




























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	384K	Up to 1 GB
 Memory	FLASH	4MB	QSPI Flash up to 1 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
	Audio	N	Y
 I/O	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
 Communication	Console RS 232 3 pin Pico Blade conn.	N	1
	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
	Open Collector Out	2 Vmax 30V, 200mA gnd ref	N
 Operating temperature	Temperature	(-40 / +85)°C	(-40 / +85)°C
 Dimension	Mechanical size	37.5 x 31 mm	85 x 56 mm Raspmod ⁽⁵⁾
 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
	Processor	CPU ESP32 @240 MHz	I.MX6ULL @900 MHz	I.MX6ULL @900 MHz
		PERFORMANCE MIPS (COREMARK) 480	954	954
	Graphics	GRAPHICS ENGINE N	PIX	PIX
		Memory	RAM memory DDR3 384k	512MB
		FLASH QSPI 4MB	N	N
		µSD slot (op to 32GB); SD not included Y	Y	Y
	Power	Power supply (inversion polarity protected) 5 V	5 V	6.5-18 V ⁽⁴⁾
		Battery Powered and Battery Charger Y	N	Y
		Power Consumption working/stdby [W] 0.9 / 0.75m	1.5 / 50µ	1.5 / 50µ
		POE Slave N	Pluggable external module ⁽³⁾	Pluggable external module ⁽³⁾
	Multimedia	RGB direct display on FPC 40 pin N	1ch 1366x768	1ch 1366x768
		IR Input on connector 6 pin picoblade N	N	N
	I/O	Audio N	Y - PCM & SPDIF on strip	Y - jack 3.5mm + pre (+ PCM & SPDIF on strip)
		On Board GPIO @ 3,3 V on strip Up to 15 ⁽¹⁾	Up to 25 ⁽¹⁾	Up to 25 ⁽¹⁾
	USB	USB port Host / Device on TYPE - A N	1 + 1 ⁽²⁾	1 + 1 ⁽²⁾
		Communication	Console RS 232 3 pin Pico Blade Connector N	1
		I2C @ 3,3 V 1	2	2
		SPI 1	1	1
		CAN cell N	1 (on strip) ⁽³⁾	1 (on strip) ⁽³⁾
		RS232 N	Y	Y
		Second USB N	Y ⁽²⁾	Y ⁽²⁾
	Networking	RJ 45 Ethernet connector on board/Ext N	2 X 100MBPS/100MBPS <small>(1st - on board RJ Connector with LEDs; 2nd - external module required)</small>	2 X 100MBPS/100MBPS <small>(1st - on board RJ Connector with LEDs; 2nd - external module required)</small>
		WiFi – BT (BGN - 4.0 EDR) Y	N / N	Y / N
	Generic	Additional nr. 2 user led Y	Y	Y
		RTC – external battery Y (same battery of power)	Y (battery not included)	Y (battery not included)
		A/D 2 ch 12bit Protected to 40V , 0–3.3V range	2 ch 12 bit	2 ch 12 bit
		D/A 2 ch 10bit Protected to 40V; 0–3.3V range, configurable as GPIO	N	N
		Protected IN 2 Vmax 40V	N	N
		I/O Connector 2x12p 2.54	1x40p 2.54	1x40p 2.54
		Open Collector OUT 2 Vmax 30V, 200mA gnd ref	N	N
	Operating temperature	Temperature (-40/+85) °C	(-20/+70) °C	
	Dimension	Form factor 37.5x31mm	86x54mm ⁽⁵⁾	
	Operating System	Distributions supported FreeRTOS	Linux kernel 4.1.15, Yocto	

⁽¹⁾ If not used by other peripheral, 3.3V

⁽²⁾ Available additional USB on strip

⁽³⁾ Strip NOT mounted (2.54), to leave customer free for any choice

⁽⁴⁾ Please refer to specific Application Note.

⁽⁵⁾ RASPMOOD : form factor, mechanical holes, expansion pin on strip, connector kind and position same of famous Pi Family