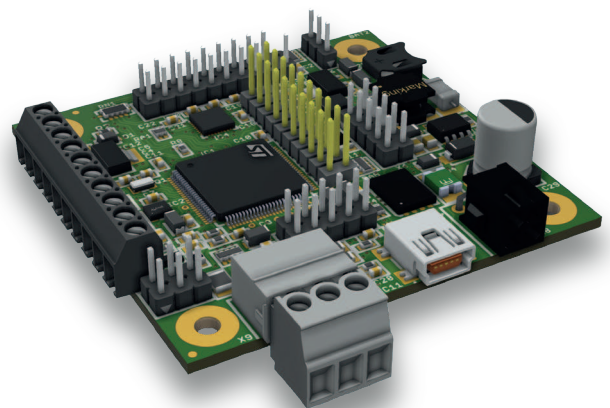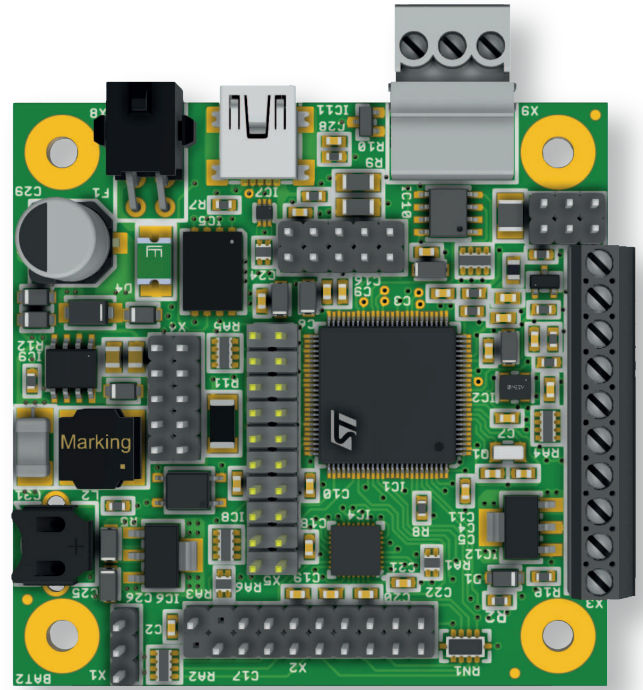# MINI-MAX/STM32F7

Micro-controller System based on Cortex-M7 Microcontroller

The Cortex micro-controller, first Introduced by ARM Ltd., is one of the most popular microcontrollers in use today with applications ranging from industrial, medical, home automation, cell phones, PDA's, computers to automotive. MINI-MAX/STM32F7 is a powerful, yet easy-to-use microcomputer system based on the latest generation of flash-based ARM micro-controllers from ST Microelectronics (STM).

MINI-MAX/STM32F7 is fully assembled and ready to use out of the box. MINI-MAX/STM32F7 has 1MB of flash memory that can store thousands of lines of C or ARM Assembly language programs. Programs are downloaded into the MINI-MAX/STM32F7 with a personal computer through the RS232 serial (COM) port or JTAG port. Downloads typically take only few seconds.

ARM® 32-bit Cortex®-M7

STM32F745VGT6 Microprocessor

25 MHz crystal, with up to 216 MHz internal operation

256Mb (32Mx8) SPI flash

4x Analog inputs, 12-bit resolution

1x Digital output, open drain

1x Digital input, dry contact

2x RS232 Serial ports with RTS/CTS handshake lines

1x RS485 Serial port (2 Wire)

1x USB Device port

JTAG programming interface

Screw terminal block for analog circuits

Expansion bus interface to low-cost peripheral boards

32.768KHz crystal and 3V battery holder for RTC

Ultra Low Power, USB or Battery operation possible, peripheral shutdown capability

3.3 Volt on-board regulator

WiPOM

Wireless Point of Monitoring

WiPOM is a software application package that adds sophisticated data logging, remote terminal, and PLC-like capabilities to the MINI-MAX/STM32F7 board. WiPOM can run on Cortex-Mx families of ARM processors, WiPOM handles all aspects of Industrial IoT applications development, including I/O management, tags, alarms, events, SMS/email handling, MODBUS master and slave capability, modem detection, and management and Cloud portal support. WiPOM runs directly on MINI-MAX/STM32F7 board. Coupled with the WiPOM Client running on a Windows PC, programming the MINI-MAX/STM32F7 board is reduced to a series of configuration selections to build a complete IoT system. WiPOM takes software out of the equation for faster time to market. Creating remote monitoring and control systems has not been easier.

USB, RS232 or over the air (requires optional modem
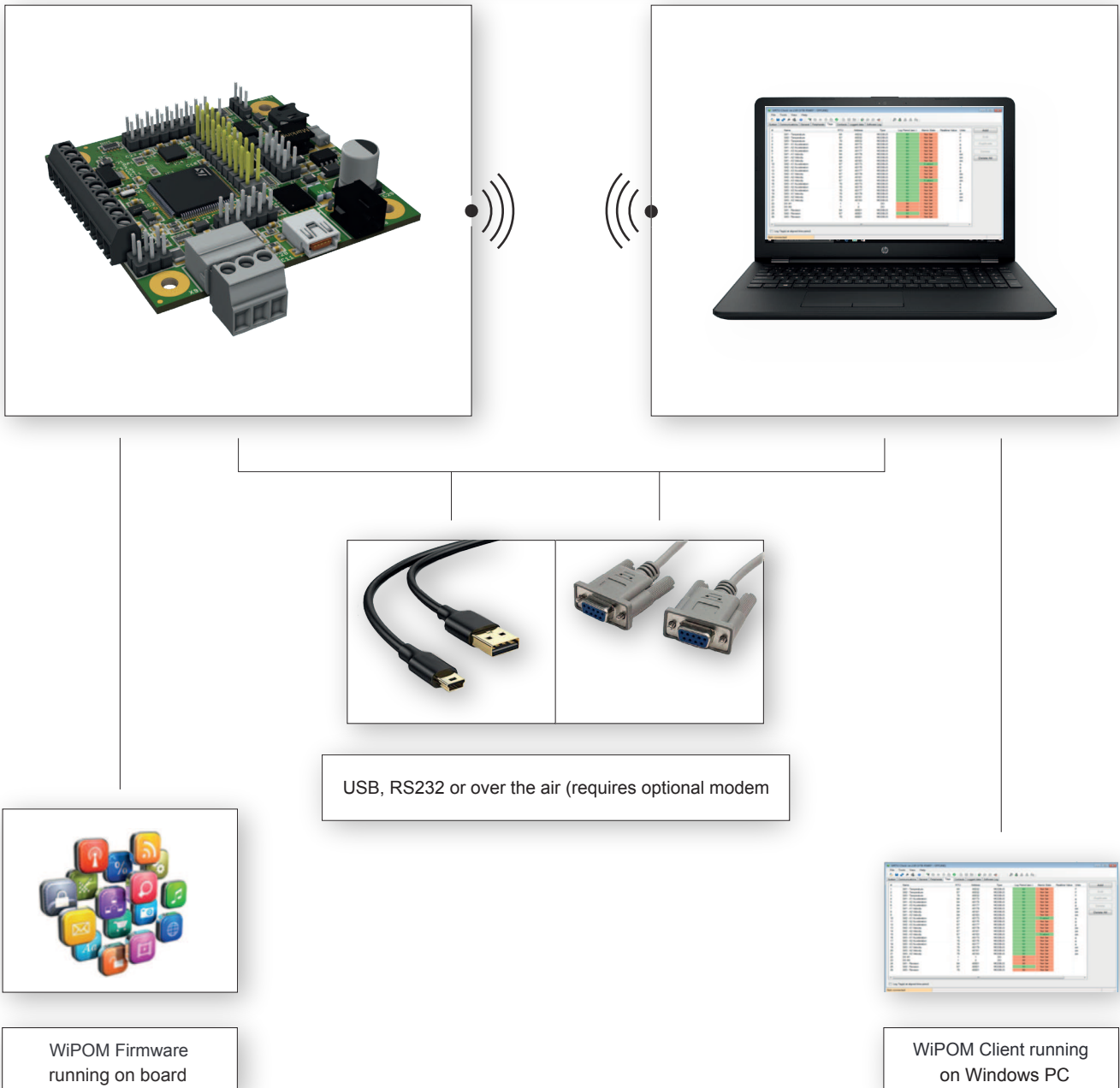
WiPOM Firmware
running on board

WiPOM Client running
on Windows PC