



SBC-pITX-APL

Pico-ITX SBC with the Intel® Atom® X Series, Intel® Celeron® J / N Series and Intel® Pentium® N Series (Codename: Apollo Lake) Processors

x86 solution designed for IoT edge computing in harsh environments



HIGHLIGHTS



CPU

Intel® Atom® X Series, Intel® Celeron® J / N Series and Intel® Pentium® N Series (formerly Apollo Lake) Processors



CONNECTIVITY

2x GbE; M.2 WWAN and WLAN slots; 8x GPIOs



GRAPHICS

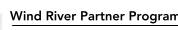
Integrated Intel® HD Graphics 500 series controller with up to 18 Execution Units



MEMORY

Up to 8GB LPDDR4 memory

Available in Industrial Temperature Range



MAIN FIELDS OF APPLICATION



Safety &
Surveillance



Digital Signage



Transportation



Energy &
Utilities

FEATURES

Processor	Intel® Atom® x5-E3930 Dual Core @1.3 GHz (Burst 1.8GHz), 2MB L2 Cache, 6.5W TDP	Video Resolution	HDMI®:	up to 3840x2160 @ 30Hz
	Intel® Atom® x5-E3940 Quad Core @1.6 GHz (Burst 1.8GHz), 2MB L2 Cache, 9.5W TDP		DP++:	up to 4096x2160 @ 60Hz
Max Cores	Intel® Atom® x7-E3950 Quad Core @1.6 GHz (Burst 2.0GHz), 2MB L2 Cache, 12W TDP	Mass Storage	LVDS:	up to 1920x1200 @ 60Hz
	Intel® Pentium® N4200 Quad Core @1.1GHz (Burst 2.5GHz), 2MB L2 Cache, 6W TDP		Optional eMMC 5.0 drive on-board	
Max Thread	Intel® Celeron® N3350 Dual Core @1.1GHz (Burst 2.4GHz), 2MB L2 Cache, 6W TDP	Networking	SATA Gen3 7p M connector	
	Intel® Celeron® J3455 , Quad Core @1.5GHz (Burst 2.3GHz), 2MB L2Cache, 10W TDP		SSD M.2 Socket 2 Key B lot, size 2260 / 3042 (excludes WWAN modules)	
Memory	Intel® Celeron® J3355 , Dual Core @2.0GHz (Burst 2.5GHz), 2MB L2Cache, 10W TDP	USB	microSD Card slot (combo with miniSIM slot)	
			Up to 2x Gigabit Ethernet connectors	
Graphics		Audio	WWAN (modem) M.2 Socket 2 Key B 2260 / 3042 slot (excludes SSD interface)	
			Connectivity M.2 Socket 1 Key E 2230 Slot for WiFi+BTLE modules	
Video Interfaces	Integrated Intel® HD Graphics 500 series controller with up to 18 Execution Units	Serial Ports	USB 3.0 Dual Type-A connector	
	Three Independent displays supported		Internal USB 2.0 Dual pin header	
	HW decoding of HEVC(H.265), H.264, MVC, VP8, VP9, MPEG2, VC-1, WMV9, JPEG/MJPEG formats	Other Interfaces	HD Audio Codec	
	HW encoding of HEVC(H.265), H.264, MVC, VP8, VP9 and JPEG/MJPEG formats		Line Out + Microphone + S/PDIF Out interfaces on internal pin header	
		Power Supply	2 x RS-232/RS-422/RS-485 Serial ports on internal pin header	
			miniSIM slot for M.2 modems (combo with microSD slot)	
			8 x GPIOs connector	
			FAN connector	
			Switch / LED Front Header connector	
			I2C + INT# + RST# signals for I2C Touch Screen controller on LVDS connector	
			Optional TPM 2.0 on-board	
			+12V _{pc}	
			Cabled coin cell battery for RTC	

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 Operating System	Windows 10 Enterprise (64-bit) Windows 10 IoT Core (32- / 64-bit) WindRiver Linux 64-bit Yocto (64-bit) Android (planning)	*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.
 Operating Temperature*	0°C ÷ +60°C (Commercial version) -40°C ÷ +85°C (industrial version)	
 Dimensions	100 x 72 mm (3.93" x 2.83")	

BLOCK DIAGRAM

