

Technical Info



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 loT** 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 **mPCle** slot ready for use with any WiFi, BT, modem, GPS.

			SBC-P-Line Boards (P6/P7/P8)
СРИ	Processor	СРИ	i.MX6 S, D, Q @ 1GHz (800MHz extended temp)
		PERFOMANCE MIPS (COREMARK)	1128, 2532, 3696
ď	Graphics	GRAPHICS ENGINE	VIVANTO
444		RAM memory DDR3 at 32bit	from 512MB up to 2GB
	Memory	eMMC flash memory	from 2GB to 32 GB
		μSD slot (SD card not included)	υρ to 32GB
ā		Power supply, inversion polarity protected	5 V or 6.5 ÷ 18V
	Power	2.5mm Power Supply jack	Υ
		Power Consumption [W]	Max 9 (Standby 1.2)
		HDMI full size connector	Y, FHD
		LVDS with backlight power supply	LVDS 2ch@1920x1080
aa		MIPI /DSI Interface	Y, on strip (4)
13	Multimedia	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	Υ
		Audio PCM @ 3.3 V	Y, on strip (4)
≉	I/O	SPDIF Output	Y, on strip (4)
		On Board GPIO @ 3.3V on strip	8 (up to 51)
Ġ	USB	USB port Host/Device on TYPE A	1 and same on strip (4)
Ψ.	036	USB OTG (1)	1, on strip (4)
		I2C internally powered @ 3.3V	1, on strip (⁴)
		I2C externally powered @3.3V (2)	1, on strip (⁴)
İ		Full UART @ 3.3V	1, on strip (⁴)
		TX/RX only UART externally powered @3.3V/1.8V (2)	1
	Communication	Full UART externally powered @ 3.3/1.8V (2)	1, on strip (⁴)
120		SPI with Slave Select	3, on strip (⁴)
		CAN cell (1)	Y
		RS485(1)	1 with transceiver
		RS232(1)	Υ
		Console RS232 on connector 3pin picoblade(1)	Y
		On board mPCle 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	Υ
		mPCIe activity LED	Y
•		RTC chipset with Battery recharger	Y (battery not included)
		Additional USB port Host/Device on expansion on strip	Y (3)
j	Operating temperature	Temperature	(-20 / +75) °C; Industrial range (-40 / +85) °C available on request with minor limitation (³)
	Dimension	Mechanical size	86 x 54 mm
/	Dimension	Form factor	credit card size
<u></u>	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.

















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		SBC Board code	SBC-P6B	SBC-P7D	SBC-P8E	
1111	D	CPU (800MHz in extended temperature)	I.MX6 SOLO @1GHz	I.MX6 DUAL LITE @1GHz	I.MX6 QUAD @ 1GHz	
CPU E	Processor	PERFOMANCE MIPS (COREMARK)	1128 (0,94)	2532 (2.11)	3696 (3.08)	
ď	Graphic	GRAPHIC ENGINE	GLES/CL 3D (1 shader) + 2D	GLES/CL 3D (1 shader) + 2D	GL/CL 3D (4 shader) + 2x 2D	
WW.	Mamasu	RAM memory DDR3 at 32bit	512MB	1GB	1GB	
	Memory	eMMC flash memory	N	N	Y- 4GB	
		μSD slot (SD card not included)	Υ	Υ	Υ	
Ī	Power	Power supply, inversion polarity protected	5 V ± 5%	6.5 ÷ 18V	6.5 ÷ 18V	
		2.5 mm Power Supply jack	Υ	Υ	Υ	
		Power Consumption [W]	5	6	9	
	Multimedia	HDMI full size connector with CEC	Υ	Υ	Υ	
		LVDS with backlight power supply	LVDS 2ch@1920x1080	LVDS 2ch@1920x1080	LVDS 2ch@1920x1080	
		MIPI/DSI Interface	Y (on strip) (4)	Y (on strip) (4)	Y (on strip) (4)	
" "		PCAP on LVDS Connector (Dedicated I2C Channel)	1	1	1	
_		Lane CSI for Camera sensor (1)	2 (on strip) (4)	2 (on strip) (⁴)	2 (on strip) (⁴)	
		Lane DSI for Display sensor (1)	2 (on strip) (4)	2 (on strip) (⁴)	2 (on strip) (⁴)	
		IR Input on connector 3pin picoblade	N	Υ	Υ	
	1/0	Audio PCM @3,3 V	Y (on strip) (4)	Y (on strip) (4)	Y (on strip) (4)	
⇄		SPDIF output	Y (on strip) (4)	Y (on strip) (4)	Y (on strip) (4)	
		On Board GPIO @3,3 V on strip	8 (up to 51)	8 (up to 51)	8 (up to 51)	
† •	LICD	USB port Host/Device on type A	1 and same on strip (4)	1 and same on strip (4)	1 and same on strip (4)	
Ψ	USB	USB OTG *	1 (on strip) (4)	1 (on strip) (⁴)	1 (on strip) (⁴)	
	Communication	I2C internally powered @3,3 V	1 (on strip) (⁴)	1 (on strip) (⁴)	1 (on strip) (⁴)	
		I2C externally powered @ 3,3 V(2)	1 (on strip) (⁴)	1 (on strip) (⁴)	1 (on strip) (⁴)	
		Full UART @ 3,3 V	1 (on strip) (⁴)	1 (on strip) (⁴)	1 (on strip) (⁴)	
		Full UART externally powered @ 3,3 V/1,8 V(2)	1 (on strip) (⁴)	1 (on strip) (⁴)	1 (on strip) (⁴)	
		TX/RX only UART externally powered @ 3,3 V/1,8V(2)	1 (011 3111)) ()	1	1 (011 3111)) ()	
			3 (on strip) (⁴)	2 (an atria) (4)	2 (
		SPI with Slave Select	3 (On Strip) ()	3 (on strip) (4)	3 (on strip) (4)	
7.		CAN cell(1)	2 (on strip) (⁴)	1 (on strip) (⁴) 1 with hs transceiver	1 (on strip) (⁴) 1 with hs transceiver	
		RS485(1)	N	1 with transceiver	1 with transceiver	
		RS232(1)	1 (on strip) (⁴)	1 with transceiver	1 with transceiver	
		Console RS232 on connector 3pin picoblade	Υ	Υ	Υ	
		On board mPCle slot full featured with SIM bay	N	Υ	Υ	
		On board SATA	N	N	Y (only with adapter)	
	Networking	RJ 45 Ethernet connector on board (No POE)	100MBPS	100MBPS	100MBPS	
0	Generic	Additional nr. 2 user led	Y	Y	Υ	
		mPCle 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 (4)	3	3	3	
ĺ	Temperature	Operating temperature	Normal range (-20/+75) °C Industrial range (-40/+85) °C available on request with minor limitation (³)			
		Mechanical size	86 mm x 54 mm			
	Dimension	Form factor	oo IIIII x 34 IIIII Credit Card Size			
<u> </u>	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.

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.

Ver 00. Mar.2018. This document may have errors and omissions.

⁽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 choise