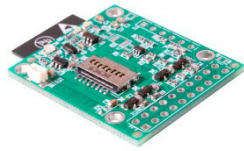





























NOVASom U-line is a family of SBCs specifically developed for IoT and smart devices markets, requiring ultra-low power, WIFI and BT, complex battery management, while maintaining our industrial high quality level, such as the vending, domotics and other handheld applications.

NOVASom U is a small credit card sized board or less. It has everything necessary to guarantee an immediate bootstrap, driving of a display, connecting via WIFI, BT and Ethernet or USB, plus it has two strips for possible expansion such as GPIO or I2C or SPI and a resistive touch screen controller.

			
		SBC-U1 Boards	SBC-U5 Boards
 Processor	CPU	ESP32	IMX6ULL
	PERFORMANCE MIPS (COREMARK)	480	954
 Graphics	GRAPHICS ENGINE	N	PIX
	RAM memory DDR3 at 32bit	384K	Up to 2 GB
 Memory	FLASH	4MB	Up to 32 GB
	µSD slot (op to 32GB), SD card NOT included	Y	Y
 Power	Power supply inversion polarity protected	5 V	5 V or 6.5-18Vcc (1)
	Battery Powered and Battery Charger	Y	Y
	POE	N	Pluggable External Module
	Power Consumption [W]	0.9 working; 0.75m stby	1.5W working; 50µ standby
 Multimedia	RGB direct display on FPC 40 pin	N	1ch 1366x768
	IR Input on connector 6 pin picoblade	N	Y
 I/O	Audio	N	Y
	On Board GPIO @ 3,3 V on strip	Up to 15 (1)	Up to 25 (1)
 USB	USB port Host/Device on TYPE - A	N	1 +1
	Console RS 232 3 pin Pico Blade conn.	N	1
 Communication	I2C @ 3,3 V	1	2
	SPI	1	1
	CAN cell	N	1 (on strip) (2)
	RS232	N	Y
	Second USB (2)	N	Y
 Networking	RJ45 Ethernet connector on board/Ext	N	Y
	WiFi-BT (BGN - 4.0 EDR) with external antenna	Y	Y (connector UFL)
 Generic	Additional nr. 2 user led	Y	Y
	RTC - external battery connector	Y (same battery of power)	Y (battery not included)
	A/D	2 ch 12bit Protected to 40V, 0-3.3V range	2 ch 12 bit
	D/A	2 ch 10bit Protected to 40V; 0-3.3V range, configurable as GPIO	N
	Protected IN	2 - Vmax 30V	N
	I/O Connector	2x12p 2.54	1x40p 2.54
 Operating temperature	Open Collector Out	2 Vmax 30V, 200mA gnd ref	N
	Temperature	(-40 / +85)°C	(-40 / +85)°C
 Dimension	Mechanical size	37.5 x 31 mm	85 x 56 mm Raspmood (3)
 Operating System	Distributions supported	FreeRTOS	Linux kernel 4.1.15, Yocto

NOTE: for more information please refer to Hardware User Manual.

SBC Board code		SBC-U1A	SBC-U5A	SBC-U5C
	<b>Processor</b>	<b>CPU</b> ESP32 @240 MHz	I.MX6ULL @900 MHz	I.MX6ULL @900 MHz
		PERFORMANCE MIPS (COREMARK)	480	954
	<b>Graphics</b>	<b>GRAPHICS ENGINE</b>	N	PIX
		RAM memory DDR3	384k	512MB
	<b>Memory</b>	FLASH QSPI	4MB	N
		µSD slot (op to 32GB); SD not included	Y	Y
		Power supply (inversion polarity protected)	5 V	5 V
	<b>Power</b>	Battery Powered and Battery Charger	Y	N
		Power Consumption working/stdby [W]	0.9 / 0.75m	1.5 / 50µ
		POE Slave	N	Pluggable external module <sup>(3)</sup>
				Pluggable external module <sup>(3)</sup>
	<b>Multimedia</b>	RGB direct display on FPC 40 pin	N	1ch 1366x768
		IR Input on connector 6 pin picoblade	N	N
		Audio	N	Y - PCM & SPDIF on strip
	<b>I/O</b>	On Board GPIO @ 3,3 V on strip	Up to 15 <sup>(1)</sup>	Up to 25 <sup>(1)</sup>
				Up to 25 <sup>(1)</sup>
	<b>USB</b>	USB port Host / Device on TYPE - A	N	1 + 1 <sup>(2)</sup>
				1 + 1 <sup>(2)</sup>
	<b>Communication</b>	Console RS 232 3 pin Pico Blade Connector	N	1
		I2C @ 3,3 V	1	2
		SPI	1	1
		CAN cell	N	1 (on strip) <sup>(3)</sup>
		RS232	N	Y
		Second USB	N	Y <sup>(2)</sup>
	<b>Networking</b>	RJ 45 Ethernet connector on board/Ext	N	2 X 100MBPS/100MBPS (1 <sup>st</sup> - on board RJ Connector with LEDs; 2 <sup>nd</sup> - external module required)
		WiFi – BT (BGN - 4.0 EDR)	Y	N / N
		Additional nr. 2 user led	Y	Y
	<b>Generic</b>	RTC – external battery	Y (same battery of power)	Y (battery not included)
		A/D	2 ch 12bit Protected to 40V, 0–3.3V range	2 ch 12 bit
		D/A	2 ch 10bit Protected to 40V; 0–3.3V range, configurable as GPIO	N
		Protected IN	2 Vmax 40V	N
		I/O Connector	2x12p 2.54	1x40p 2.54
		Open Collector OUT	2 Vmax 30V, 200mA gnd ref	N
	<b>Operating temperature</b>	Temperature	(-40/+85) °C	(-20/+70) °C
	<b>Dimension</b>	Form factor	37.5x31mm	86x54mm <sup>(5)</sup>
	<b>Operating System</b>	Distributions supported	FreeRTOS	Linux kernel 4.1.15, Yocto

<sup>(1)</sup> If not used by other peripheral, 3.3V

<sup>(2)</sup> Available additional USB on strip

<sup>(3)</sup> Strip NOT mounted (2.54), to leave customer free for any choice

<sup>(4)</sup> Please refer to specific Application Note.

<sup>(5)</sup> RASPMOOD : form factor, mechanical holes, expansion pin on strip, connector kind and position same of famous PI Family