

NOVASom P-line is a family of Linux based SBCs specifically developed for markets requiring **low cost** boards that maintain the **high performance** and industrial **high quality** levels such as the High end **multimedia, vending, domotics and IoT** applications.

The small credit card size board contains everything necessary to **guarantee** an immediate bootstrap, driving of a **display**, connecting via **Ethernet** and **USB** plus two strips for possible **expansion** and an **mPCIe** slot ready for use with any WiFi, BT, modem, GPS.



		SBC-P-Line Boards (P6/P7/P8)	
	Processor	CPU	i.MX6 S, D, Q @ 1GHz (800MHz extended temp)
		PERFORMANCE MIPS (COREMARK)	1128, 2532, 3696
	Graphics	GRAPHICS ENGINE	VIVANTO
	Memory	RAM memory DDR3 at 32bit	from 512MB up to 2GB
		eMMC flash memory	from 2GB to 32 GB
		µSD slot (SD card not included)	up to 32GB
	Power	Power supply, inversion polarity protected	5 V or 6.5 ÷ 18V
		2.5mm Power Supply jack	Y
		Power Consumption [W]	Max 9 (Standby 1.2)
	Multimedia	HDMI full size connector	Y, FHD
		LVDS with backlight power supply	LVDS 2ch@1920x1080
		MIPI/DSI Interface	Y, on strip (4)
		PCAP on LVDS Connector (Dedicated I2C Channel)	1
		Lane CSI for Camera sensor (1)	2, on strip (4)
		Lane DSI for Display sensor (1)	2, on strip (4)
		IR Input on connector 3pin picoblade	Y
	I/O	Audio PCM @ 3.3 V	Y, on strip (4)
		SPDIF Output	Y, on strip (4)
		On Board GPIO @ 3.3V on strip	8 (up to 51)
	USB	USB port Host/Device on TYPE A	1 and same on strip (4)
		USB OTG (1)	1, on strip (4)
	Communication	I2C internally powered @ 3.3V	1, on strip (4)
		I2C externally powered @3.3V (2)	1, on strip (4)
		Full UART @ 3.3V	1, on strip (4)
		TX/RX only UART externally powered @3.3V/1.8V (2)	1
		Full UART externally powered @ 3.3/1.8V (2)	1, on strip (4)
		SPI with Slave Select	3, on strip (4)
		CAN cell (1)	Y
		RS485(1)	1 with transceiver
		RS232(1)	Y
		Console RS232 on connector 3pin picoblade(1)	Y
On board mPCIe slot full featured with SIM bay	Y		
On board SATA	Y (only with adapter – only P8)		
	Networking	RJ 45 Ethernet connector on board (No POE)	100MBPS
	Generic	Additional nr. 2 user led	Y
		mPCIe activity LED	Y
		RTC chipset with Battery recharger	Y (battery not included)
	Operating temperature	Temperature	(-20 / +75) °C; Industrial range (-40 / +85) °C available on request with minor limitation (3)
		Dimension	Mechanical size Form factor
	Operating System	Distributions supported	Linux kernel 3.10.53/4.1.15, Android 4.2.2/4.3/4.4/5.X, Ubuntu12.04/14.04, Suse, Mandriva, Open WRT (or newer)

- UP TO 5 YEARS TOTAL WARRANTY
- 15 YEARS LIFETIME AVAILABILITY
- ONLY INDUSTRIAL COMPONENTS
- FOR INDUSTRIAL AND CRITICAL APPLICATIONS



NOTE: for more information refer to Hardware User Manual.

	SBC Board code	SBC-P6B	SBC-P7D	SBC-P8E
	Processor			
	CPU (800MHz in extended temperature)	LMX6 SOLO @1GHz	LMX6 DUAL LITE @1GHz	LMX6 QUAD @ 1GHz
	PERFORMANCE MIPS (COREMARK)	1128 (0,94)	2532 (2,11)	3696 (3,08)
	Graphic			
	GRAPHIC ENGINE	GL ES/CL 3D (1 shader) + 2D	GL ES/CL 3D (1 shader) + 2D	GL/CL 3D (4 shader) + 2x 2D
	Memory			
	RAM memory DDR3 at 32bit	512MB	1GB	1GB
	eMMC flash memory	N	N	Y- 4GB
	µSD slot (SD card not included)	Y	Y	Y
	Power			
	Power supply, inversion polarity protected	5 V ± 5%	6,5 ÷ 18V	6,5 ÷ 18V
	2.5 mm Power Supply jack	Y	Y	Y
	Power Consumption [W]	5	6	9
	Multimedia			
	HDMI full size connector with CEC	Y	Y	Y
	LVDS with backlight power supply	LVDS 2ch@1920x1080	LVDS 2ch@1920x1080	LVDS 2ch@1920x1080
	MIPI/DSI Interface	Y (on strip) ⁽¹⁾	Y (on strip) ⁽¹⁾	Y (on strip) ⁽¹⁾
	PCAP on LVDS Connector (Dedicated I2C Channel)	1	1	1
	Lane CSI for Camera sensor ⁽¹⁾	2 (on strip) ⁽¹⁾	2 (on strip) ⁽¹⁾	2 (on strip) ⁽¹⁾
	Lane DSI for Display sensor ⁽¹⁾	2 (on strip) ⁽¹⁾	2 (on strip) ⁽¹⁾	2 (on strip) ⁽¹⁾
IR Input on connector 3pin picoblade	N	Y	Y	
	I/O			
	Audio PCM @3,3 V	Y (on strip) ⁽¹⁾	Y (on strip) ⁽¹⁾	Y (on strip) ⁽¹⁾
	SPDIF output	Y (on strip) ⁽¹⁾	Y (on strip) ⁽¹⁾	Y (on strip) ⁽¹⁾
	On Board GPIO @3,3 V on strip	8 (up to 51)	8 (up to 51)	8 (up to 51)
	USB			
	USB port Host/Device on type A	1 and same on strip ⁽¹⁾	1 and same on strip ⁽¹⁾	1 and same on strip ⁽¹⁾
	USB OTG *	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾
	Communication			
	I2C internally powered @3,3 V	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾
	I2C externally powered @ 3,3 V ⁽²⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾
	Full UART @ 3,3 V	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾
	Full UART externally powered @ 3,3 V/1,8 V ⁽²⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾
	TX/RX only UART externally powered @ 3,3 V/1,8V ⁽²⁾	1	1	1
	SPI with Slave Select	3 (on strip) ⁽¹⁾	3 (on strip) ⁽¹⁾	3 (on strip) ⁽¹⁾
	CAN cell ⁽¹⁾	2 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾	1 (on strip) ⁽¹⁾
	RS485 ⁽¹⁾	N	1 with hs transceiver	1 with hs transceiver
	RS232 ⁽¹⁾	1 (on strip) ⁽¹⁾	1 with transceiver	1 with transceiver
	Console RS232 on connector 3pin picoblade	Y	Y	Y
	On board mPCIe slot full featured with SIM bay	N	Y	Y
On board SATA	N	N	Y (only with adapter)	
	Networking			
	RJ 45 Ethernet connector on board (No POE)	100MBPS	100MBPS	100MBPS
	Generic			
	Additional nr. 2 user led	Y	Y	Y
	mPCIe activity LED	na	Y	Y
	RTC chipset with Battery recharger	Y (battery not included)	Y (battery not included)	Y (battery not included)
	Additional USB port Host/Device on expansion on strip ⁽¹⁾	3	3	3
	Temperature			
	Operating temperature	Normal range (-20/+75) °C Industrial range (-40/+85) °C available on request with minor limitation ⁽³⁾		
	Dimension			
	Mechanical size	86 mm x 54 mm		
	Form factor	Credit Card Size		
	Operating System	Distributions supported		
		Linux kernel 3.10.53/4.1.15, Android 4.2.2/4.3/4.4/5.X, Ubuntu12.04/14.04, Suse, Mandriva, Open WRT		

⁽¹⁾ Signals dedicated and cannot be used as GPIO. They can be found floating accordingly to the equipment.

⁽²⁾ Signals powered externally from a 1.8V or 3.3V source. The 3.3V source can come from the NOVASOMP.

⁽³⁾ MOQ = 500pz, processor @800MHz

⁽⁴⁾ Strip NOT mounted (2.54), to leave customer free for any choice

NOTE: Tailor made and custom solutions are available to solve any problem, just call.

Our stock change frequently: if a product is on stock, for samples MOQ=1. For production MOQ =500pz. Average Lead Time = 16 weeks. For MOQ less than 500 price change..