin configured as output and driven high – see the E01-TX basic IQRF example).

Note: TR-21A, TR-31B and TR-32B have the LDO output default enabled, while TR-52B and higher have this disabled.

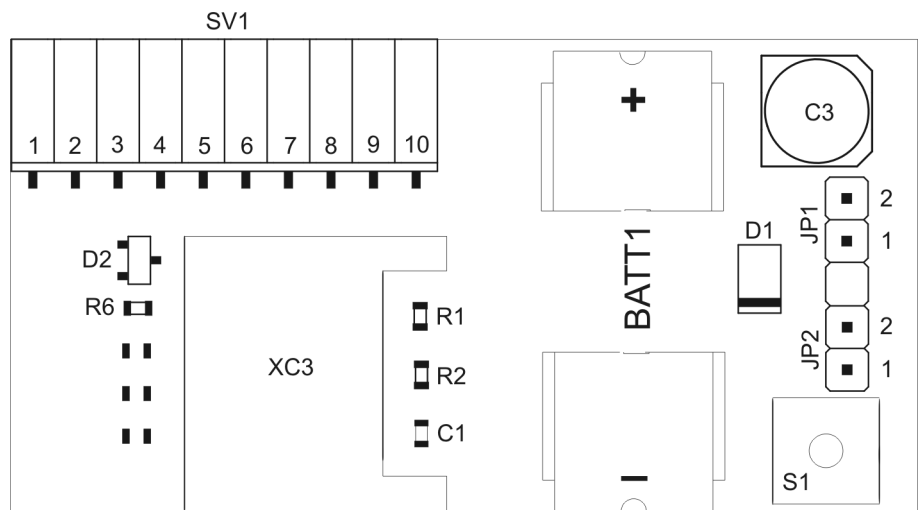
The pushbutton functionality fully depends on the user software in the TR module.

TR module

All SIM-sized IQRF transceiver modules are supported. After connecting the kit to the CK-USB-02 programmer via the SV1 connector the TR module in SIM socket can be programmed. Battery must be disconnected during programming.

Connectors and interfaces

XC3	SIM card connector for TR modules.
SV1	For CK-USB-02 connection. It can also serve as SPI or I/O interface and power supply input.
JP1	Battery connection.
JP2	Jumper parallel to the pushbutton.



Software

DK-PGM-02 functionality depends just on the software in TR module which is fully under the user's control.

IQRF application examples, basic as well as several advanced ones are compatible for this kit.

Pack list

- DK-PGM-02 kit
- 1 jumper
- Battery is not included

Recommended options

- BL-ER14250 Battery 1.2 Ah
- BL-ER14250M Battery 0.8 Ah, higher drain current (for TR-52B, TR-53B. ...)
- DK-PGM-02-LED LED indication development board
- DK-PGM-02-TMP Development board with precise temperature sensor

Ordering code

- DK-PGM-02 IQRF universal development kit, low cost

Document history

- 100114 First release

Sales and Service

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Partners and distribution

Please visit www.iqrf.org/partners

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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On-line support: <http://iq-esupport.com>



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