



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



WISE-1020

Wireless IoT Node



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 security
- Compliant to 6LoWPAN Internet Protocol (IP) and IEEE 802.15.4e
- Industry-leading low power radio technology with:
 - > 4.5mA to Receive a packet
 - > 5.4mA to Transmit at 0dBm
 - > 9.7mA to Transmit at 8dBm
- Supports various power sources: USB DC power, 3-pin DC input power

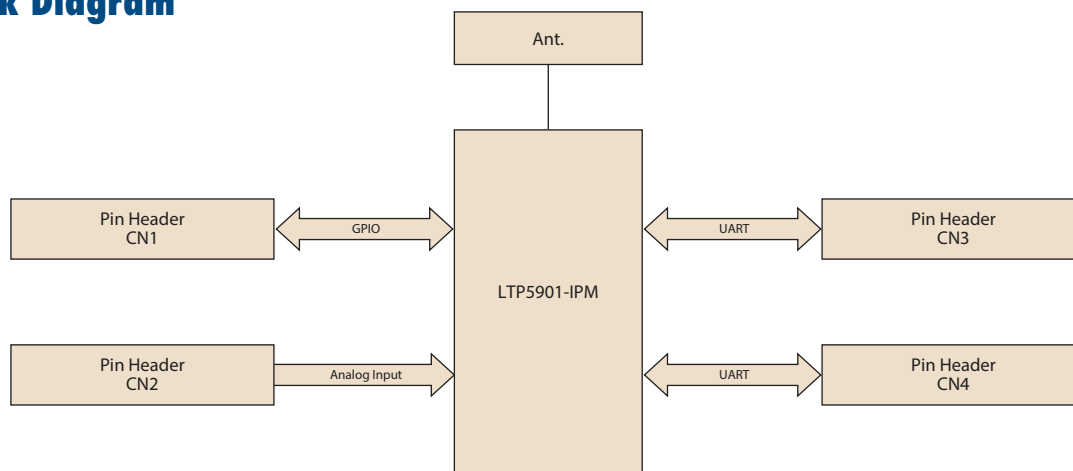
Introduction

WISE-1020 series is a wireless IoT node with Linear/Dust Network ARM Cortex-M3 Processor, which is a self-forming and self-healing mesh network complaint to 6LoWPAN Internet Protocol (IP) and IEEE802.15.4e standard. With time synchronization, channel hopping and full mesh network, it offers wire-like reliability and the world's lowest power WSN solution.

Specifications

Processor System	MCU	Linear/ Dust Network ARM Cortex-M3 Processor
	SRAM	72kB
	Flash	512kB
Wireless	Standard-based	Based on 6LoPAN and IEEE 802.15.4e standards
	Frequency Band	2.4000 ~ 2.4835 GHz
	Number of Channels	15
	Channel Separation	5 MHz
	Raw Data Rate	250 kbps
	Antenna Pin ESD Protection	±6000 V
I/O Interface	Analog (I)	3
	Digital (I/O)	DI 4/D0 3 (up to 16 DIO by OCSDK development request)
	UART	1
Power Source	Micro USB DC Power	DC 5V
	3-Pin DC Input Power	DC 5-12V
Radio Power Consumption	Receive a Packet	4.5mA
	Transmit at 0dBm	5.4mA
	Transmit at 8dBm	9.7mA
Mechanical	Dimensions (L x W)	75 x 60 mm
	Weight	35g
Environmental	Operating Temperature	-40 ~ 85° C
	Operating Humidity	5% ~ 95% Relative Humidity, non-condensing
Certification	EMC	CE, FCC Class B
	RF	R&TTE, FCC, TELEC
	Safety	CE LVD

Block Diagram



Ordering Information

Order Number	Description
WISE-1020-0S01E	Wireless IoT Node with SMA connector and antenna
WISE-1020-0C01E	Wireless IoT Node with chip antenna

Optional Accessories

Part Number	Description
1700023619-01	A cable USB-A 4P(M)/micro USB 5P(M) 1m
WISE-ED10-00A1E	WISE-1020 Expansion Debug Board

Packing List

Part Number	Description	Quantity
1750000318	2dBi 2.4GHz Antenna (WISE-1020-0S01E only)	1

Related Models

Model Name	Description
WISE-3310-D200L1E	WISE-3310 WPAN GW, 200-Node, Linux OS
WISE-3310-D100L1E	WISE-3310 WPAN GW, 100-Node, Linux OS