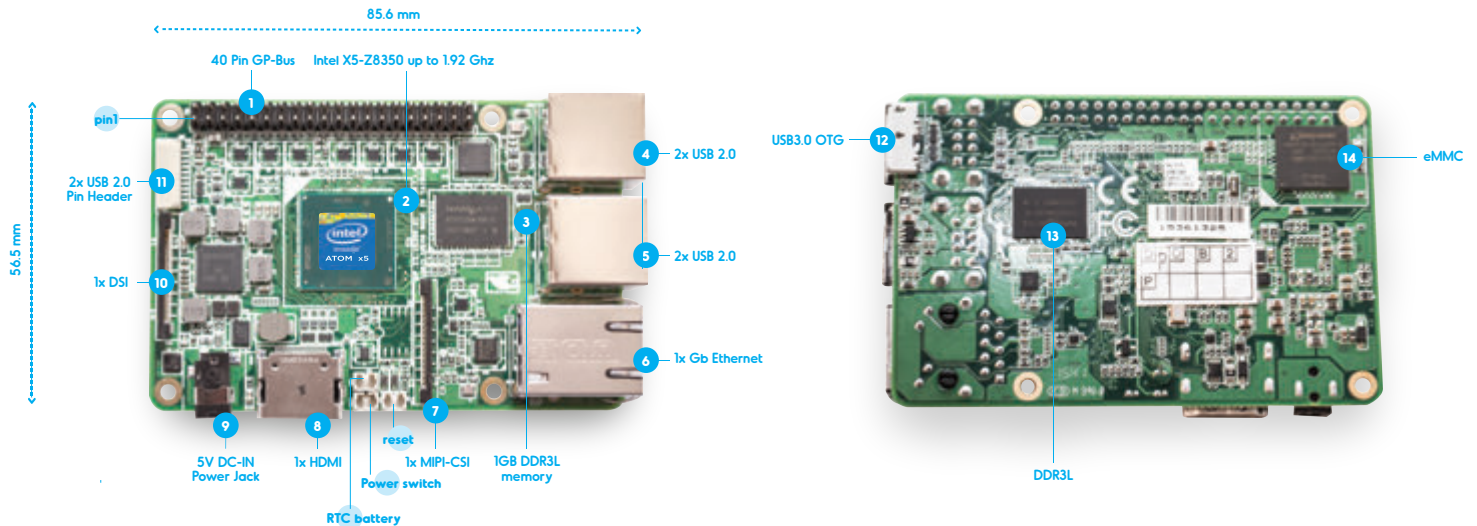




bridge  
the gap

# specification



**UP is a credit card size board** with the high performance and low power consumption features of the latest tablet technology: the **Intel® Atom™ x5 Z8350 Processors (codename Cherry Trail) 64 bits up to 1.92GHz**. The internal **GPU is the new Intel Gen 8 HD 400 with 12 Execution Units up to 500MHz** to deliver extremely high **3D graphic** performance. UP is equipped with **2GB/4GB DDR3L RAM** and **16GB/32GB eMMC**.

UP has **40-pin General Purpose bus** which provides the freedom to makers to build up their shield. There are more interfaces available, such as **4x port USB2.0 on connectors +2x port USB2.0 on header**, **1x USB 3.0 OTG**, **1x Gbit Ethernet** (full speed), **1x DSI port**, **1x Camera** (MIPI-CSI), **1x HDMI**, **RTC**.

When it comes to security, UP has **Intel security features** needed for professional IoT applications such **Intel AES New Instructions and Intel Identity Protection Technology**.

It's UP to you to choose which operation system is best for your application. The CPU is supported by **Android 5.0 Lollipop**, **Microsoft Windows 10** and we support and enable **Linux**, through our UP Community.

UP has a standard **industrial PC operating temperature** range of **32-104°F/0-60°C**, which makes it flexible for many applications.

**UP is perfect for professional makers.**

## UP - Applications



Drones



Education



Robotics





















Media Center



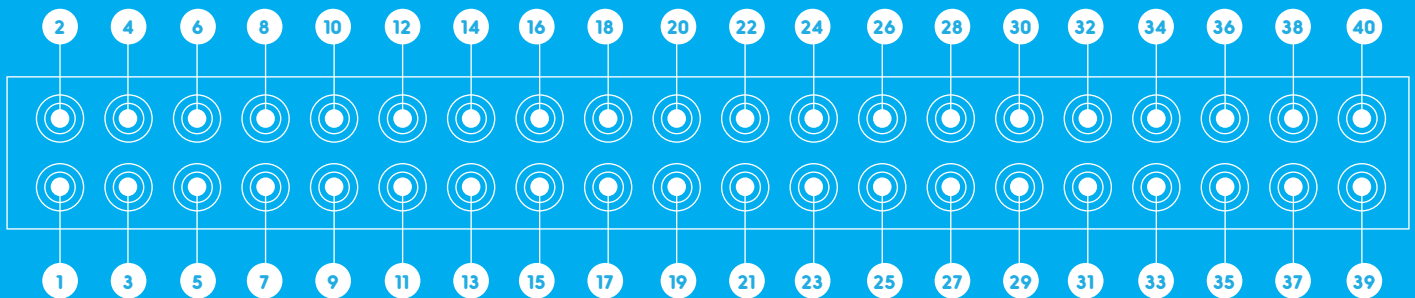
Internet of Things



Home Automation

	<b>SOC</b> Intel® Atom™ x5-Z8350 Processor (2M Cache, up to 1.92 GHz) CPU with 64 bit architecture; Quad Core CPU		<b>Memory</b> 2GB / 4GB DDR3L-1600
	<b>Graphics</b> Intel® HD 400 Graphics ,12 EU GEN 8, up to 500MHz Support DX*11.1/12, Open GL*4.2, Open CL*1.2 OGL ES3.0, H.264, HEVC(decode), VP8		<b>Storage Capacity</b> 16GB eMMC / 32 GB eMMC
	<b>Video &amp; Audio</b> HDMI 1.4b I2S audio		<b>Display interface</b> DSI
	<b>Camera interface</b> CSI (4 Mega pixel)		<b>Ethernet</b> 1x Gb Ethernet (full speed) RJ-45
	<b>USB 2.0</b> 4x USB2.0 2x USB 2.0 pin header (10 pins in total)		<b>USB 3.0</b> 1 x USB 3.0 OTG
	<b>RTC</b> Yes		<b>Expansion</b> 40 pin General Purpose bus
	<b>Power</b> 5V DC-in @ 3A		<b>Compatible Operating system</b> Microsoft® Windows 10 full version 32 bit, supported by IGB RAM Linux • Android Lollipop
	<b>Dimensions</b> 3.37" x 2.22" / 85.60 mm × 56.5 mm		<b>Operating Temperature</b> 32-140°F / 0-60°C
	<b>Operating Humidity</b> 10%~80%RH non-condensing		<b>Certificate</b> CE/FCC Class A, RoHS compliant

## UP - Pinout



1 3V3	2 5V	3 GPIO0/I2C_SDA	4 5V	5 GPIO1/I2C1_SCL
6 Ground	7 GPIO2	8 GPIO15/UART_TX	9 Ground	10 GPIO16/UART_RX
11 GPIO3	12 GPIO17/I2S_CLK	13 GPIO4	14 Ground	15 GPIO5
16 GPIO18	17 3V3	18 GPIO19	19 GPIO6/SPI_MOSI	20 Ground
21 GPIO7/SPI_MISO	22 GPIO20	23 GPIO8/SPI_CLK	24 GPIO21/SPI_CS0N	25 Ground
26 GPIO22/SPI_CS1N	27 GPIO9/I2C0_SDA	28 GPIO23/I2C0_SCL	29 GPIO10	30 Ground
31 GPIO11	32 GPIO24/PWM0	33 GPIO12/PWM1	34 Ground	35 GPIO13/I2S_FRM
36 GPIO25	37 GPIO14	38 GPIO26/I2S_DATAIN	39 Ground	40 GPIO27/I2S_DATAOUT

## Part number :

UP-CHT04 -A11-0002 2GB RAM+16GB eMMC  
UP-CHT04 -A11-0003 2GB RAM+32GB eMMC  
UP-CHT04 -A11-0004 4GB RAM+32GB eMMC

Included accessories  
Optional accessories

Heatsink  
Power adapter  
USB3.0 OTG cable  
HDMI cable  
DSI adapter cable