

CUBECCELL-DEV-BOARDPLUS

TARJETA DE DESARROLLO CUBECCELL



Description

CubeCell (TM) is a new product series made by Heltec team, mainly for LoRa/LoRaWAN node applications. CubeCell (TM) series is based on ASR605x (ASR6501, ASR6502), those chips are already integrated with the PSoC® 4000 series MCU (ARM® Cortex® M0+ Core) and SX1262. We have done a lot of migration and development, made it perfectly support Arduino®, can run the LoRaWAN protocol stably, can easily connect lithium batteries and solar panels. HTCC-AB02 is a Dev-Board. Friendly designed for developers, easy to verify communication solutions.

Overview

CubeCell (TM) is a new product series made by the Heltec team, mainly for LoRa/LoRaWAN node applications. CubeCell (TM) series is based on ASR605x (ASR6501, ASR6502), those chips are already integrated with the PSoC® 4000 series MCU (ARM® Cortex® M0+ Core) and SX1262. We have done a lot of migration and development, made it perfectly support Arduino®, can run the LoRaWAN protocol stably, can easily connect lithium batteries and solar panels. HTCC-AB02 is a Dev-Board. Friendly designed for developers, easy to verify communication solutions.

Resource	Parameter	
Master Chip	ASR6502 (48 MHz ARM® Cortex® M0+ MCU)	
Wireless Communication	LoRa	
	Node-to-node communication or LoRaWAN	
LoRa Chip	SX1262	
LoRaWAN Area	hardware version	Support frequency
		EU433
	LF	CN470
		IN865
		EU868
	HF	US915
		AU915
		KR920
		AS923

LoRa Maximum Output Power	22dB ± 1dB
Hardware Resource	UART x 2; SPI x 2; I2C x 2; SWD x 1; 12-bits ADC input x 3; 8-channel DMA engine; GPIO x 16
FLASH	128KB internal FLASH
RAM	16KB internal SRAM
Interface	Micro USB x 1; LoRa Antenna interface(IPEX) x 1; 15 x 2.54 pin x 2+2 x 2.54 pin x 3
Maximum Size (Including protruding parts such as switch and battery compartment)	51.9 x 25 x 8 mm
USB to Serial Chip	CP2102
Battery	3.7V Lithium (SH1.25 x 2 socket)
Solar Energy	5.5~7V solar panel
Battery Detection Circuit	√
External Device Power Control (Vext)	√
Low Power	Deep Sleep 3.5μA
Display Size	0.96-inch OLED
Working Temperature	-40~80°C

Electrical Features	Condition	Minimum	Typical	Maximum	
Power Supply	USB powered ($\geq 500\text{mA}$)	4.7V	5V	6V	
	Lithium powered ($\geq 250\text{mA}$)	3.3V	3.7V	4.2V	
	3.3V (pin) powered ($\geq 150\text{mA}$)	2.7V	3.3V	3.5V	
	5V (pin) powered ($\geq 500\text{mA}$)	4.7V	5V	6V	
Power Consumption(mA)	LoRa Rx Mode		10mA		
	LoRa 10dB output		70mA		
	LoRa 14dB output		90mA		
	LoRa 17dB output		100mA		
	LoRa 20dB output		105mA		
	Sleep Mode (USB powered)			9.6mA	

	Sleep Mode (VBAT/battery powered)		11 μ A	
	Sleep Mode (3.3V header powered)		3.5 μ A	
Output	3.3V pin output			500mA



	AG Electrónica S.A.P.I. de C.V. República del Salvador N° 20 Segundo Piso Teléfono: 55 5130 - 7210		
ACOTACIÓN: N/A	http://www.agelectronica.com	ESCALA: N/A	REALIZO: JFRR
			REV: JFRR
TOLERANCIA: N/A	TARJETA DE DESARROLLO CUBECCELL		
TOLERANCIA: N/A	Fecha: 10/01/2022	No. Parte: CUBECCELL-DEV-BOARDPLUS	