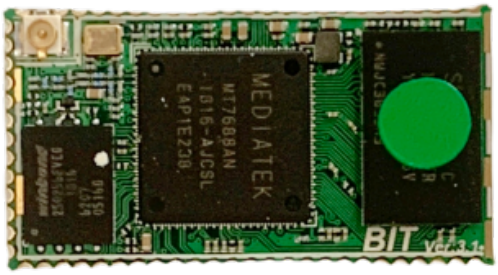
IoT WiFi Linux Computer Module

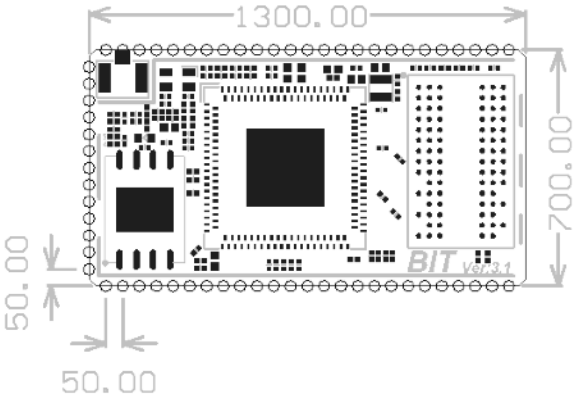
What the heck is an IoT computer? It is a Linux computer designed specifically for building connected hardware applications. It combines the tiny form factor and power-efficiency of the Arduino, with the power and flexibilities of the Raspberry Pi.

- Easy to use, even for people who are just getting started with building hardware and software.
- Expandable, and plugs into a variety of “dock” boards which support a family expansion to allow you to make cool projects.
- Affordable, allowing everyone to own one.



With it, we want to lower the barrier of entry, and allow everyone to take the leap into hardware development.

Size



1.3 inches * 0.7 inches, It is really very small.so that it can easily fit into your class project or company’s product.

Specifications

MODEL: BIT32CYI1,BIT16CYI1

Field：

[1-3]: Series。BIT： MT7688AN core module

[4-5]: FLASH size, 16:16MB, 32:32MB, 08:8MB

[6]: RAM size, A: 32MB, B: 64MB, C: 128MB, D: 256MB

[7]: connect type, Y: Stamps half hole, H: Pin

[8]: I: Wide temperature

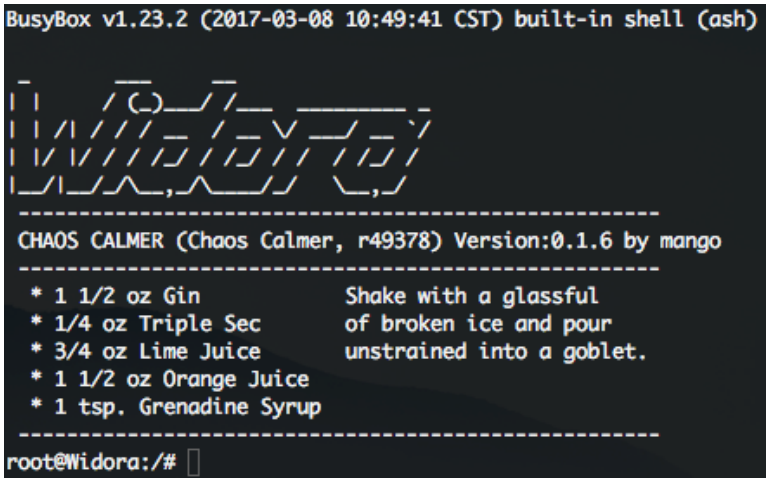
[9]: 1: V3.1

Interfaces

There is a wide range of digital inputs and output available on the BIT which will allow you to interface to the external world. USB provides you with a wired connection to your computer, power and peripheral devices like Webcams. I2C and SPI allow you to connect to industry standard devices like sensors and actuators. I2S connects to audio devices, Ethernet to wired legacy networks, and General Purpose (GPIO) pins are available for simple or custom designed interfaces.

interfaces	
WiFi	IEEE 802.11b/g/n
Ethernet	5 port 10M/100Mbps Adaptive
USB2.0	1
SDIO	1
SPI	1
I2C	1
I2S	1
UART	3
PWM	4
GPIO	8+

Full OpenWrt/Linux Support



Support many languages

An important benefit of running Linux is that the module can be programmed with whatever language you want. Save time by using languages and libraries you are already familiar with. such as:

- Shell
- C or C++
- JavaScript(node.js)
- Python
- golang

Other Features

Wi-Fi features	
Frequency	2.4GHz ISM Band, 802.11b/g/n, 1T1R, 150Mbps
RF power (11b)	17db ± 1db
RF power (11g)	15db ± 1db
RF power (11n n20)	15db ± 1db
RF power (11n n40)	14db ± 1db
Channel	1-13
Supported antenna models	
Model	HLK-TX-PCB-G
Name	2.4GHz PCB Antenna
Peak gain	4dBi
Admitted power	2W
Connector	IPEX
Power	
Voltage	3.3V±0.2V
Average current	170±50mA
Peak current	800mA
Conditions	
Operating temperature	-20°C to +55°C
Storage temperature	-20°C to +80°C

Pins

PIN	Function	Feature	Description
A1	I2S_SDI	I	I2S data in
A2	I2S_SDO	O	I2S data out
A3	I2S_WS	O	I2S channel, 0: left, 1: right
A4	I2S_CLK	O	I2S bit clock
A5	I2C_SCLK	O	I2C clock
A6	I2C_SD	I/O	I2C data
A7	VDD_FLASH	I	Independent power supply of FLASH
A8	SPI_CS1	O	SPI chip select 1
A9	SPI_CLK	O	SPI clock
A10	SPI_MISO	I	SPI data master in slave out
A11	SPI_MOSI	O	SPI data master out slave in
A12	SPI_CS0	O	SPI chip select 0
A13	GPIO_O	I/O	GPIO11
B1	UART_TXD0	O	Serial port0 data out
B2	UART_RXD0	I	Serial port0 data in
B3	RXI_P	A	network port0 receive positive
B4	RXI_N	A	network port0 receive negative
B5	TXO_P	A	network port0 send positive
B6	TXO_N	A	network port0 send negative
B7	GPIO14/TXO_P	I/O	GPIO14/network port1 send positive
B8	GPIO15/TXO_N	I/O	GPIO15/network port1 send negative
B9	GPIO16/RXI_P	I/O	GPIO16/network port1 receive positive
B10	GPIO17/RXI_N	I/O	GPIO17/network port1 receive negative
B11	PWM_CH0	O	PWM channel 0
B12	PWM_CH1	O	PWM channel 1
B13	TXD2/PWM2	O	Serial port2 data out/PWM channel 2

B14	RXD2/PWM3	I/O	串口2数据接收/PWM通道3
B15	SD_WP	I	write protect, 1: protect, 0: write
B16	SD_CD	I	insert detect, 1: not insert, 0: insert
B17	SD_D1	I/O	SDIO data 1
B18	SD_D0	I/O	SDIO data 0
B19	SD_CLK	O	SDIO clock
B20	SD_CMD	O	SDIO command
B21	SD_D3	I/O	SDIO data 3
B22	SD_D2	I/O	SDIO data 2
B23	GND	P	Power ground
B24	UD_P	I/O	USB data positive
B25	UD_N	I/O	USB data negative
C1	GND	P	Power ground
C2	RF	A	RF
C3	GND	P	Power ground
C4	GND	P	Power ground
C5	UART_RXD1	I	Serial port1 data in
C6	UART_TXD1	O	Serial port1 data out
C7	WLED_N	O	WIFI LED, low active
C8	LINK0	O	PORT0 LED, low active
C9	GPIO42/LINK1	I/O	GPIO42/PORT1 LED, low active
C10	GPIO41/LINK2	I/O	GPIO41/PORT2 LED, low active
C11	PCIE_CKP0	O	PCIE bus clock out positive
C12	PCIE_CKN0	O	PCIE bus clock out negative
C13	PCIE_RXN0	I	PCIE bus data receive negative
C14	PCIE_RXP0	I	PCIE bus data receive positive
C15	PCIE_TXP0	O	PCIE bus data send positive
C16	PCIE_TXN0	O	PCIE bus data send negative
C17	3.3VD	P	3.3V Power
C18	GND	P	Power ground
C19	GPIO40/LINK3	I/O	GPIO40/PORT3 LED, low active

C20	GPIO39/LINK4	I/O	GPIO39/PORT4 LED, low active
C21	CPURST_N	I	CPU rat in, low active
C22	WPS_RST_PBC	I	user button, WPS, low active
C23	REF_CLK	O	reference
C24	PERST_N	O	PCIE reset out
C25	GND	P	Power ground

Ordering Infomation

Model: BIT32CYI1 Description: FLASH: 32MBytes RAM: 128MBytes

Model: BIT16CYI1 Description: FLASH: 16MBytes RAM: 128MBytes