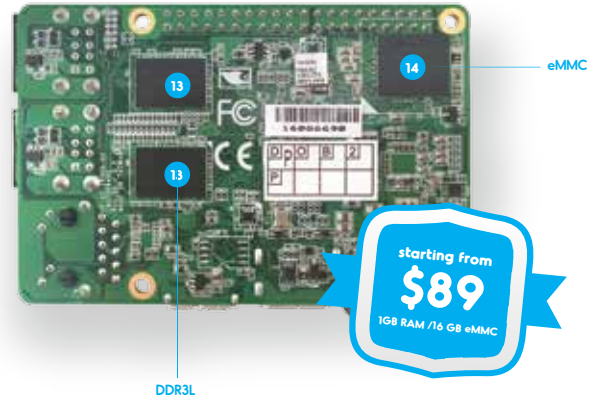
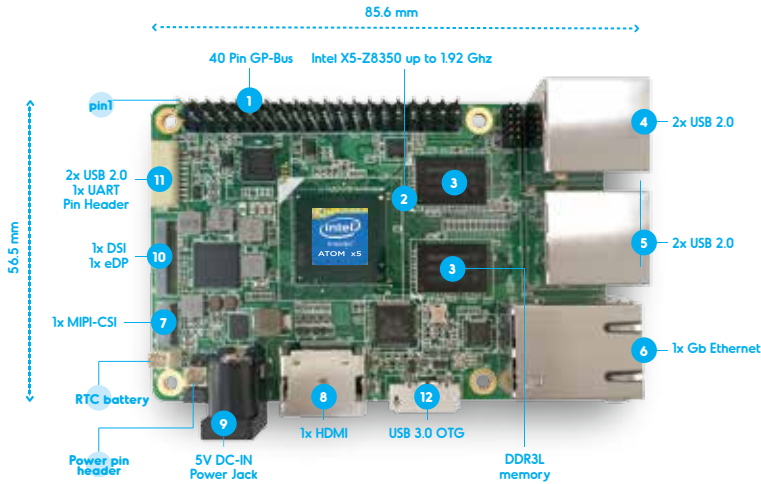




bridge
the gap

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 **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 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



























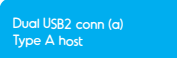
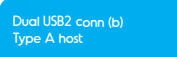




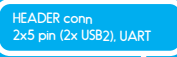
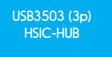






















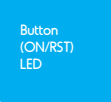

Media Center

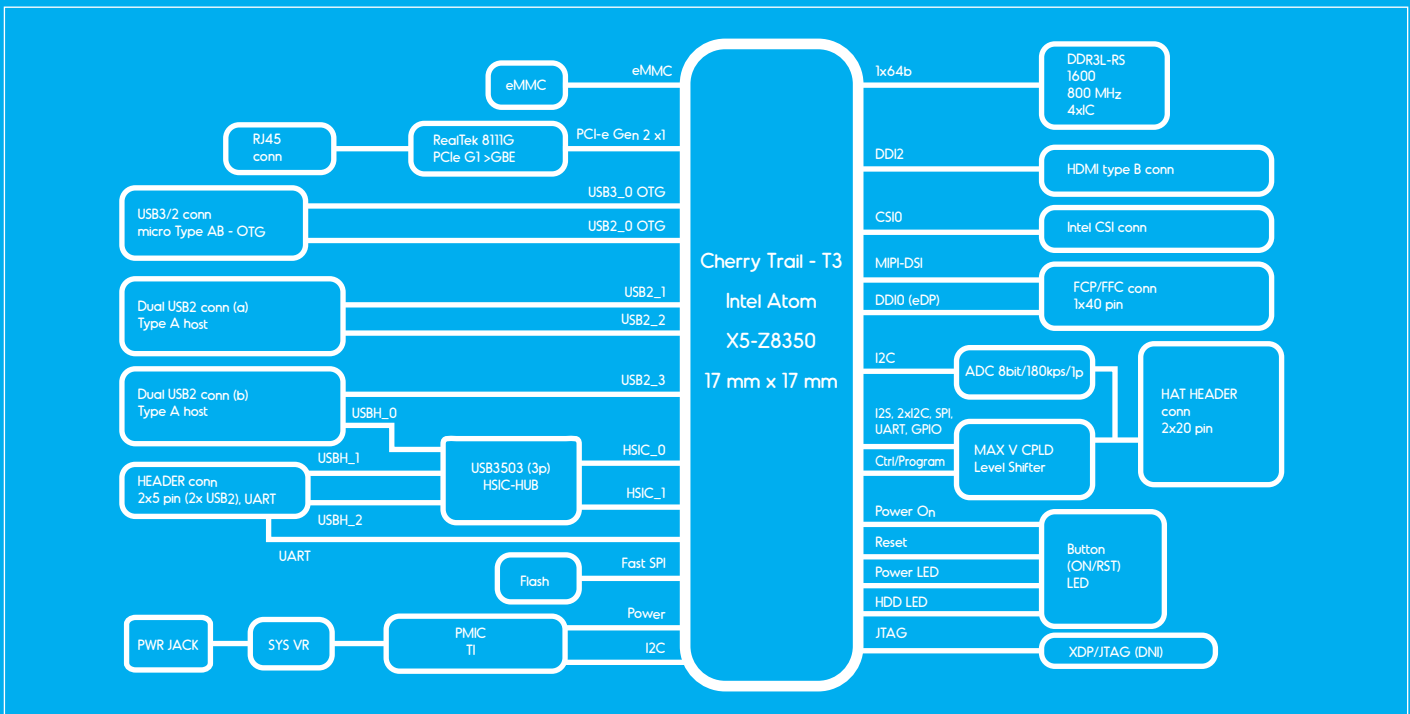


Internet of Things



Home Automation

 <p>SOC Intel® Atom™ x5-Z8350 Processor (2M Cache, 1.44 GHz up to 1.92 GHz) CPU with 64 bit architecture; Quad Core</p>  <p>Graphics 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>Video & Audio HDMI 1.4b I2S audio port</p> <p>Camera interface CSI (4 Mega pixel)</p> <p>USB 2.0 4x UB2.0 2x USB 2.0 pin header (10 pins in total)</p> <p>RTC Yes</p> <p>Power 5V DC-in @ 3A 5.5/2.1mm jack</p> <p>Dimensions 3.37" x 2.22" / 85.6 mm x 56.5 mm</p> <p>Operating humidity 10%~80%RH non-condensing</p>       	 <p>Memory 1GB / 2GB / 4GB DDR3L-1600</p>  <p>Storage Capacity 16GB eMMC / 32 GB / 64 GB eMMC</p>  <p>Display interface DSI / eDP</p>  <p>Ethernet 1x Gb Ethernet (full speed) RJ-45</p>  <p>USB 3.0 1x UB3.0 OTG</p>  <p>Expansion 40 pin General Purpose bus, supported by Altera Max V. ADC 8-bit@188ksos</p>  <p>Compatible Operating system Microsoft Windows 10 full version Linux (ublinux, Ubuntu, Yocto) • Android Lollipop • Brillo</p>  <p>Operating Temperature 32-140°F / 0~60°C</p>  <p>Certificate CE/FCC Class A, RoHS complaint Microsoft Azure certified</p>	 <p>eMMC</p>  <p>RJ45 conn</p>  <p>RealTek 8111G PCIe G1 >GBE</p>  <p>PCI-e Gen 2 x1</p>  <p>USB3/2 conn micro Type AB - OTG</p>  <p>USB2_0 OTG</p>  <p>Dual USB2 conn (a) Type A host</p>  <p>Dual USB2 conn (b) Type A host</p>  <p>USBH_0</p>  <p>USBH_1</p>  <p>USBH_2</p>  <p>UART</p>  <p>HEADER conn 2x5 pin (2x USB2), UART</p>  <p>USB3503 (3p) HSIC-HUB</p>  <p>HSIC_0</p>  <p>HSIC_1</p>  <p>Flash</p>  <p>Fast SPI</p>  <p>Power</p>  <p>I2C</p>  <p>PWR JACK</p>  <p>SYS VR</p>  <p>PMIC TI</p>  <p>DDR3L-RS 1600 800 MHz 4xLC</p>  <p>HDMI type B conn</p>  <p>Intel CSI conn</p>  <p>FCPL/FFC conn 1x40 pin</p>  <p>ADC 8bit/180kps/1p</p>  <p>HAT HEADER conn 2x20 pin</p>  <p>I2S, 2xI2C, SPI, UART, GPIO</p>  <p>MAX V CPLD Level Shifter</p>  <p>Power On</p>  <p>Reset</p>  <p>Power LED</p>  <p>HDD LED</p>  <p>JTAG</p>  <p>Button (ON/RST) LED</p>  <p>XDP/JTAG (DNI)</p>
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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 :	1GB RAM+16GB eMMC	UP-CHT01-A10-0432	4GB RAM+32GB eMMC	Included accessories Optional accessories	Heatsink/RTC battery Power adapter USB3.0 OTG cable HDMI cable
UP-CHT01-A10-0116	2GB RAM+16GB eMMC	UP-CHT01-A10-0464	4GB RAM+64GB eMMC		
UP-CHT01-A10-0216	2GB RAM+32GB eMMC				