# dresden elektronik

# deRFgateway
# for ARM based radio modules
Datasheet

- The deRFgateway is a development and application platform for dresden elektronik radio modules based on ARM microcontroller.

- The deRFgateway supports pluggable dresden elektronik radio modules.

- Useful for Gateway function is the onboard Ethernet interface on deRFgateway, only available in combination with ARM based radio modules.

- The USB interface allows the radio module communication with a host PC or notebook.

- The platform can be powered over USB, DC-Plug or battery.

- Onboard sensors for transmission of environmental data like temperature, luminosity and acceleration.

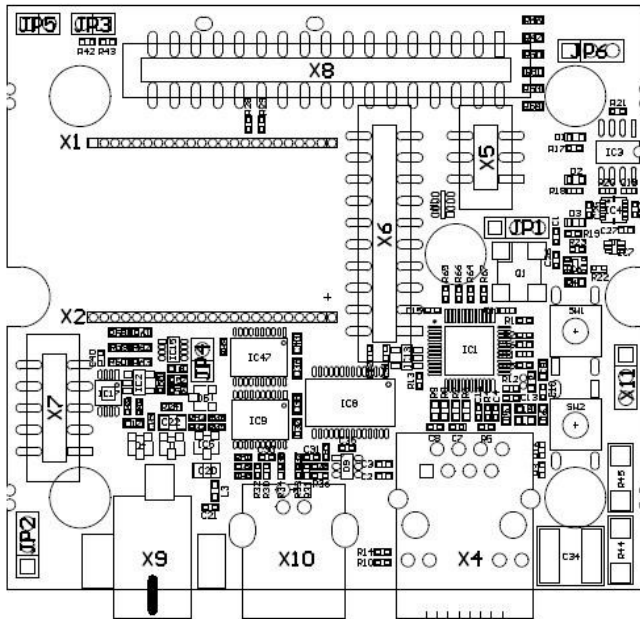- Onboard memory sufficient for data storage and over-the-air firmware updates.

## Technical Data

| | |
|---|---|
| **Dimensions** | 70 x 68 x 33 mm |
| **IP protection** | IP 00 |
| **Operating temperature** | -40 to +85°C |
| **Control and display elements** | 2x Buttons and 3x LED |
| **Power supply** | DC: 5 VDC<br>USB: 5 VDC over USB<br>Battery: 3 x AA |
| **Power consumption** | $I\_idle < 17$ mA<br>deRFgateway with deRFarm7 module and Ethernet deactivated<br>$I\_idle = 40$ mA (typ.)<br>$I\_TxRxOn = 54$ mA (typ.)<br>deRFgateway with deRFarm7 module with Ethernet and 100BASE-TX Connection<br>$I\_idle = 161$ mA (typ.)<br>$I\_TxRxOn = 175$ mA (typ.) |
| **Interfaces** | JTAG (AVR & ARM), Debug, USB, Ethernet, I2C, UART, SPI, ADC |
| **Onboard Sensors** | Temperature, Luminosity, Acceleration |
| **Onboard Memory** | 4 Mbit Serial Flash |
| **Supported Radio Modules** | deRFarm7 series (pluggable) |
| **Certification** | CE pending<br>(The deRFgateway is intended for laboratory, development, demonstration or evaluation purposes only) |

**Technical Data**

## Board Overlay

X1 & X2: Radio Module
X4: Ethernet RJ45
X5: Debug & Trace
X6: JTAG for ARM
X7: JTAG for AVR
X8: 34 Pin User Interface
X9: DC
X10: USB Type-B

JP1: Acc. INT or SW2
JP2: Bat or DC/USB
JP3: VBAT monitor
JP4: RST Supervisor
JP5: VCC module
JP6: SW1

Top View deRFgateway

| | Order No. |
|---|---|
| **Scope of delivery** | |
| deRFgateway for ARM | BN-031633 |
| | |
| **Accessories (optional)** | |
| RS232 level shifter | BN-028560 |
| DC power supply 5 V / 1.2 A | BN-023431 |
| | |
| **Board variants** | |
| deRFnode for ARM | BN-031632 |
| deRFnode for AVR/ARM | BN-031634 |

More information about the variants is described in detail in the user manual.
Order online: https://shop.dresden-elektronik.de

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