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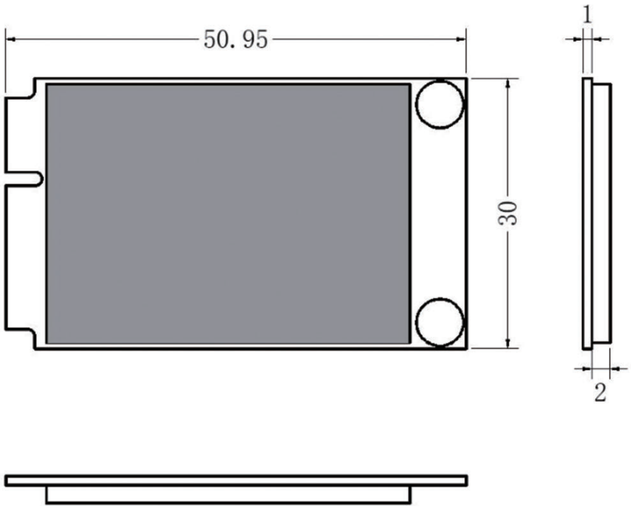
Heltec

Heltec Product Manual

LoRa Gateway

HT1303 LoRaWAN Concentrator Module



Product Info	
Name	HT1303 LoRaWAN Concentrator Module
Description	The HT1303 LoRaWAN concentrator is a mini-PCIe-based LPWAN concentrator module based on the Semtech SX1303, which enables easy integration into existing routers or other network equipment equipped with LPWAN Gateway capabilities.
LoRa Node Series	LoRaWAN Gateway
Baseband Chipset	SX1303 + SX1250
Operating Temperature	-40~85℃
Protocol	LongFi
Drive Bus	SPI USB
MCU	ESP32-S3FN8
LoRa Maximum Output	27 ± 2 dBm
Socket	Mini PCI-eIPEX (V1)

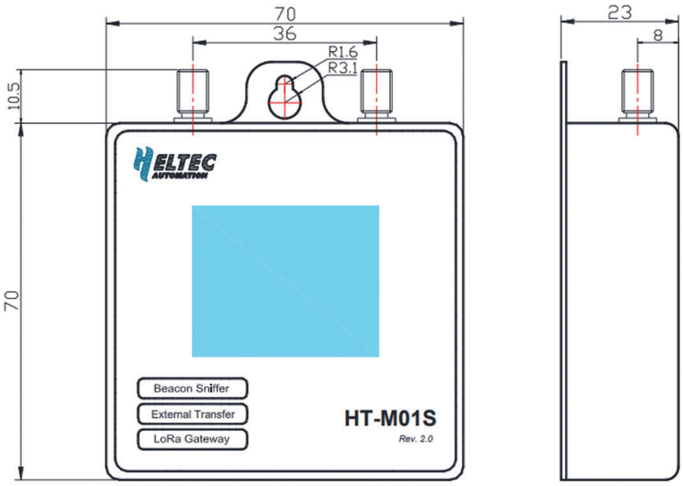
HT-M01S Indoor LoRa Gateway (Rev.2.0)

Product Info	
Name	HT-M00 Dual Channel LoRa Gateway
Description	HT-M00 is a low-cost dual channel gateway.It is located to smart family LoRa applications that work with less than 30PCS LoRa nodes.This gateway is based on two SX1276 chips driven by ESP32, .
LoRa Node Series	LoRaWAN Gateway
Operation System	Autonomous OS
Operating Temperature	-20 ~ 70 °C
Internet	Wi-Fi
MCU	ESP32-D0WDQ6
Protocol	LoRaWAN
LoRa Maximum Output	20 ± 2 dBm
Display Size	0.96"
Socket	Type-C
Socket	Type-C SMA RJ45
Wi-Fi	IEEE 802.11 b/g/n

HT-M01 Mini LoRa Gateway

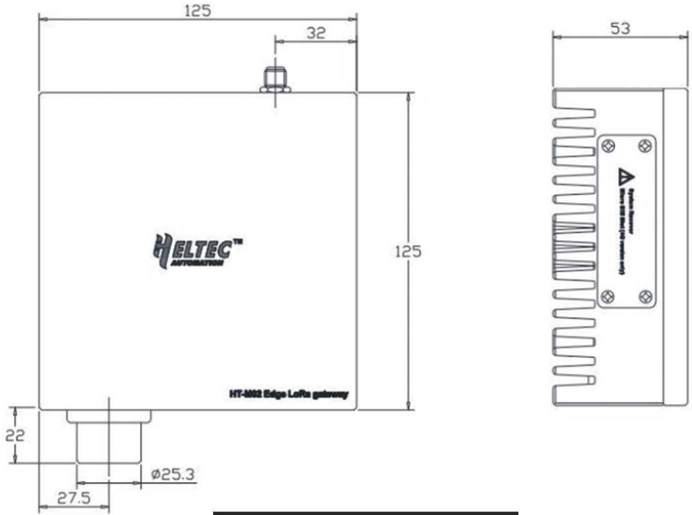
Product Info	
Name	HT-M01 Mini LoRa Gateway
Description	HT-M01 only include LoRa function, it can't work independentlyWork independently, must work with other OS, support both SPI and USB interface can work with Windows® (7, 8, 10 or higher) or Linux (Raspberry Pi®). The SMT32 MCU inside work as a USB-SPI converter.
Gateway Type	LoRaWAN Gateway
Baseband Chipset	SX1308 + SX125/7
Operating Temperature	-20 ~ 70 °C
Protocol	LoRaWAN
MCU	STM32F401CDU6
Drive Bus	SPI
LoRa Maximum Output	20 ± 2 dBm
Display Size	N/A
Socket	2.54 HeaderSMAMicro USB

HT-M01S Indoor LoRa Gateway (Rev.2.0)



Product Info	
Name	HT-M01S Indoor LoRa Gateway (Rev.2.0)
Description	The most significant feature of HT-M01S (Rev. 2.0) is that it is a standard LoRaWAN gateway based on ESP32 MCU, without running Linux operating system on a high-performance CPU, which can greatly reduce the cost of a common LoRaWAN gateway.
LoRa Node Series	LoRaWAN Gateway
Operation System	Autonomous OS
Baseband Chipset	SX1303 + SX1250
Operating Temperature	-40~85℃
Internet	Wi-Fi Ethernet
Protocol	LoRaWAN
MCU	ESP32-D0WDQ6
LoRa Maximum Output	27 ± 2 dBm
Display Size	1.8"
Socket	Type-C SMA RJ45
Wi-Fi	IEEE 802.11 b/g/n

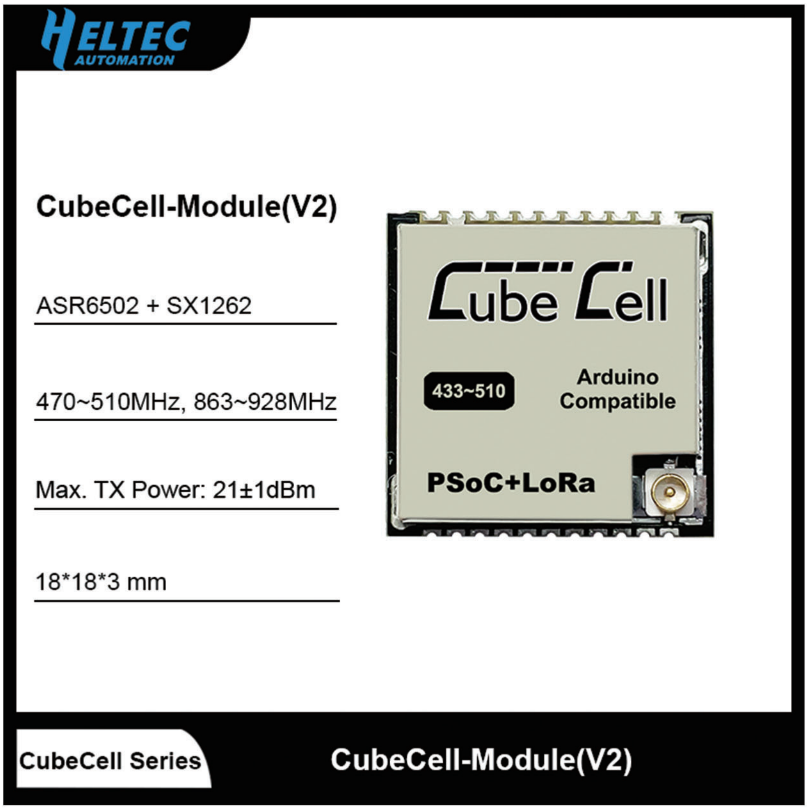
HT-M02 Edge LoRa Gateway

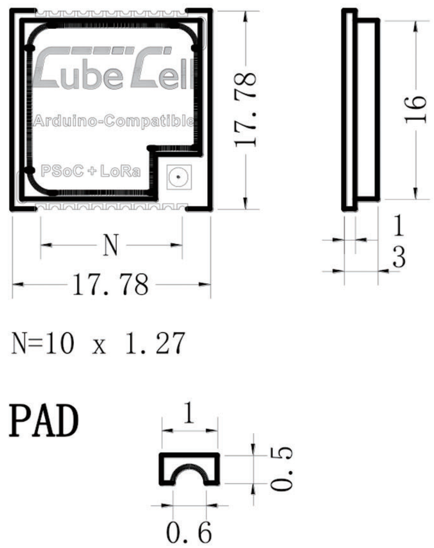


Product Info	
Name	HT-M02 Edge LoRa Gateway
Description	This is an application-oriented, professional-grade gateway with a good mechanical structure to help dissipate heat and facilitate placement. The Linux operating system has integrated common environments such as LoRaWAN server and Docker, and can be used in scenarios such as edge computing.
Gateway Type	LoRaWAN Gateway
Operation System	Debian
Baseband Chipset	SX1303 + SX1250
Operating Temperature	-20 ~ 70 °C
Internet	Wi-FiEthernet4G/LTEPoE
Protocol	LoRaWAN
MCU	RK3566
Drive Bus	UART
LoRa Maximum Output	27 ± 2 dBm
Socket	SMARJ45

CubeCell Series

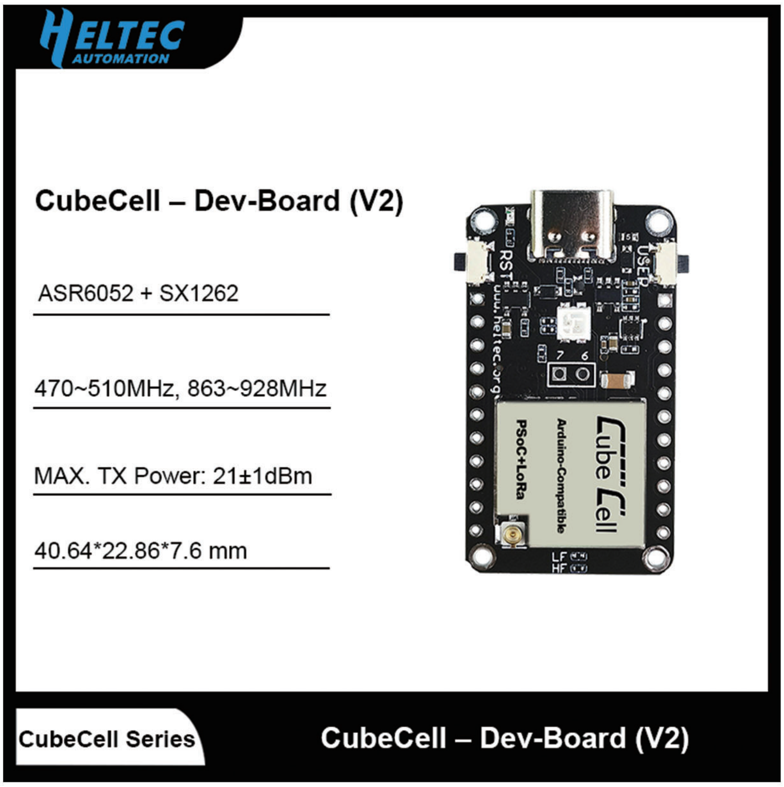
CubeCell – Module (V2)

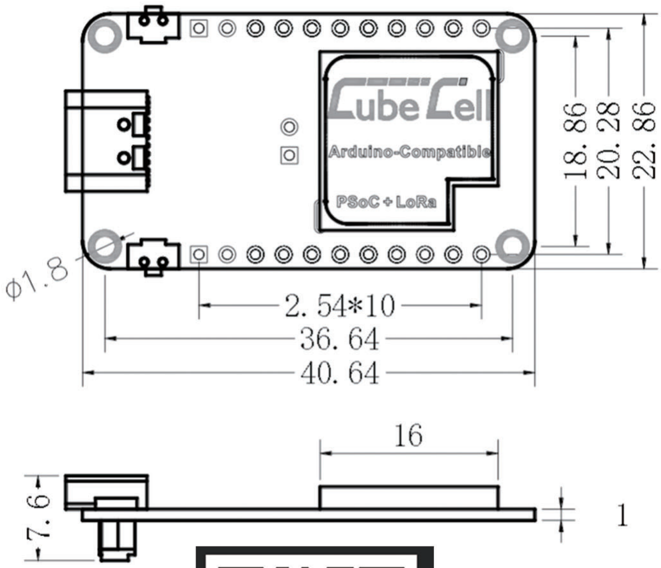




Product Info	
Name	CubeCell – Module (V2)
Description	HTCC-AM01 is Cubecell(TM) Series made by Heltect team, mainly for LoRa/LoRaWAN node applications.
LoRa Node Series	CubeCell
Operating Temperature	-40 ~ 85 °C
Low Power Features	<5uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
Product Status	Presale
MCU	ASR6502
Drive Bus	UART
LoRa Maximum Output	20 ± 2 dBm
Socket	LGAIPEX (V1)

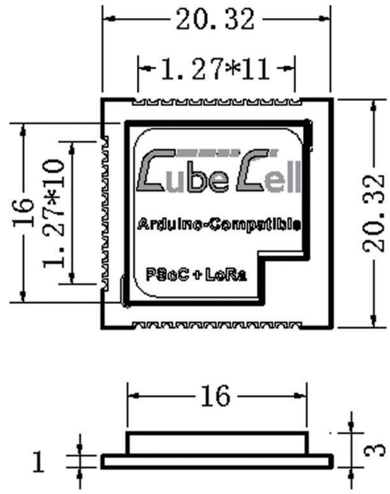
CubeCell – Dev-Board (V2)





Product Info	
Name	CubeCell – Dev-Board (V2)
Description	HTCC-AB01 is Cubecell(TM) Series made by Heltect team, mainly for LoRa/LoRaWAN node applications.
LoRa Node Series	CubeCell
Operating Temperature	-40 ~ 85 °C
Low Power Features	<5uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
Product Status	Presale
MCU	ASR6502
Drive Bus	SPI IIC
Supported Battery Type	Lithium (SH1.25-2 Socket)
LoRa Maximum Output	27 ± 2 dBm
Display Size	N/A
Socket	2.54 HeaderType-CIPEX (V1)
Special Properties	Solar Panel portAT Command control

CubeCell Module Plus



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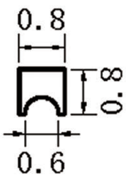
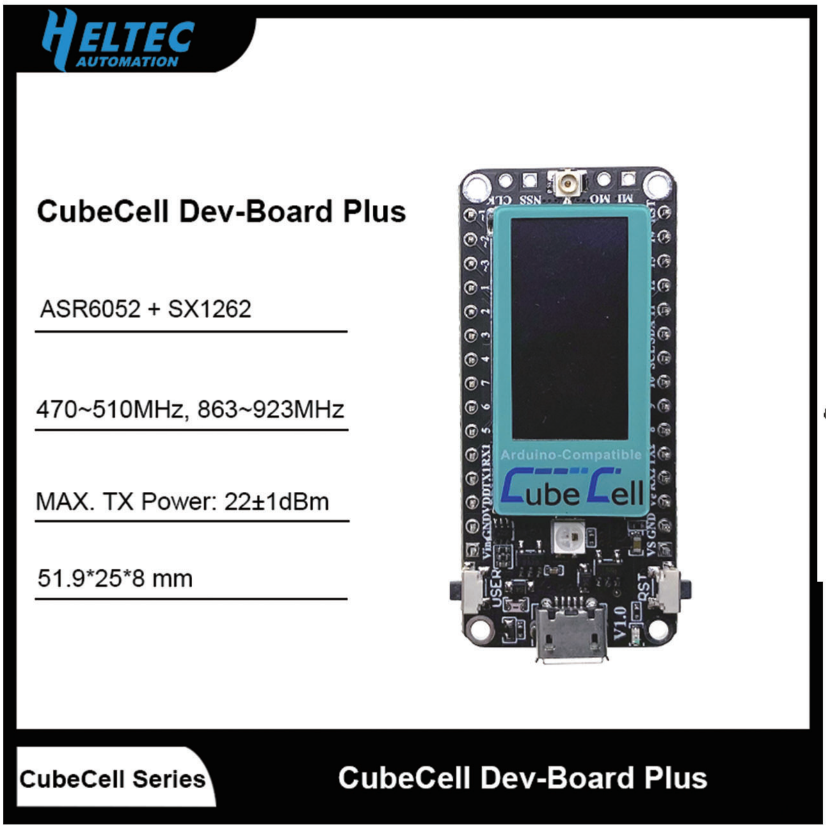
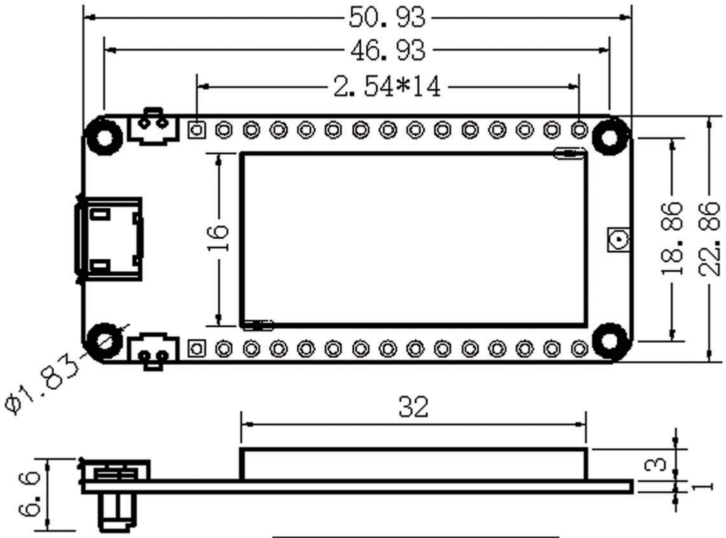


Product Info	
Name	CubeCell Module Plus
Description	This is a module, must work with other PCB board.
LoRa Node Series	CubeCell
Operating Temperature	-20 ~ 70 °C
Low Power Features	<5uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
MCU	ASR6502
Drive Bus	UART
LoRa Maximum Output	20 ± 2 dBm
Socket	LGA
Special Properties	AT Command control

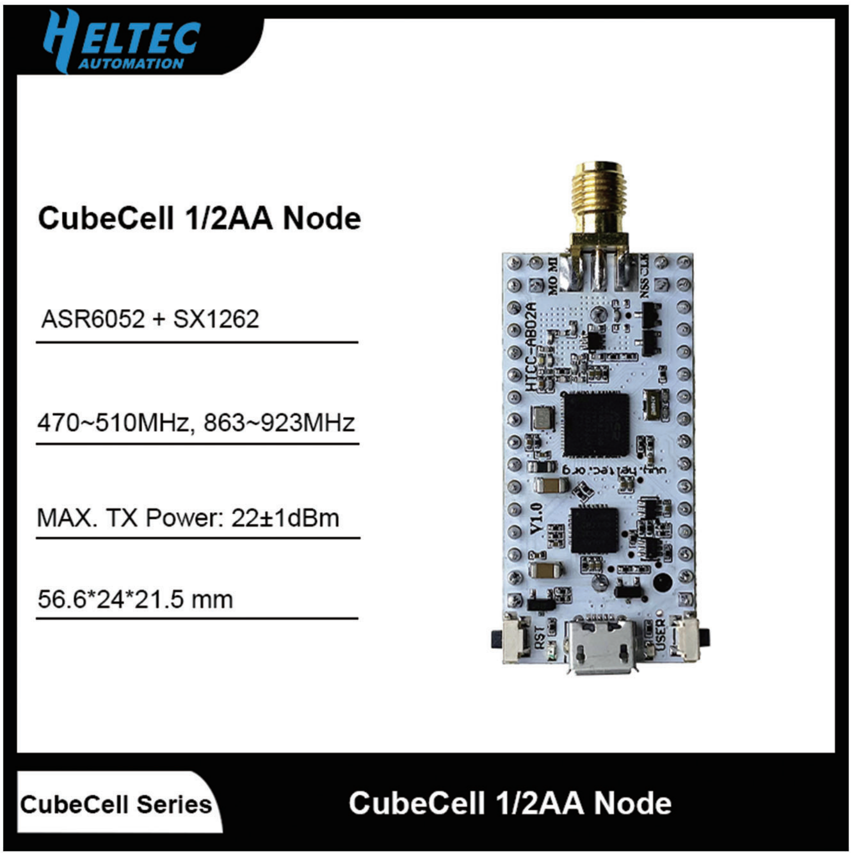
CubeCell Dev-Board Plus

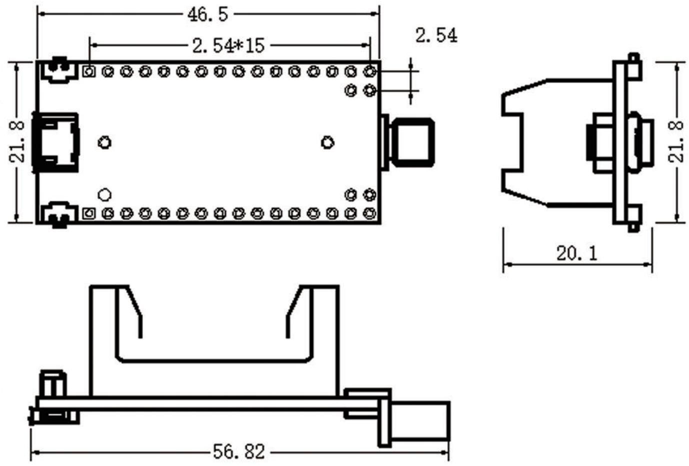




Product Info	
name	CubeCell Dev-Board Plus
description	HTCC-AB02 is a Dev-Board. Friendly designed for developers, easy to verify communication solutions.
LoRa Node Series	CubeCell
Operation System	N/A
Operating Temperature	-20 ~ 70 °C
Low Power Features	<5uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
Product Status	In Stock
MCU	ASR6502
Drive Bus	N/A
Supported Battery Type	Lithium (SH1.25-2 Socket)
LoRa Maximum Output	20 ± 2 dBm

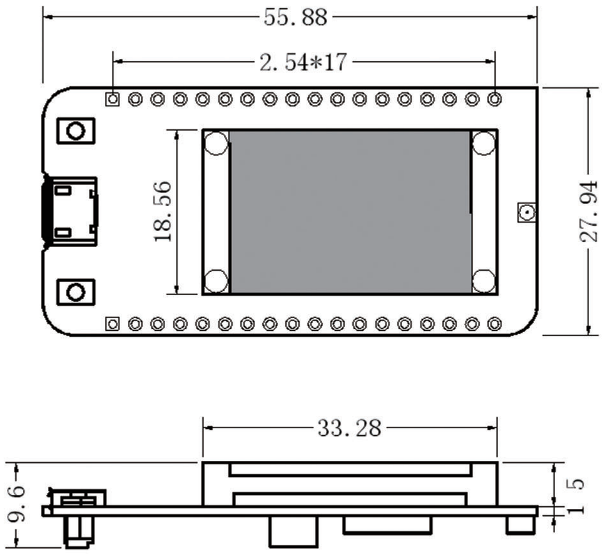
CubeCell 1/2AA Node





Product Info	
Name	CubeCell 1/2AA Node
Description	HTCC-AB02A is a Dev-Board. Friendly designed for developers, easy to verify communication solutions.
LoRa Node Series	CubeCell
Operating Temperature	-20 ~ 70 °C
Low Power Features	<5uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
MCU	ASR6502
Supported Battery Type	1/2AA (Not rechargeable)
LoRa Maximum Output	20 ± 2 dBm
Socket	2.54 Header SMA Micro USB

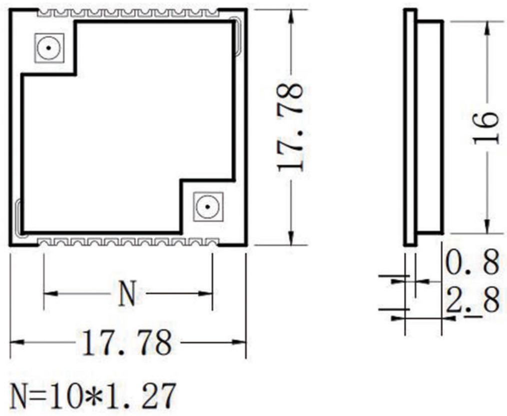
CubeCell GPS-6502

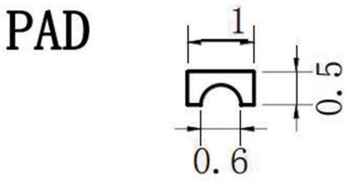


Product Info	
Name	CubeCell GPS-6502
Description	HTCC-AB02S is a Dev-Board. Already integrated AIR530Z GPS module, friendly designed for developers, easy to verify communication solutions.
LoRa Node Series	CubeCell
Operating Temperature	-20 ~ 70 °C
Low Power Features	<20uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
MCU	ASR6502
Supported Battery Type	Lithium (SH1.25-2 Socket)
LoRa Maximum Output	20 ± 2 dBm
Socket	2.54 Header IPEX (V1) Micro USB SH1.25 battery port
Special Properties	GPS Solar Panel port AT Command control

ESP32 Series

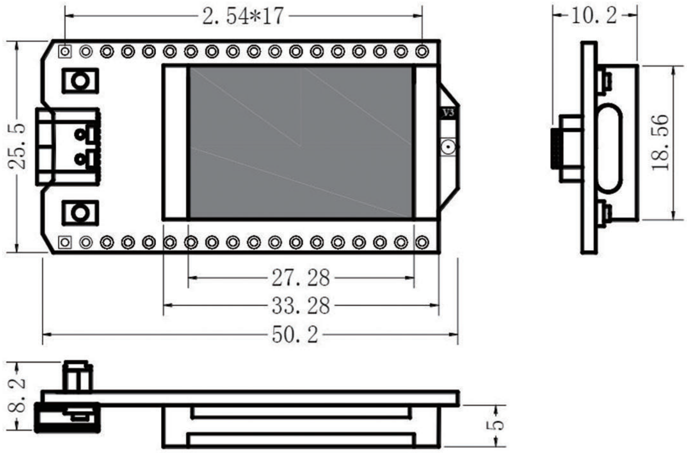
HT-CT62





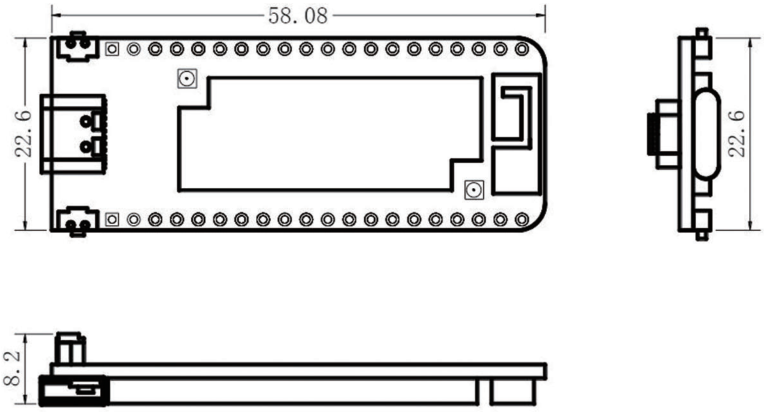
Product Info	
Name	HT-CT62
Description	HT-CT62 is a LoRa/LoRaWAN node module based on ESP32C3 + SX1262
LoRa Node Series	ESP32 + LoRa
Operating Temperature	-40 ~ 85 °C
Low Power Features	<10uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
MCU	ESP32-C3FN4
LoRa Maximum Output	20 ± 2 dBm
Wi-Fi	IEEE 802.11 b/g/n
Socket	LGA; IPEX (V1)
Special Properties	AT Command control

WiFi LoRa 32 (V3)



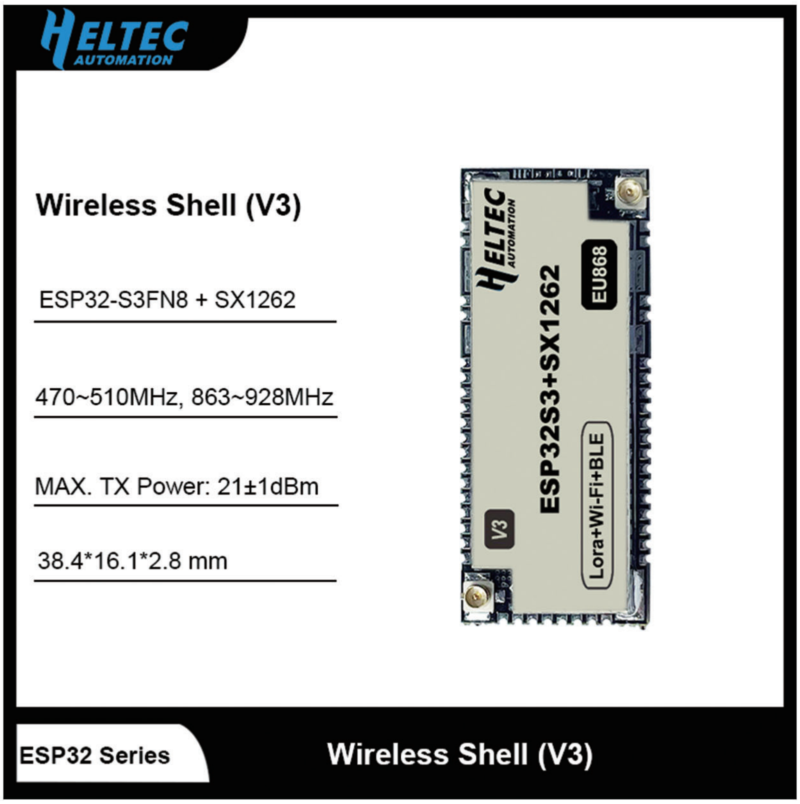
Product Info	
Name	WiFi LoRa 32 (V3)
Description	WiFi LoRa 32 is a classic IoT dev-board designed & produced by Heltec Automation.
LoRa Node Series	ESP32 + LoRa
Operating Temperature	-20 ~ 70 °C
Low Power Features	<10uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
MCU	ESP32-S3FN8
Supported Battery Type	Lithium (SH1.25-2 Socket)
LoRa Maximum Output	20 ± 2 dBm
Display Size	0.96"
Socket	2.54 Header; Type-C; IPEX (V1); SH1.25 battery port
Special Properties	OLED Display
Wi-Fi	IEEE 802.11 b/g/n
Bluetooth	BLE v5.0

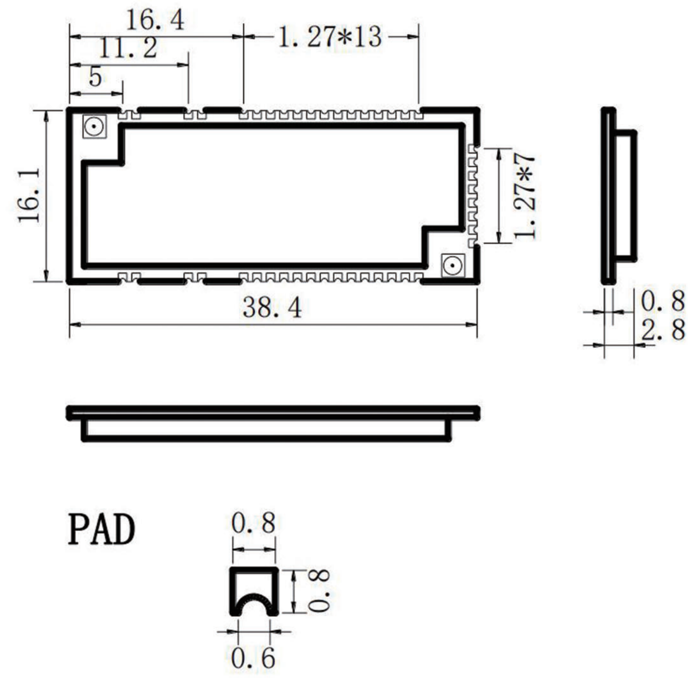
Wireless Stick Lite (V3)



Product Info	
Name	Wireless Stick Lite (V3)
Description	HTIT-WSL is a development board for Wi-Fi, Bluetooth and LoRa.
LoRa Node Series	ESP32 + LoRa
Operating Temperature	-20 ~ 70 °C
Low Power Features	<10uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
MCU	ESP32-S3FN8
Drive Bus	UART
Supported Battery Type	Lithium (SH1.25-2 Socket)
LoRa Maximum Output	20 ± 2 dBm
Socket	2.54 Header; Type-C; IPEX (V1); SH1.25 battery port
Wi-Fi	IEEE 802.11 b/g/n
Bluetooth	BLE v5.0

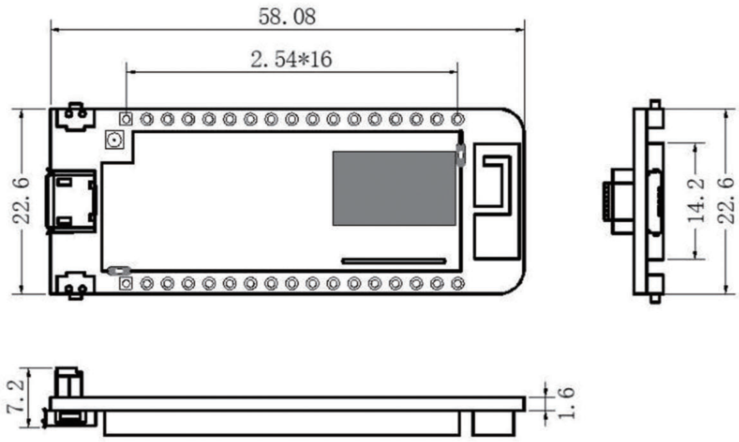
Wireless Shell (V3)





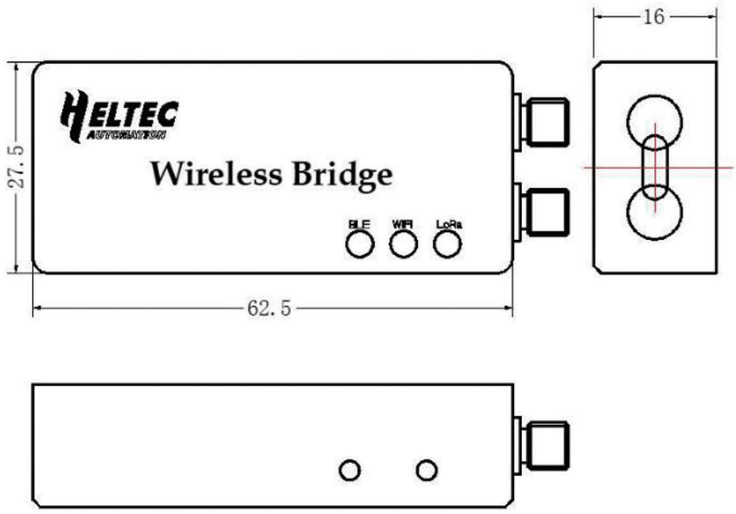
Product Info	
Name	Wireless Shell (V3)
Description	HTIT-Wsh(Wireless shell) is a long communication range, high receive sensitivity, low power consumption(9uA) and low cost LoRa node module.
LoRa Node Series	ESP32 + LoRa
Operating Temperature	-40 ~ 85 °C
Low Power Features	<10uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
MCU	ESP32-S3FN8
LoRa Maximum Output	20 ± 2 dBm
Socket	IPEX (V1)
Wi-Fi	IEEE 802.11 b/g/n
Bluetooth	BLE v5.0

Wireless Stick (Gecko Board)



Product Info	
Name	Wireless Stick
Description	In order to meet the user' s requirements for high performance and small size, we designed this product. On the basis of WiFi LoRa 32, it' s has a smaller size, 0.49" OLED display, and better RF characteristics.
LoRa Node Series	ESP32 + LoRa
Operating Temperature	-20 ~ 70 °C
Low Power Features	<100uA
Protocol	LoRaWAN
LoRa Node Chip	SX1276
MCU	ESP32-D0WDQ6
Supported Battery Type	Lithium (SH1.25-2 Socket)
LoRa Maximum Output	20 ± 2 dBm
Display Size	0.49"
Socket	2.54 Header; Micro USB; IPEX (V1); SH1.25 battery port
Special Properties	OLED Display; Solar Panel port
Wi-Fi	IEEE 802.11 b/g/n
Bluetooth	BLE v4.2

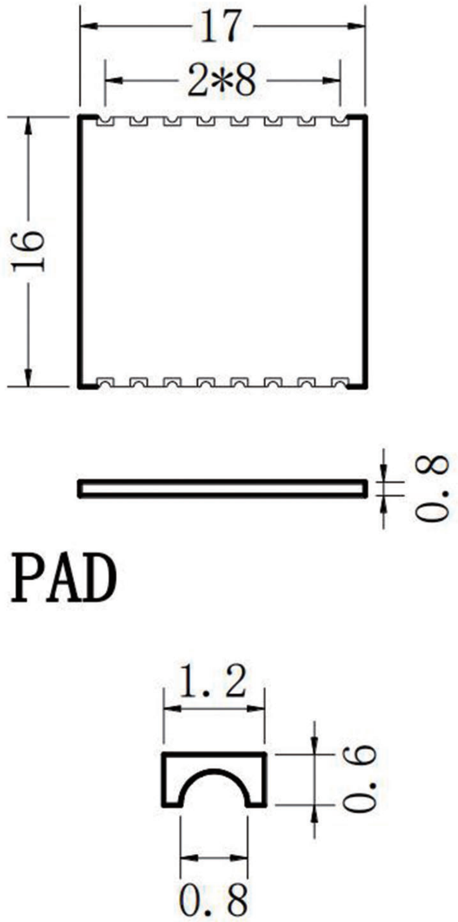
Wireless Bridge



Product Info	
Name	Wireless Bridge
Description	Based on ESP32 and SX1276 chips, onboard 8M Byte SDRAM and 8M Byte FLASH, WiFi and Bluetooth can work at the same time. It is a bridge that converts "WiFi/Bluetooth – LoRa" signals to each other.
LoRa Node Series	ESP32 + LoRa
Operation System	Autonomous OS
Operating Temperature	-20 ~ 70 °C
Low Power Features	<100uA
Protocol	LoRaWAN
LoRa Node Chip	SX1276
MCU	ESP32-D0WDQ6
LoRa Maximum Output	20 ± 2 dBm
Socket	Type-C; SMA
Wi-Fi	IEEE 802.11 b/g/n
Bluetooth	BLE v4.2

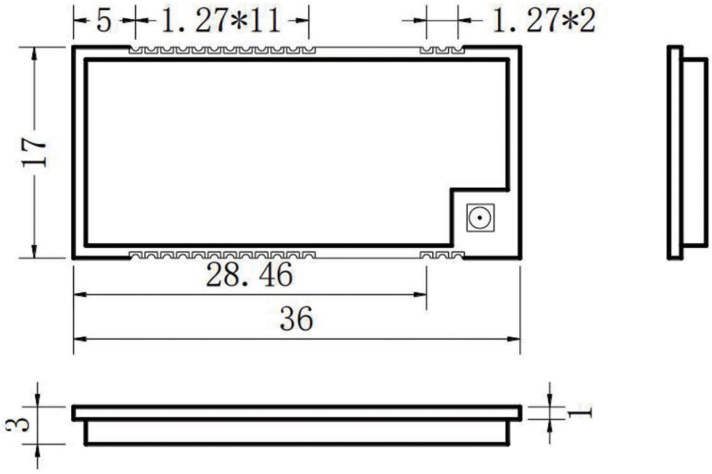
STM32 Series

HT-RA62



Product Info	
Name	HT-RA62
Description	HTIT-RA62 is a LoRa node module based on SX1262. SX1262 sub-GHz radio transceivers are ideal for long-range wireless applications.
LoRa Node Series	CubeCell
Operating Temperature	-40 ~ 85 °C
LoRa Node Chip	SX1262
LoRa Maximum Output	20 ± 2 dBm
Socket	IPEX (V1)

HT-AT62



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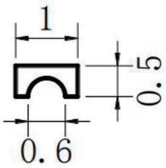
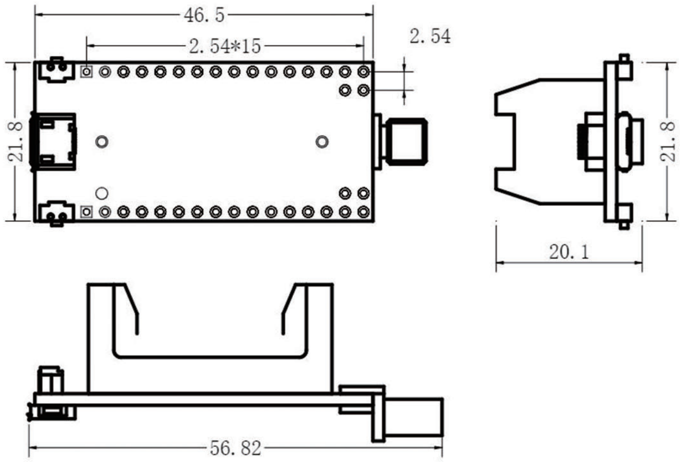


Product Info	
Name	HT-AT62
Description	HT-AT62 is a cost-effective LoRa node module.
LoRa Node Series	APT32 + LoRa
Operating Temperature	-40 ~ 85 °C
Low Power Features	<20uA
Protocol	LoRaWAN
LoRa Node Chip	SX1262
Drive Bus	UART
LoRa Maximum Output	20 ± 2 dBm
Socket	IPEX (V1)
Special Properties	AT Command control

LoRa Node 151



Product Info	
Name	LoRa Node 151
Description	Based on ultra-low power design, we launched LoRa Node 151, adopting the STM32L151CCU6 MCU (support DFU mode) and SX127x LoRa chip, use 1/2 AA Lithium chlorine sulfite battery. Enter low power mode under the standard LoRaWAN protocol, the Deep Sleep Current ≤ 1.8uA.
LoRa Node Series	STM32 + LoRa
Operating Temperature	-20 ~ 70 °C
Low Power Features	<5uA
Protocol	LoRaWAN
LoRa Node Chip	SX1276
MCU	STM32L151CCU6
Supported Battery Type	1/2AA (Not rechargeable)
LoRa Maximum Output	20 ± 2 dBm
Socket	2.54 Header; SMA; Micro USB

Turtle Board

HELTEC AUTOMATION

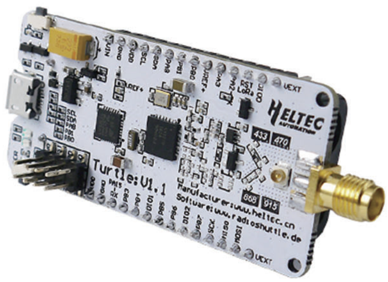
Turtle Board

STM32L432KC+SX1276

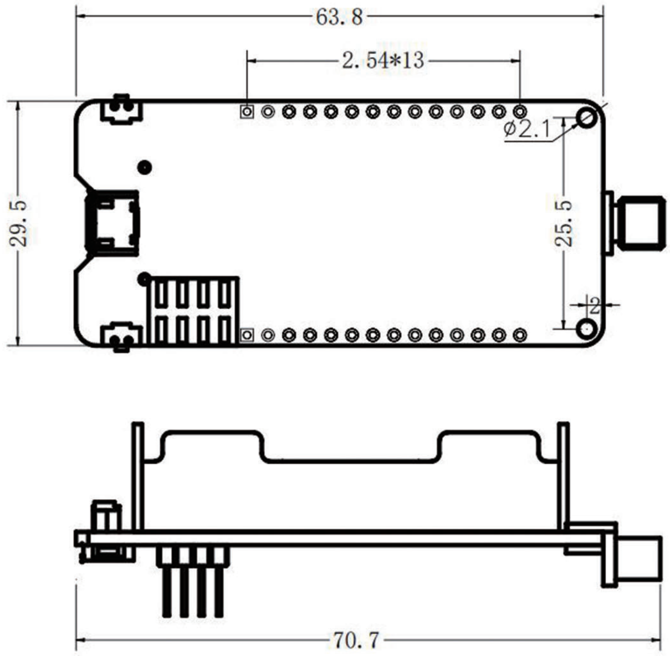
470~510MHz, 863~923MHz

MAX. TX Power: 19±1dBm

73.5*31.5*24 mm



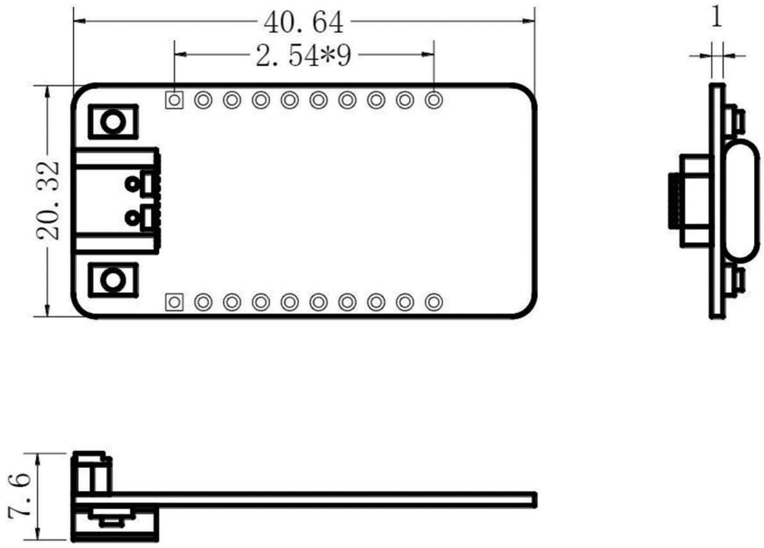
STM32 Series **Turtle Board**



Product Info	
Name	Turtle Board
Description	Support standard LoRaWAN protocol and RadioShuttle protocol. The included RadioShuttle radio protocol software enables node-to-node communication without additional routers and servers. The Turtle LoRa board by HelTec Automation can run 10 years on AAA batteries (standard or rechargeable NiMH) using the "RadioShuttle" LoRa wireless low-energy protocol software.
LoRa Node Series	STM32 + LoRa
Operating Temperature	-20 ~ 70 °C
Low Power Features	<5uA
Protocol	LoRaWAN; RadioShuttle
LoRa Node Chip	SX1276
MCU	STM32L432KC
Supported Battery Type	AAA (Not rechargeable)
LoRa Maximum Output	20 ± 2 dBm
Socket	2.54 Header; SMA; IPEX (V1); Micro USB

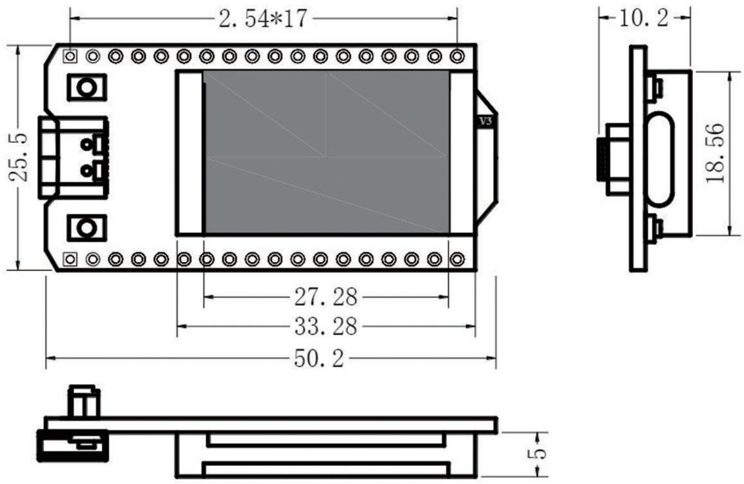
ESP Arduino

ESP32-C3



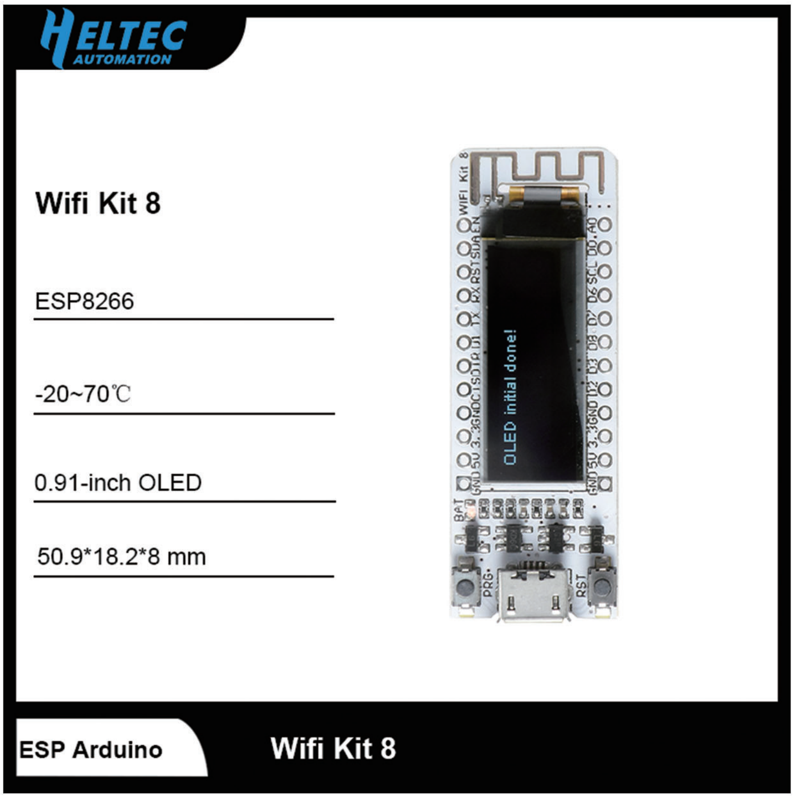
Product Info	
Name	ESP32-C3
Description	ESP32-C3 is a development board based on ESP32-C3FN4 chip.
Operating Temperature	-40 ~ 85 °C
Internet	Wi-Fi
Development Method	Arduino; PlatformIO
MCU	ESP32-C3FN4
Socket	2.54 Header; Type-C; SH1.25 battery port
Wi-Fi	IEEE 802.11 b/g/n
Bluetooth	BLE v5.0

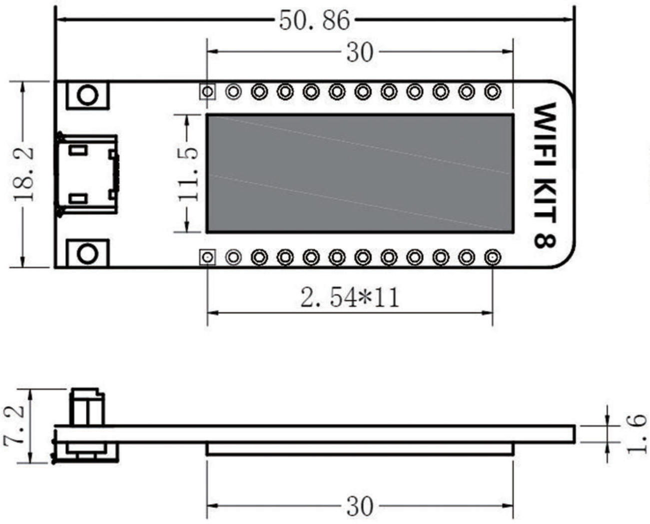
WiFi Kit 32 (V3)



Product Info	
Name	WiFi Kit 32 (V3)
Description	It's a highly integrated product based on ESP32 (include Wi-Fi and BLE), Li-Po battery management system, 0.96" OLED are also included.
Operating Temperature	-20 ~ 70 °C
Internet	Wi-Fi
Development Method	Arduino; PlatformIO
MCU	ESP32-S3FN8
Display Size	0.96"
Socket	2.54 Header; Type-C; SH1.25 battery port; IPEX (V1)
Special Properties	OLED Display
Wi-Fi	IEEE 802.11 b/g/n
Bluetooth	BLE v5.0

Wifi Kit 8





Product Info	
Name	Wifi Kit 8
Description	WiFi Kit 8 is a classic IoT dev-board designed & produced by Heltec Automation(TM), it' s a highly integrated product based on ESP8266 (Wi-Fi), Li-Po battery management system, 0.91" OLED is also included. It' s the best choice for smart cities, smart farms, smart homes, and IoT makers.
Operating Temperature	-20 ~ 70 °C
Internet	Wi-Fi
Development Method	Arduino; PlatformIO
MCU	ESP8266EX
Display Size	0.91"
Socket	2.54 Header; Micro USB; SH1.25 battery port
Special Properties	OLED Display
Wi-Fi	IEEE 802.11 b/g/n

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HELTEC AUTOMATION

最接近应用的**LORA/LoRa WAN**整体方案