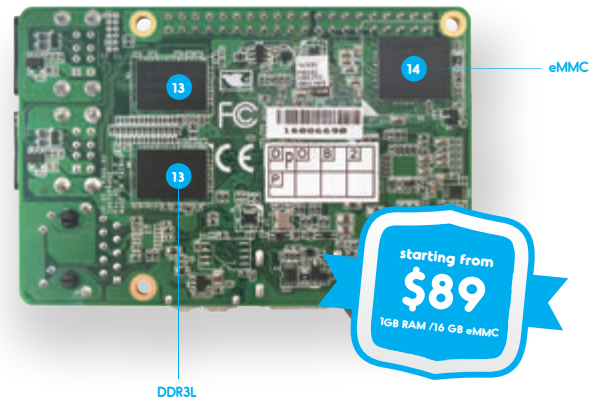
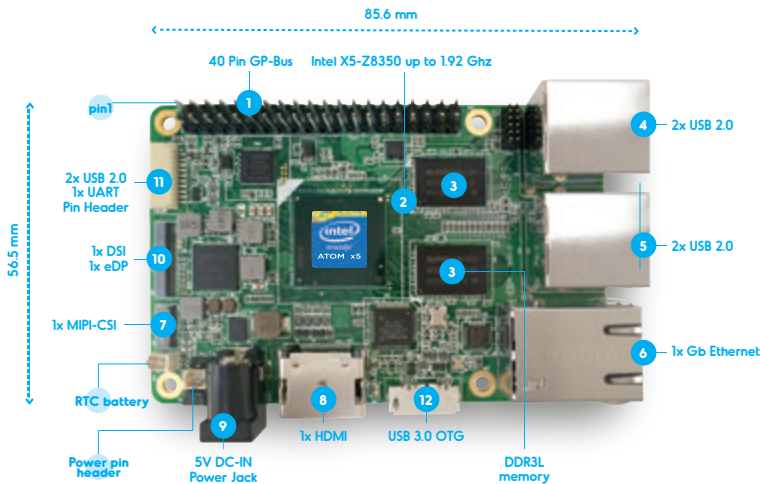




**UP is a credit card size board** with the high performance and low power consumption features of the latest tablet technology: the **Intel® Atom™ x5 Z8350 Processors (codename Cherry Trail) 64 bits up to 1.92GHz**. The internal **GPU** is the new **Intel Gen 8 HD 400 with 12 Execution Units up to 500MHz** to deliver extremely high **3D graphic** performance. UP is equipped with **1GB/2GB/4GB DDR3L RAM** and **16GB/32GB/64GB 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 + 1x UART on header, 1x USB 3.0 OTG, 1x Gbit Ethernet (full speed), 1x DSI/eDP 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 6.Marshmallow, Microsoft Windows 10** and we support and enable **Linux**, through our UP Community.

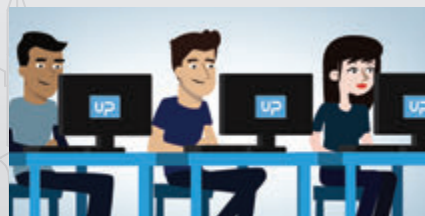
UP has a standard **industrial PC operating temperature** range of **32-140°F/0-60°C**, which makes it flexible for many applications.

**UP is perfect for professional makers.**

## UP - Applications



Drones



Education



Robotics



Media Center

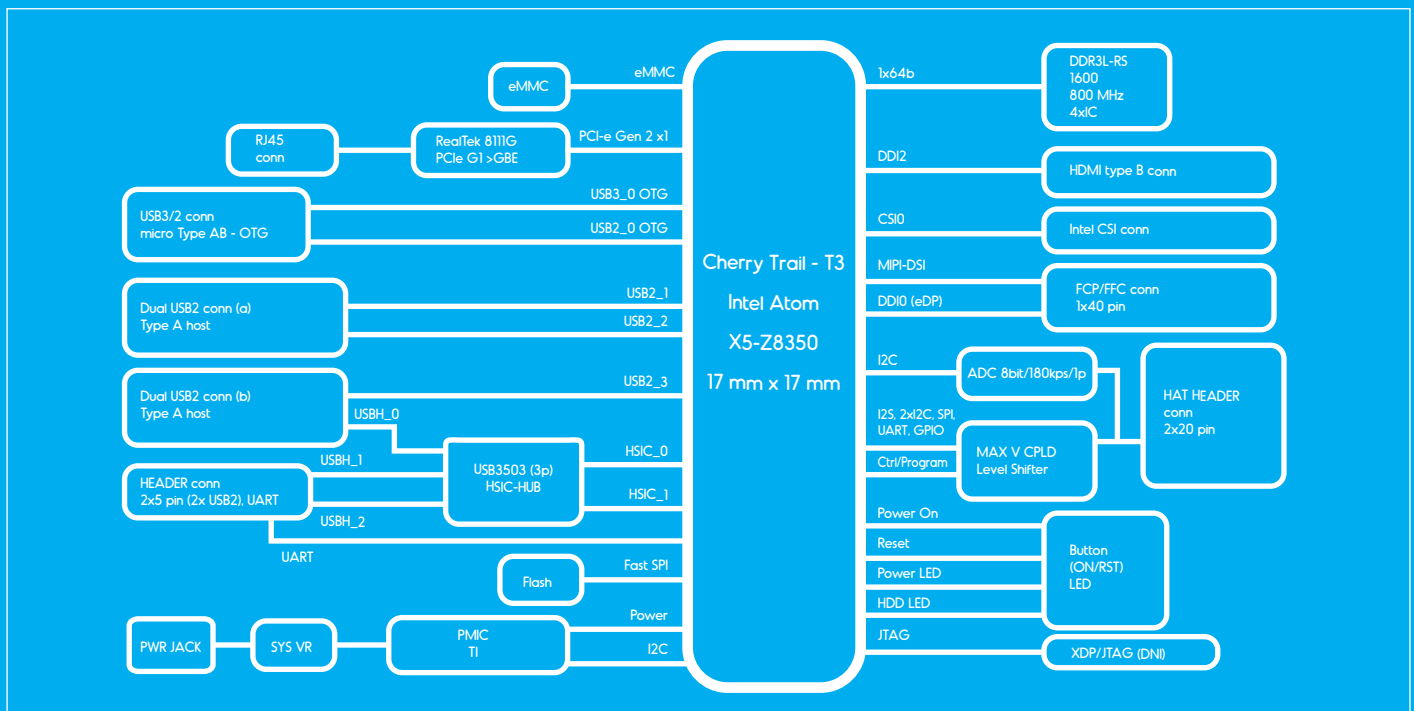


Internet of Things



Home Automation

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | <p><b>SOC</b><br/>Intel® Atom™ x5-Z8350 Processor (2M Cache, 1.44 GHz up to 1.92 GHz) CPU with 64 bit architecture; Quad Core</p> <p><b>Graphics</b><br/>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</p> <p><b>Video &amp; Audio</b><br/>HDMI 1.4b<br/>I2S audio port</p> <p><b>Camera interface</b><br/>CSI (4 Mega pixel)</p> <p><b>USB 2.0</b><br/>4x UB2.0<br/>2x USB 2.0 pin header (10 pins in total)</p> <p><b>RTC</b><br/>Yes</p> <p><b>Power</b><br/>5V DC-in @ 4A 5.5/2.1mm jack</p> <p><b>Dimensions</b><br/>3.37" x 2.22" / 85.60 mm x 56.5 mm</p> <p><b>Operating humidity</b><br/>10%~80%RH non-condensing</p> |            | <p><b>Memory</b><br/>1GB / 2GB / 4GB DDR3L-1600</p> <p><b>Storage Capacity</b><br/>16GB eMMC / 32 GB / 64 GB eMMC</p> <p><b>Display interface</b><br/>DSI / eDP</p> <p><b>Ethernet</b><br/>1x Gb Ethernet (full speed) RJ-45</p> <p><b>USB 3.0</b><br/>1x UB3.0 OTG</p> <p><b>Expansion</b><br/>40 pin General Purpose bus, supported by Altera Max V. ADC 8-bit@188ksos</p> <p><b>Compatible Operating system</b><br/>Microsoft Windows 10 full version<br/>Linux (ubilinux, Ubuntu, Yocto) • Android Marshmallow</p> <p><b>Operating Temperature</b><br/>32-140°F / 0~60°C</p> <p><b>Certificate</b><br/>CE/FCC Class A, RoHS complaint<br/>Microsoft Azure certified, REACH</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



UP - Pinout

|       |      |                 |      |                  |          |                   |                  |          |                   |          |                   |          |           |          |           |        |           |                   |           |                   |           |                  |                    |           |                    |                   |                    |           |           |           |                |                |           |                   |           |           |                      |           |                       |
|-------|------|-----------------|------|------------------|----------|-------------------|------------------|----------|-------------------|----------|-------------------|----------|-----------|----------|-----------|--------|-----------|-------------------|-----------|-------------------|-----------|------------------|--------------------|-----------|--------------------|-------------------|--------------------|-----------|-----------|-----------|----------------|----------------|-----------|-------------------|-----------|-----------|----------------------|-----------|-----------------------|
| 2     | 4    | 6               | 8    | 10               | 12       | 14                | 16               | 18       | 20                | 22       | 24                | 26       | 28        | 30       | 32        | 34     | 36        | 38                | 40        |                   |           |                  |                    |           |                    |                   |                    |           |           |           |                |                |           |                   |           |           |                      |           |                       |
| 1     | 3    | 5               | 7    | 9                | 11       | 13                | 15               | 17       | 19                | 21       | 23                | 25       | 27        | 29       | 31        | 33     | 35        | 37                | 39        |                   |           |                  |                    |           |                    |                   |                    |           |           |           |                |                |           |                   |           |           |                      |           |                       |
| 1 3V3 | 2 5V | 3 GPIO0/I2C_SDA | 4 5V | 5 GPIO1/I2C1_SCL | 6 Ground | 7 GPIO2/ADC-input | 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-CHT01-A10-0116  
UP-CHT01-A10-0216  
UP-CHT01-A10-0232

1GB RAM+16GB eMMC  
2GB RAM+16GB eMMC  
2GB RAM+32GB eMMC

UP-CHT01-A10-0432  
UP-CHT01-A10-0464

4GB RAM+32GB eMMC  
4GB RAM+64GB eMMC

Included accessories  
Optional accessories

Heatsink/RTC battery  
Power adapter  
USB3.0 OTG cable  
HDMI cable

# Mouser Electronics

Authorized Distributor

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