



Enabling Low Power Applications

The RTX4100 Wi-Fi Module is a small form factor, single stream, 802.11 b/g/n Wi-Fi module with on-board low power application processor - a true enabler of the 'Internet of Things'.

Ideal for low power sensor, automation and smart metering solutions

The RTX4100 Wi-Fi Module allows fast and easy application development of low power sensor and actuator solutions - enabling devices, machines and other systems to connect directly to the internet for a wide range of emerging machine to machine (M2M) applications.

The Module is ideal for application development due to its small footprint, high efficiency and low power consumption, which is achieved through the use of Energy Micro EFM32 Gecko MCU and the Qualcomm Atheros AR4100 Wi-Fi System-in-Package.

The RTX4100 Wi-Fi Module can be integrated into devices to support various wireless standards including 802.11 b/g/n. All features are enhanced by a built-in or external antenna and an edge connector for connecting to an application board.

The module I/O's include:

- Power supply pins
- ADC ports, DAC ports
- GPIO ports
- UART, SPI, I2C
- Timers

Reduce development time

The RTX4100 is supported by a development platform reducing development time through multiple interfaces and power supply options. The reference hardware is designed to relieve design efforts by having a USB port, serial connector, sensor interfaces and human interfaces. With the RTX4100, highly secure low power sensor and automation solutions can be easily designed and its built-in power profiling options facilitates energy management. The RTX4100 is moreover suitable for both battery and mains power.

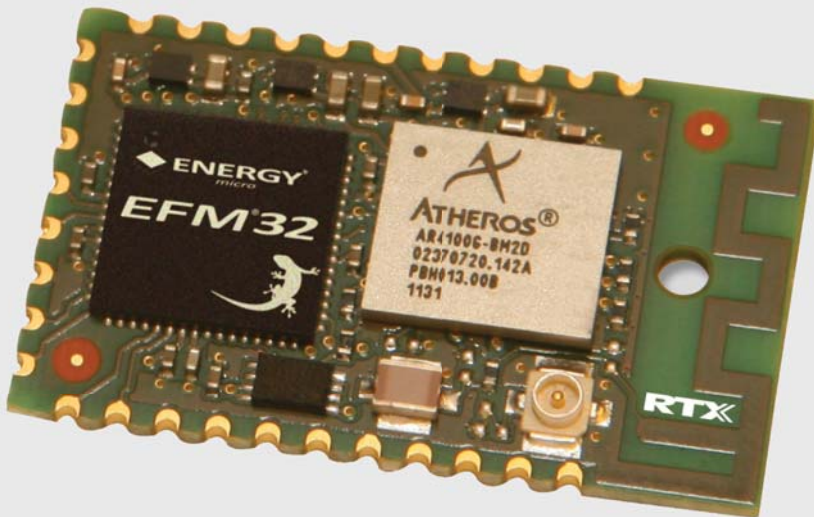
Applications

Rapid development of sensors for smart energy, security and automation demonstrators are possible through extensive SW support. The developer is supported by a Board Support Package including:

- Application framework to allow rapid development
- Application protocols (SEP 2.0 and CoAP)
- Zero-cost tool chain
- Low Power RTOS
- Full IPv6 and IPv4 stacks
- Full security package including WPA2 and WPS
- Web server
- Patented connectivity technology to support cloud applications
- IEC 60335 Class B Household safety standards compliant

TECHNICAL SPECIFICATIONS - RTX4100

Feature	Specification
Standards supported	<ul style="list-style-type: none">• 802.11 b/g/n Wi-Fi
Software Support	<ul style="list-style-type: none">• Full BSP options including RTOS and drivers• Full IPv4 and IPv6 stack• Patented connectivity technology to support cloud applications and access from internet to sensors through firewalls• WEP, WPA, WPA2, WPS support• Web server (optional)• RTX Automation software modules including Smart Energy Profile 2.0 and CoAP• Optional DLMS/COSEM for smart metering• RTX application framework and zero tool cost chain
Antenna options	<ul style="list-style-type: none">• On-board PCB Antenna• Antenna connector
Components	<ul style="list-style-type: none">• Atheros AR4100 SiP• Energy Micro Gecko MCU
Physical characteristics	<ul style="list-style-type: none">• 30 mm x 18 mm x 2.4 mm• Single sided PCB
Power ratings	<ul style="list-style-type: none">• 3.4 – 5.5V supply
Power consumption	<ul style="list-style-type: none">• 20-500uA typical values (depends on QoS)• Less than 4µA in low energy mode, monitoring I/O's
Development tools ¹	<ul style="list-style-type: none">• Evaluation Kit (EVK)• Software Development Kit (SDK)• Full Documentation Package• Application Debugger tools



¹Available upon request - contact RTX.

CODICO®

CODICO GmbH
Zwingenstrasse 6-8, A-2380 Perchtoldsdorf
Tel. Vienna +43/(0)1/86 305 - 5000
Fax Vienna +43/(0)1/86 305 - 98
e-mail: office@codico.com
www.codico.com

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