



Kaynes Component Wireless Modules

KT1010 (Bluetooth Core Specification Version 4.1 (Bluetooth low Energy Single Mode))

Overview

- "Blank" Module: User can Develop Own Unique Application Codes
- Based on CSR1010 SoC
- 128KB Memory: 64KB RAM and 64KB ROM
- Bluetooth® v4.1 Specification
- Support for Bluetooth v4.1 Specification host
- Stack Including ATT, GATT, SMP, L2CAP, GAP
- RSSI Monitoring for Proximity Applications
- <600nA Current Consumption in Dormant Mode
- Switch-Mode Power Supply
- Programmable General Purpose PIO controller



Bluetooth Smart Module

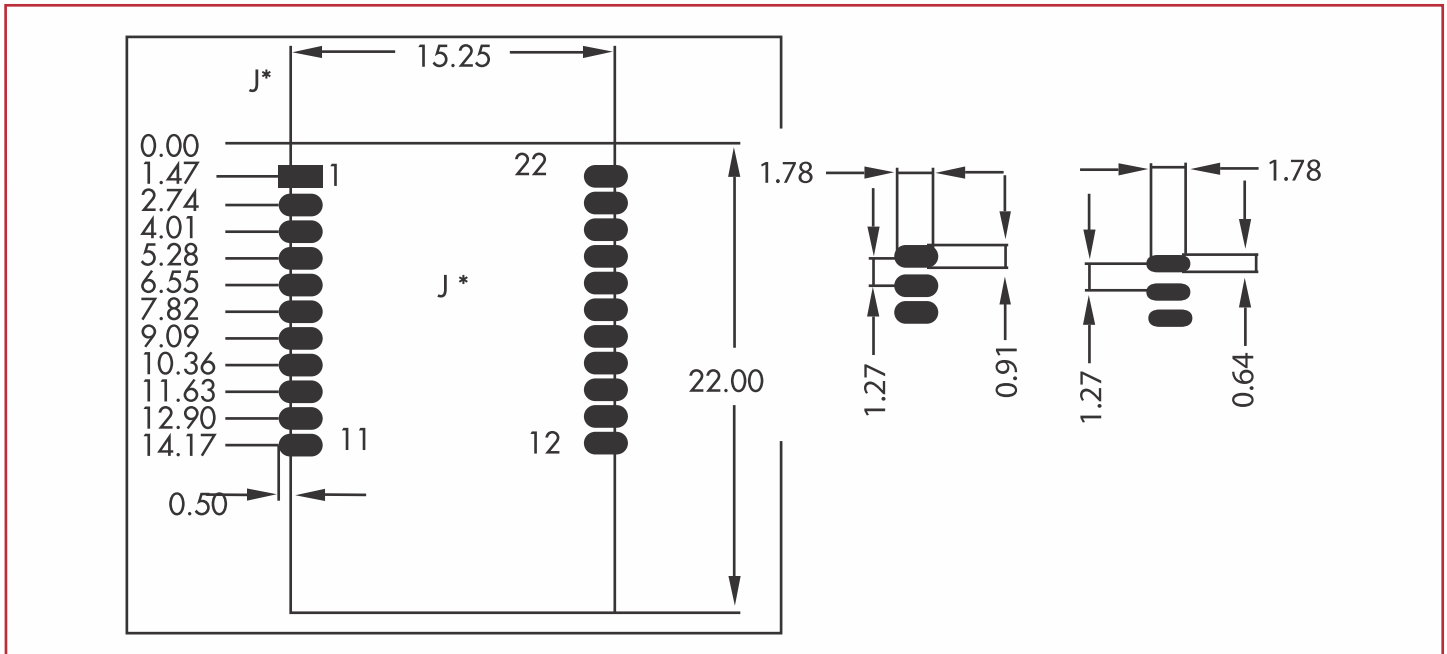
Product Features	Applications
<ul style="list-style-type: none">• 10-bit ADC, 12 Digital PIOs• 3 Analogue AIOs• UART, I²C / SPI for EEPROM / Flash memory ICs and Peripherals• Debug SPI• 4 PWM Modules	<ul style="list-style-type: none">• Sports and Fitness• Healthcare• Home Entertainment• Office and Mobile Accessories• Automotive• Remote Control• Smart Watches• Human Interface Devices (HID)

Item	Specification
Part Number	KT1010
Antenna	Embedded (Patterned Antenna)
Bluetooth Technology	Conforms to Bluetooth Core Specification Version 4.1 (Single Mode Low Energy Radio)
Transmit Power	Plus 7.5 dBm (SoC)
Receiver Sensitivity	-92.5 dBm (SoC)
Crystal Oscillator	Embedded(32khz and 16mhz Crystal or System Clock)
Power Supply	1.8 V To 3.6 V (Corresponds to Ldo Mode, Dc/dc Converter Mode, Low Voltage Mode)

Power Consumption	Average		Units
	Chip	Module	
Bluetooth BLE function – Dormant Mode(Chip)	600	1000	nA
Bluetooth BLE function – Sleep Mode(Chip)	5	15	uA
Bluetooth BLE function – Peak (TX / RX)(Chip)	16	16	mA

Operating Temperature	-25 Deg.c To +75 Deg.c (No Condensation)
Dimensions	22mm X 15.25mm X 2.7mm (3.7 mm with Shieled)
Mounting Method	SMD
Certifications	EPL

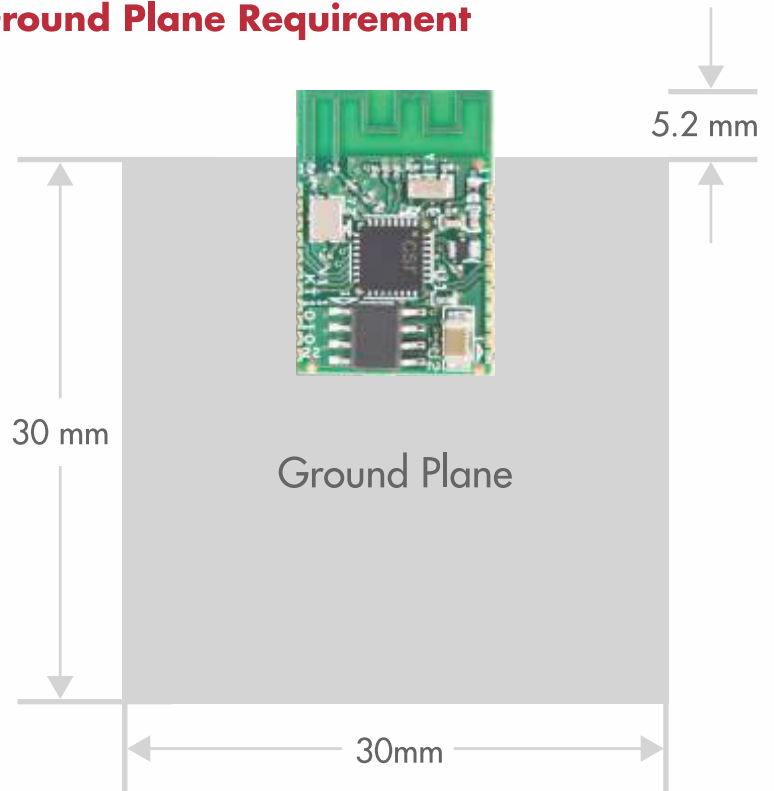
Recommended Layout Pattern:



Pin Configuration

Pin No.	Pin Name
1	VDD_PAD
2	GND
3	PIO_8 / DEBUG_MISO
4	PIO_9
5	PIO_10
6	PIO_11
7	SPI_PIO#
8	I2C_SCL / SF_CLK
9	I2C_SDA / SF_DOUT
10	VDD_BAT
11	GND
12	WAKE
13	AIO_2
14	AIO_1
15	AIO_0
16	PIO_0 / UART_TX
17	PIO_1 / UART_RX
18	PIO_3 / SF_DIN
19	PIO_4 / SF_CS#
20	PIO_5 / DEBUG_CLK
21	PIO_6 / DEBUG_CS
22	PIO_7 / DEBUG_MOSI

Ground Plane Requirement



Sl.No.	Part Number	Description
1	KT1010	Module in Tape and Reel
2	KT1010-S	Module with Shield in Tape and Reel
3	KT1010-EVK	Evaluation Kit