



The RV-3029-C3 is an ultra miniature Real-Time-Clock Module with embedded Crystal. The temperature compensated oscillator delivers very high time-accuracy of $\pm 6\text{ppm}$ (0.5s/day) from -40°C to $+85^{\circ}\text{C}$ and $\pm 8\text{ppm}$ -40°C to $+125^{\circ}\text{C}$.

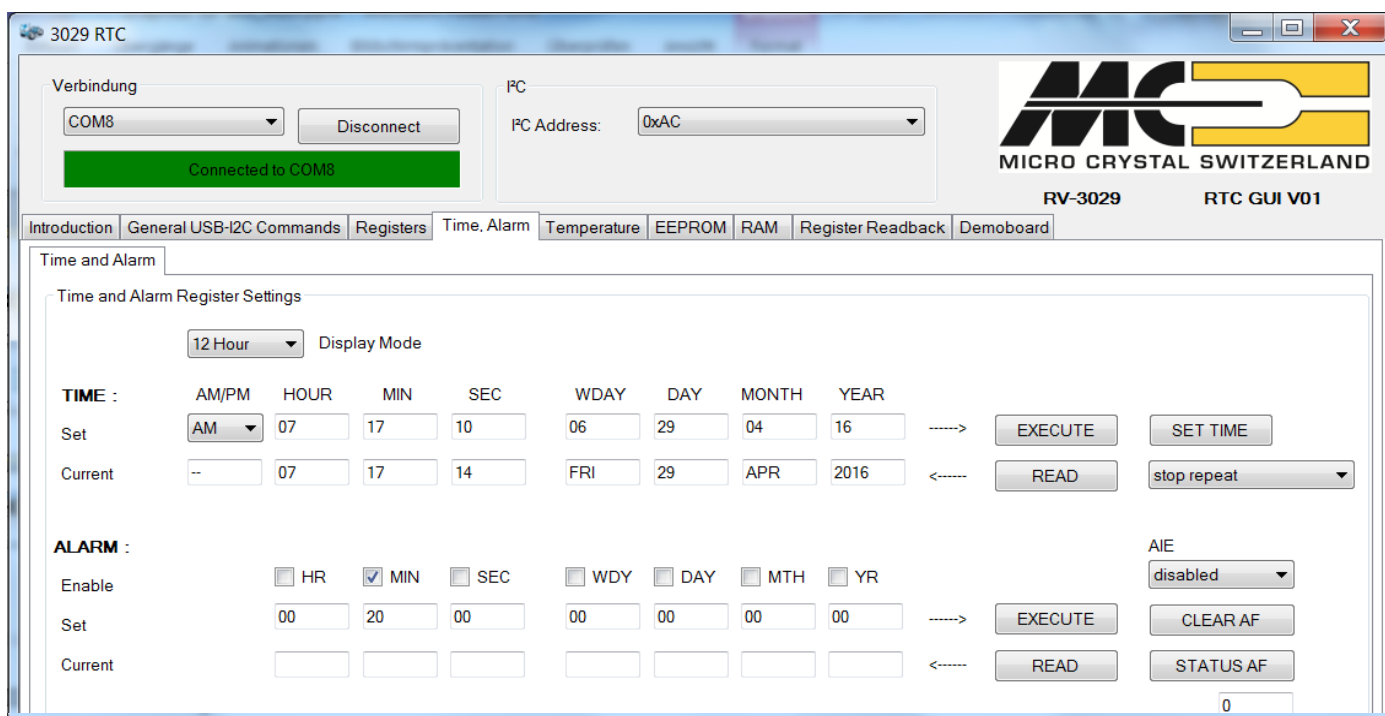
The key features include:

- Time, Date, Alarm, Timer
- Backup-Battery Input with internal switch-over function with programmable Trickle-charge
- Digital temperature read out
- 8 Bytes RAM and 2 Bytes EEPROM for customer's application

Description:

The evaluation kit simplifies the system design. The RTC functions can be directly evaluated and tested. The kit has 3 parts:

- Dongle to establish the Interface between the USB-port of the PC and the I²C-bus
- The development board RV-3029-C3. All components including the small RTC package and a row of pins are preassembled
- The Graphical User Interface (GUI) is ready for download.



Graphical User Interface:

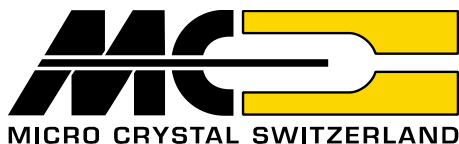
Software

The software control via the GUI allows a fast start to communicate via I²C-Bus with the Real-Time Clock. Every register is directly decoded and visualized. All the functions, e.g. setting / reading the actual time can be interactively accessed.

Aside from the detailed GUI pages for the Real-Time Clocks, a General USB-I²C Commands page allows communication with any I²C-bus RTC by directly entering the hex codes.

The screenshots illustrate the GUI's functionality across different tabs:

- Registers Tab:** Displays configuration registers (00h Control_1 to 04h Control_Reset) and time settings (00h Seconds to 08h Date). It includes a 'TIMER' section with 18h and 19h timer settings and a 'TEMPERATURE' section for 20h temperature.
- General USB-I²C Commands Tab:** Shows a USB-I²C dongle connected to a demo board. Text explains that the GUI provides easy control of the RTC-module and that dedicated demo boards are connected directly to the USB ↔ I²C-bus dongle.
- Temperature Tab:** Features a 'Temperature Readout' section with a 'READ TEMPERATURE' button and fields for 20h (hex), 20h (decimal), 20h (Kelvin), 20h (Celsius), and 20h (Fahrenheit). It also includes a 'Temperature Setting' section with a 'SET TEMPERATURE' button and a 20h (hex) field.
- Received Data Section:** Displays a list of received data values, such as 12 16 00 00 00, 08 12 13 29 06 04 16, and 38 28 7A E7.



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