



SOM-Q7-APL

Qseven® Rel. 2.1 compliant module with Intel® Atom® X Series, Intel® Celeron® J / N Series and Intel® Pentium® N Series (Codename: Apollo Lake) Processors

High graphics performance and extreme temperature for low power designs



HIGHLIGHTS



CPU
Intel® Atom® X Series, Intel® Celeron® J / N Series and Intel® Pentium® N Series



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



CONNECTIVITY
2x USB 3.0; 4x PCI-e; 6x USB 2.0



MEMORY
up to 8GB Dual-Channel DDR3L-1866

Available in Industrial Temperature Range



MAIN FIELDS OF APPLICATION



Medical



Transportation



Industrial Automation



Smart Devices



Digital Signage

FEATURES

Processor	Intel® Atom® x5-E3930 Dual Core @1.3 GHz (Burst 1.8GHz), 2MB L2 Cache, 6.5W TDP	Video Resolution	DP: Up to 4096 x 2160 @60Hz eDP: Up to 3840 x 2160 @60Hz HDMI®: Up to 3840 x 2160 @30Hz LVDS, VGA: Up to 1920 x 1200 @ 60Hz
	Intel® Atom® x5-E3940 Quad Core @1.6 GHz (Burst 1.8GHz), 2MB L2 Cache, 9.5W TDP	Mass Storage	Optional eMMC 5.0 drive soldered on-board 2 x external S-ATA Gen3 Channels SD interface
	Intel® Atom® x7-E3950 Quad Core @1.6 GHz (Burst 2.0GHz), 2MB L2 Cache, 12W TDP	Networking	Gigabit Ethernet interface Intel® I210 or I211 Controller (MAC + PHY)
	Intel® Pentium® N4200 Quad Core @1.1GHz (Burst 2.5GHz), 2MB L2 Cache, 6W TDP	USB	6 x USB 2.0 Host Ports 2 x USB 3.0 Host Ports (*)
	Intel® Celeron® N3350 Dual Core @1.1GHz (Burst 2.4GHz), 2MB L2 Cache, 6W TDP		(*) Second USB 3.0 Host port can be exploited only using Qseven® Rel. 2.1 compliant Carrier boards
	Intel® Celeron® J3455 , Quad Core @1.5GHz (Burst 2.3GHz), 2MB L2 Cache, 10W TDP	PCI-e	4 x PCI-e Root Ports (including the PCI-e port used for Gigabit Ethernet controller)
Memory	Intel® Celeron® J3355 , Dual Core @2.0GHz (Burst 2.5GHz), 2MB L2 Cache, 10W TDP	Audio	HD Audio interface
	Dual Channel Soldered Down DDR3L-1866 memory, up to 8GB	Serial Ports	1 x UART, TTL interface
Graphics	Integrated Intel® HD Graphics 500 series controller with up to 18 Execution Units	Other Interfaces	I2C Bus LPC Bus SMBus SPI interface Watch Dog Timer Thermal / FAN management Power Management Signals
	Three Independent displays supported HW decoding of HEVC(H.265), H.264, MVC, VP8, VP9, MPEG2, VC-1, WMV9, JPEG/MJPEG formats HW encoding of HEVC(H.265), H.264, MVC, VP8, VP9 and JPEG/MPEG formats	Power Supply	+5V _{DC} and +5V _{SB} (optional)
Video Interfaces	eDP interface or Single/Dual Channel 18/24bit LVDS interface HDMI® or DP++ interface		

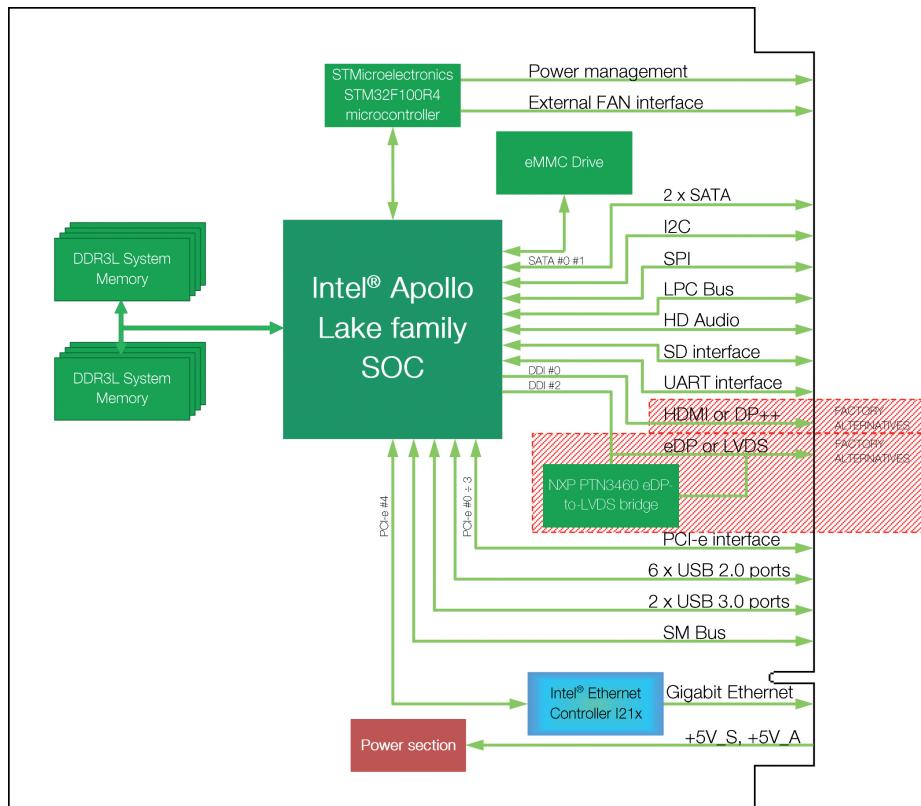
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 Operating System	Microsoft® Windows 10 Enterprise (64 bit) Microsoft® Windows 10 IoT Core Linux Yocto (64 bit)	*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature 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	70 x 70 mm (2.76" x 2.76")	

BLOCK DIAGRAM



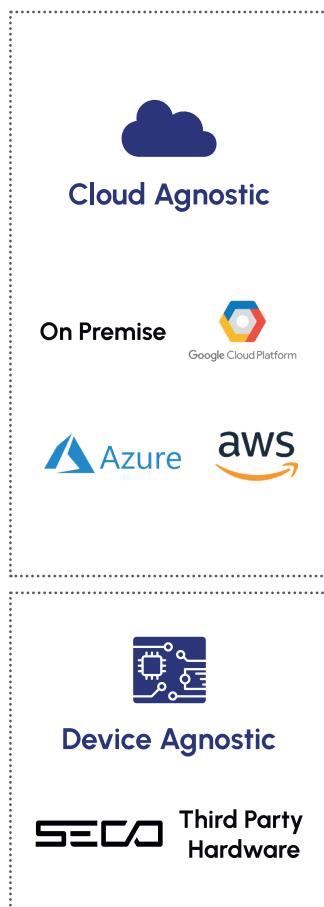
Streamline and expedite your edge computing implementations

EDGEHOG OS

A flexible operating system that adapts to your needs, thanks to the customization tool and Docker support. Reliability and security are built-in through a dual-partition system and native integration with Exein's robust AI-based protection.

DATA ORCHESTRATION

Integrate third-party services, simplify data flows and analysis, and enhance business efficiency by enabling easy and fast utilization of AI.



DEVICE MANAGER

Update, configure, and manage remote devices. Optimize time and costs to maximize operational efficiency and security without the need for costly field interventions.

PORTAL

Analyze data from remote devices, customize the user experience with applications tailored to user needs, and manage user rights, company access, and tenant privileges.

SERVICES

Custom Apps



Device Manager

»Edgehog

Data Orchestration

»Astarte

Portal

EDGEHOG OS

Containers

SDK



Double Partition

Device Manager Agent

Incremental Updates

Immutable OS

Scan to know more about our solution

EDGEHOG OS



CLEA DOCS

