



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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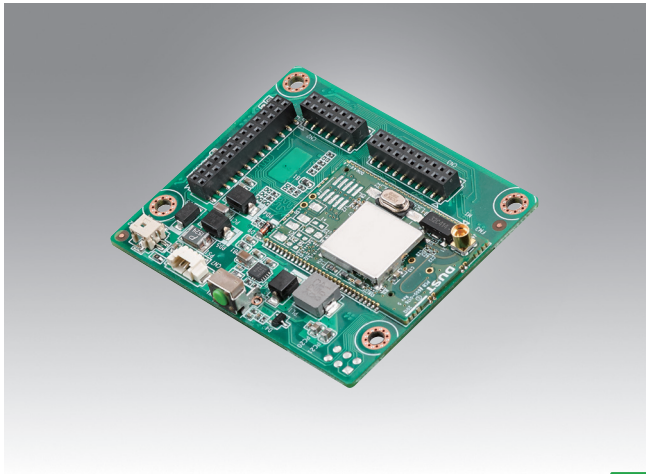
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WISE-1021

Wireless IoT Node



CE FCC 

Features

- Self-forming and self-healing mesh network
- Interference robust by time synchronization and transmission frequency hopping design
- Network-wide reliability and power optimization
- AES-128 bit encryption with NIST certified security
- Compliant to 6LoWPAN Internet Protocol (IP) and IEEE 802.15.4e
- Multiple interface for sensor Integration, include I2C, SPI, UART, GPIO, ADC
- Wide temperature: -40 ~ 85° C

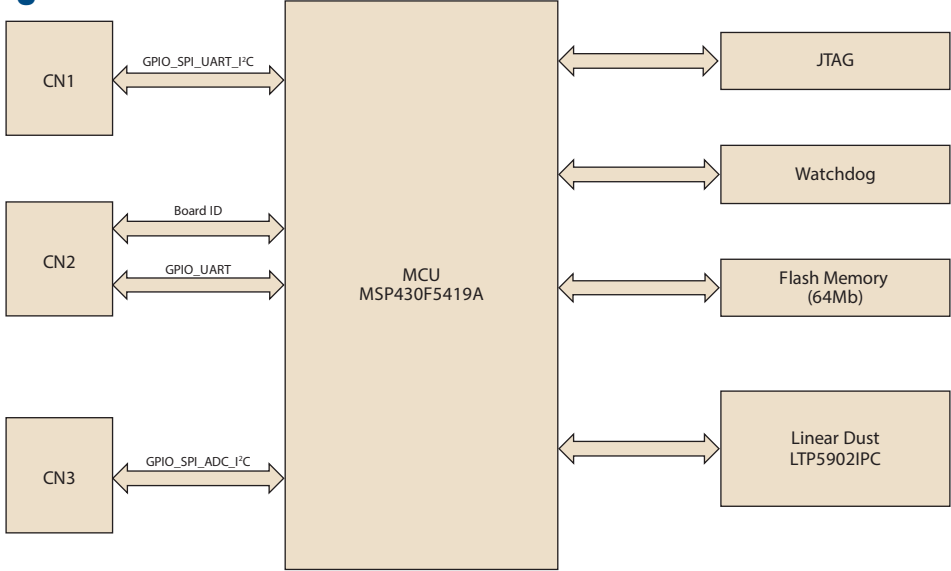
Introduction

Advantech Wireless IoT Node, WISE-1021, features a highly-integrated, low power radio with self management and IP network. With time synchronization, channel hopping and full mesh network, it offers wire-like reliability and the worlds lowest power WSN solution.

Specifications

Processor System	MCU	Linear/Dust Network Cortex-M3 and TI MSP430 MCU
	Flash	64Mb
Radio	Frequency Band	2.4000 ~ 2.4835 GHz
	Number of Channels	15
	Channel Separation	5 MHz
	Modulation	IEEE 802.15.4 Direct Sequence Spread Spectrum (DSSS)
	Raw Data Rate	250 kbps
	Antenna Pin ESD Protection	±6000 V
I/O Interface	GPIO	Up to 6
	UART	Up to 2
	UART	Up to 2
	SPI	Up to 3
	ADC	Up to 10
Power Source	DC-In	
Radio Power Consumption	Receive a Packet	4.5mA
	Transmit at 0dBm	5.4mA
	Transmit at 8dBm	9.7mA
Mechanical	Dimensions	65 x 55 mm
	Weight	35g
Environmental	Operating Temperature	-40 ~ 85° C
	Operating Humidity	5% ~ 95% Relative Humidity, non-condensing

Block Diagram



Ordering Information

Model Name	Description
WISE-1021WR-1100E	Wireless IoT Node, IEEE 802.15.4e Linear/Dust Mesh network with TI MSP430 MCU
WISE-DB1021-1W00E	Development board for WISE-1021