Description

The ALPW-BLEM003 module is a complete ready-to-use *Bluetooth*® Smart module.

The ALPW-BLEM003 module combines ultra low power hardware components and a complete *Bluetooth*® Smart protocol stack.
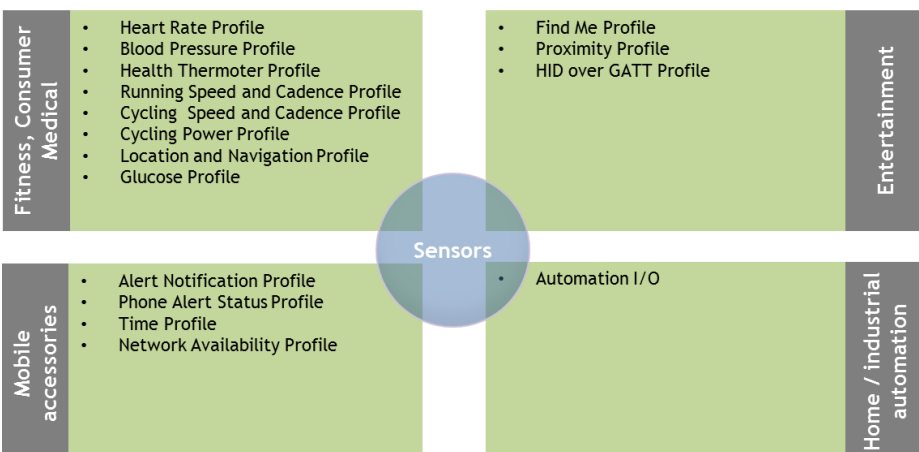
Alpwise solutions benefit from best-in-class product from wireless leading semiconductor manufacturers.

Main Features

- Small form factor
- Ultra low power consumption
- EM9301 2,4 GHz *Bluetooth*® Smart controller
- 1AA battery or button cell battery supply
- Complete connectivity
- Digital and analog comparator
- Programmable Cortex M0 processor to handle *Bluetooth*® Smart user application + *Bluetooth*® Smart stack
- Qualified *Bluetooth*® Smart protocol stack with GAP, SMP, ATT, L2CAP and GATT protocols

User Applications

The ALPW-BLEM003 facilitates the integration of cost-effective and low power consumption wireless technologies for the following application segments, thanks to a continously updated and qualified list of profiles:

Fitness, Consumer Medical
- Heart Rate Profile
- Blood Pressure Profile
- Health Thermoter Profile
- Running Speed and Cadence Profile
- Cycling Speed and Cadence Profile
- Cycling Power Profile
- Location and Navigation Profile
- Glucose Profile

Entertainment
- Find Me Profile
- Proximity Profile
- HID over GATT Profile

Sensors

Mobile accessories
- Alert Notification Profile
- Phone Alert Status Profile
- Time Profile
- Network Availability Profile

Home / industrial automation
- Automation I/O

Contact

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You can buy our products through our International distributors. You will find the distributors details on our website on the contact page.
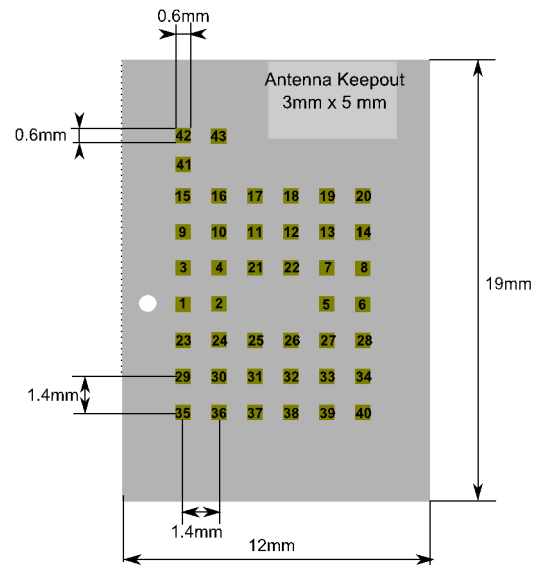
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Technical Data

Microprocessor	STM32 ARM Cortex M0
Bluetooth® controller	EM9301
Module Dimensions (mm)	12 x 19 x 2.4 with shielding 12 x 19 x 1.6 without shielding
Frequency Range	2.4 GHz
TX Output Power	-18 dBm to +3 dBm
RX Sensitivity	-80 dBm
Operating Temperature	-40˚C to +85˚C
Power Supply	2.0 to 3.3 V

GPIOs	Up to 10
Connectivity	1 USART, 1 I2C
Analog Interfaces	4 ADC 10 bit with VREF
Certifications	CE, IC, FCC, MIC, BT Pending
Options	UFL antenna, shielding

Module Pin-Out

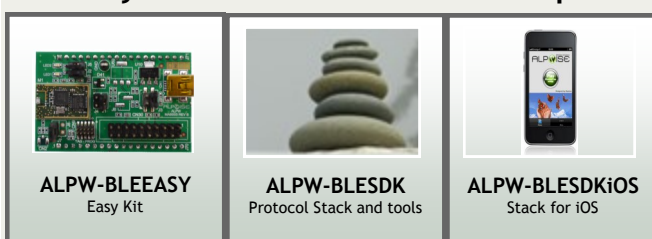| PAD		PAD	
PAD1	GND	PAD23	SWD_DAT
PAD2	NC	PAD24	I2C_SMBA
PAD3	ADC4	PAD25	GND
PAD4	ADC3	PAD26	GND
PAD5	USART_RTS	PAD27	VDDA
PAD6	USART_CLK	PAD28	ADC1
PAD7	USART_CTS	PAD29	SWD_CLK
PAD8	VDD 3.3V	PAD30	IO2
PAD9	GND	PAD31	NC
PAD10	NC	PAD32	NC
PAD11	USART_TX	PAD33	I2C_SCL
PAD12	NC	PAD34	I2C_SDA
PAD13	NC	PAD35	ADC2
PAD14	GND	PAD36	IO1
PAD15	BOOT	PAD37	MCU NRST
PAD16	USART_RX	PAD38	NC
PAD17	NC	PAD39	NC
PAD18	NC	PAD40	GND
PAD19	NC	PAD41	GND
PAD20	NC	PAD42	RF OUTPUT
PAD21	GND	PAD43	GND
PAD22	GND		

Dimensions

Flexible System Configuration

The **ALPW-BLEM003** module enables wide use in different design configuration:

- **Stand Alone module** - ready-to-use *Bluetooth*® Smart co-processor, packed with GAP and GATT profile. Additional profile can be added upon the specific use.

- **Application module -** user application program can be downloaded into the internal Flash memory to take benefit of the internal MCU power and interface offer (GPIO's, ADC…). Protocol stack is provided through the ALPW-BLESDKCM0 SDK.

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You may also be interested in these products

ALPW-BLEEASY
Easy Kit

ALPW-BLESDK
Protocol Stack and tools

ALPW-BLESDKiOS
Stack for iOS

Along with the ALPW-BLEM003 module, Alpwise provides all the tools facilitating the implementation of your *Bluetooth*® low energy application: development kit, SDK, SDK for iOS

Please contact us to know more about our complete offer.