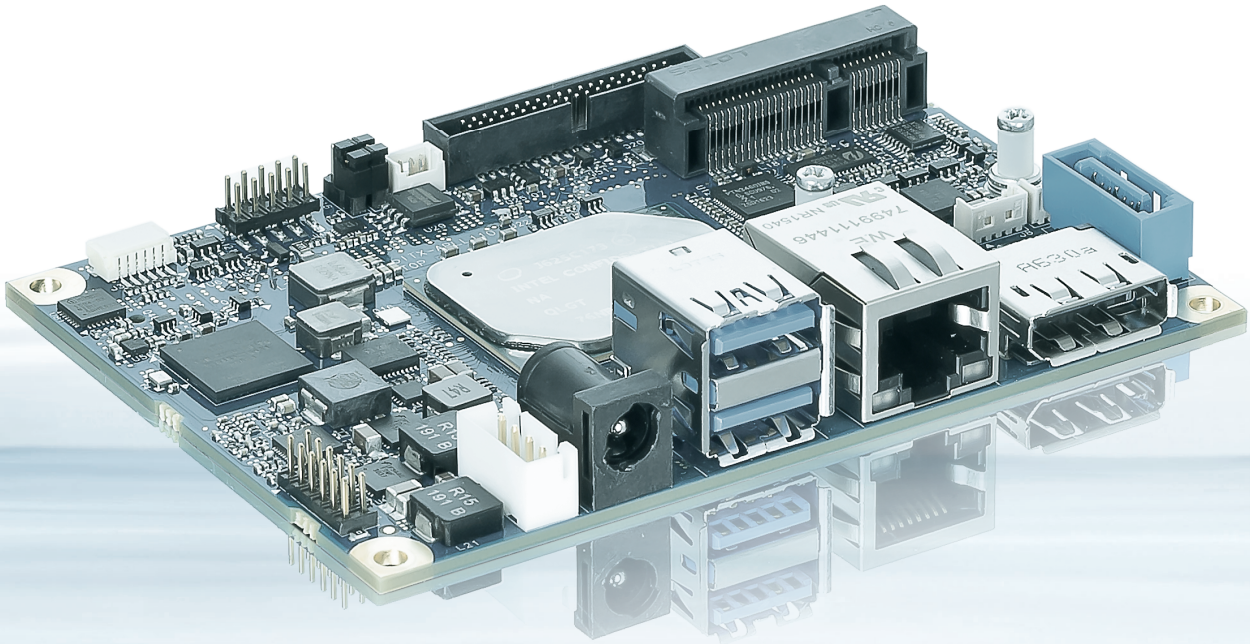


# pITX-APL

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## Embedded pITX Motherboard with Intel Atom® E39xx series and Celeron® N3350 CPUs

- ▶ Intel Atom® E39xx and N3350 SOC (2 or 4 cores), TDP: 6-12 W
- ▶ mPCIe Slot Connector
- ▶ SO-DIMM socket DDR3L-1866 memory (up to 8 GByte)
- ▶ TPM2.0 and optional Kontron APPROTECT based on Wibu-Systems CodeMeter®
- ▶ Display Port + LVDS for best graphics

POSSIBILITIES START HERE

## pITX-APL

### Typical Applications

- ▶ POS/POI: Higher Graphics and CPU core performance, Low power, multi display support
- ▶ Medical/Connectivity: Higher Graphics and CPU core performance, longevity
- ▶ Industrial Automation: Wide range of I/Os, compact size, longevity
- ▶ Digital signage: Multi display support, low power, wide range of I/Os
- ▶ Future-oriented Devices: Display Port and LVDS, low power, compact size

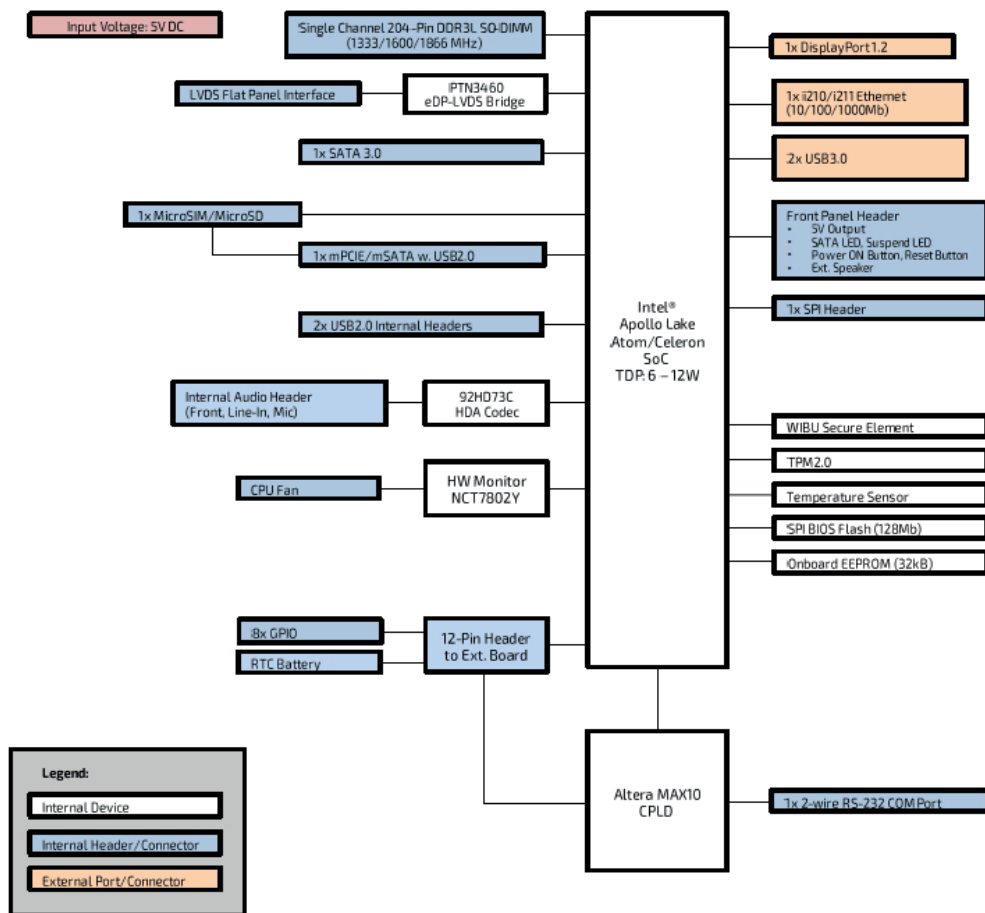
The pITX-APL is part of the Security Solution Product Line. The motherboard is prepared for Application Protection, License Creation, Delivery, Management and Tracking, Implementation of license models as well as the assignment of privileges and access levels.

## TECHNICAL INFORMATION

FORM FACTOR	Pico-ITX
MECHANICAL DIMENSIONS WITH COOLING	100 mm x 72 mm x 41 mm (Length x Width x Height)
PROCESSOR	Onboard CPU variants Intel® Processor line, 14 nm SoC - Intel Atom® x7 E3950 4C 2.0 GHz, 13 W - Intel Atom® x5 E3940 4C 1.8 GHz, 9.5 W - Intel Atom® x5 E3930 2C 1.8 GHz, 6.5 W - Intel® Mobile Celeron® N3350 2C 2.3 GHz, 6 W - Intel® Pentium® N4200, 4 Core, 2.3 GHz, 6 W
BIOS	AMI Aptio V
EEPROM	Atmel AT24C32 for board information
MEMORY	4x channel DDR3L, support maximum memory size up to 8Gbyte
FLASH MEMORY	The pITX-APL board supports microSD cards via onboard microSD/microSIM combo connector. The microSD card interface is sharing a combo connector with the micro SIM card.
STORAGE	The pITX-APL supports one SATA Gen 3 port
WAKE ON	Wake on LAN, USB, Power button (S3 to S5)
HARDWARE STATUS MONITOR	The hardware monitoring chip NCT7802Y is connected via SMBus and incorporates the following features: - CPU Temperature Monitoring - Voltages Level - Fan Control
TPM	Infineon SLB9665XQ2.0
POWER MANAGEMENT	ACPI 5.0 support: - Processor Core C-States (CC0, CC1, CC6) - Processor Core/Package States support (C0, C1, C1E, C6, C6L, C7, C8, C9, C10) - Processor Module States (MC0-CC0, MC0-CC6, MC7) - Display States support (D0, D1, D2, D3, D4, D5, D9) - Graphics States (RC0, RC1, RC6) - System Sleep States (S0, S0ix, S3, S4, S5) - Dynamic I/O power reduction (disabling sense amps on input buffers, tri-stating output buffers) - Active power-down of Display links
BATTERY	BR2032
EXPANSION	1x mPCIe (PCIe Rev 2.0) / mSATA (SATA Gen 3.0) with USB 2.0 and microSIM interface
OPERATING SYSTEM SUPPORT	Six different Board Support Packages are offered: - BSP1: Windows 10 IOT Enterprise 64 bit, eMMC Boot - BSP2: Windows 10 IOT Core, Redstone 64 bit - BSP3: Windows 7, 64 bit, eMMC boot (optional) - BSP4: Windows ES 7, 64 bit, eMMC boot (optional) - BSP5: Linux 64 bit, Yocto - BSP6: VxWorks 7.x or newer (optional) - API: KEAPI 3 for all OS (except for VxWorks)

## TECHNICAL INFORMATION

EXTERNAL I/O	LAN, USB3.0 DISPLAY PORT POWER	1x RJ-45 LAN Ports and dual USB3.0 1x DisplayPort Rear Connector 5 V DC-IN Power Jack
INTERNAL I/O	SATA USB SERIAL PERIPHERAL INTERFACE (SPI) LVDS  mPCIe AUDIO  SERIAL	1x SATA Gen 3 Straight with Locking Latch 2x USB 2.0 4-pin header internal 9-pin header  1x 24-bit Dual-Channel LVDS Converter for External Display with 5 V Backlight power output support 1x mPCIe half-size connector with SIM Card Interface, SSD and USB 3.0/2.0 HD Audio with Microphone, Stereo Line-in & Stereo Line-out internal header, SPDIF 1x RS232
INTERNAL HEADER	POWER  CMOS CLEAR/AUTOSTART FRONT PANEL MICROSD/MICROSIM	one Locking barrel-type DC Power Jack one internal 4-pin Power connector one 1 x 3-pin power connector for CPU Fan two (1 x 3) 2 mm pin-header one 2 x 5-pin connector one microSD & microSIM combo socket adapter



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