

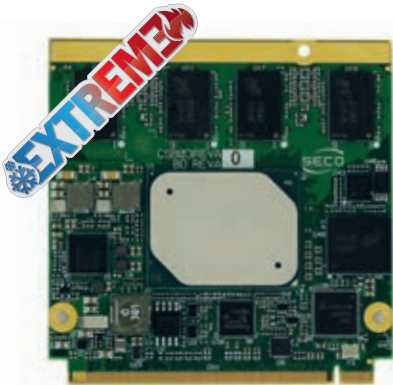


Q7-B03

Qseven® Rel. 2.1 compliant module with the Intel® Atom™ E39xx family, Intel® Celeron® N3350 and Intel® Pentium® N4200 (formerly code name Apollo Lake) SoCs

High graphics performance and extreme temperature for low power designs

Apollo Lake



HIGHLIGHTS

- Compliant to the most recent Qseven® rel. 2.1 specs
- 4K HW Video both decoding and encoding
- Extreme graphics for low power embedded applications
- Industrial grade and connectivity capable
- Support for the most popular operating systems



MAIN FIELDS OF APPLICATION



Internet of Things



Biomedical/ Medical devices



Digital Signage - Infotainment



HMI



Automotive



Gaming



Industrial



Visual Computing



Mobile devices



Multimedia devices

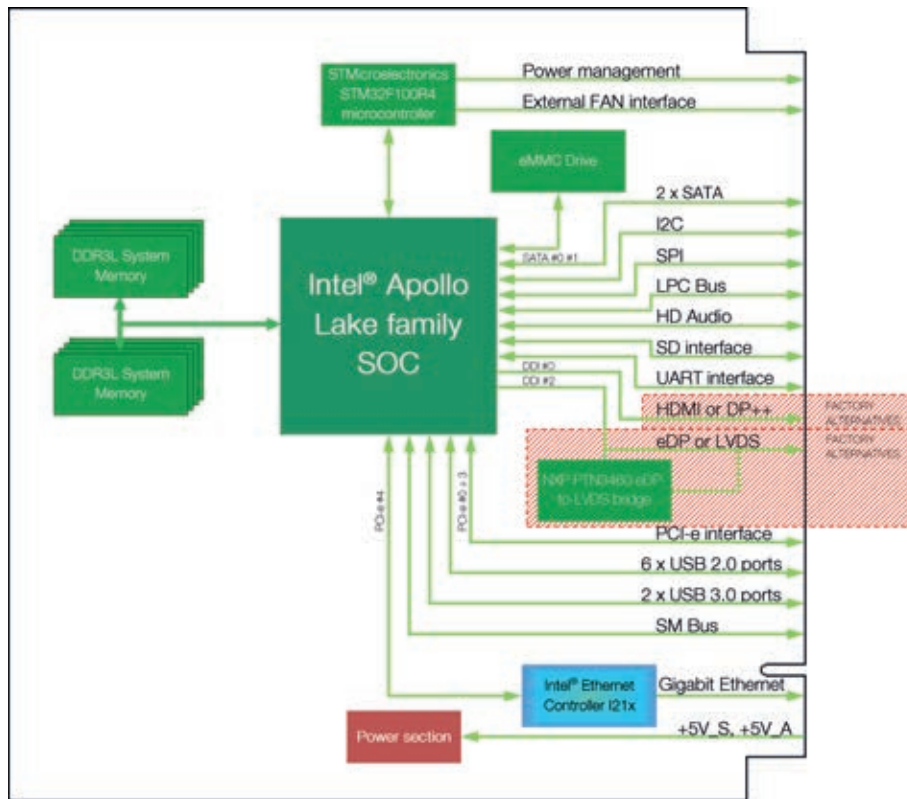
FEATURES

Processor	Intel® Atom™ x5-E3930 Dual Core @1.3 GHz (Burst 1.8GHz), 2MB L2 Cache, 5.5W TDP Intel® Atom™ x5-E3940 Quad Core @1.6 GHz (Burst 1.8GHz), 2MB L2 Cache, 9W TDP Intel® Atom™ x7-E3950 Quad Core @1.6 GHz (Burst 2.0GHz), 2MB L2 Cache, 12W TDP Intel® Pentium® N4200 Quad Core @1.1GHz (burst 2.5GHz), 2MB L2 Cache, 6W TDP Intel® Celeron® N3350 Dual Core @1.1GHz (burst 2.4GHz), 2MB L2 Cache, 6W TDP	Audio	HD Audio interface
Max Cores	4	Serial Ports	1 x UART, TTL interface
Memory	Dual Channel Soldered Down DDR3L-1866 memory, up to 8GB	Other Interfaces	I2C Bus LPC Bus SM Bus SPI interface Watch Dog Timer Thermal / FAN management Power Management Signals
Graphics	Integrated Gen9-LP Graphics controller, with 18 Execution Units 4K HW decoding and encoding of HEVC(H.265), H.264, VP8, SVC, MVC	Power Supply	+5V _{DC} and +5V _{SB} (optional)
Video Interfaces	eDP interface or Single/Dual Channel 18/24bit LVDS interface through eDP-to-LVDS bridge HDMI or DP++ interface	Operating System	Microsoft® Windows 10 Enterprise (64 bit) Microsoft® Windows 10 IoT Core Linux (64 bit) Yocto (64 bit) Android (planning)
Video Resolution	HDMI, eDP: Up to 3840 x 2160 (4K) DP++: Up to 4096 x 2160 LVDS: Up to 1920 x 1200	Operating Temperature*	0°C ÷ +60°C (Commercial version) -40°C ÷ +85°C (Industrial version)
Mass Storage	2 x external S-ATA Gen3 Channel SD interface Optional eMMC disc soldered onboard	Dimensions	70 x 70 mm (2.76" x 2.76")
Networking	Gigabit Ethernet interface Intel® I210 or I211 Controller (MAC + PHY)	*Measured at any point of the heatspreader/heatsink during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider specific cooling solutions for the final system.	
USB	6 x USB 2.0 Host Ports 2 x USB 3.0 Host Ports (*) (* Second USB 3.0 Host port can be exploited only using Qseven® Rel. 2.1 compliant Carrier boards)		
PCI-e	4 x PCI-e Root Ports (including the PCI-e port used for Gigabit Ethernet controller)		

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BLOCK DIAGRAM



ACCESSORIES

PN	DESCRIPTION
QA42-0000-1111-10	Carrier Board for Qseven® rel. 2.0 Compliant modules on 3.5" Form factor - DisplayPort - 2nd Ethernet Port - LVDS - Debug Port
QA42-0000-2111-10	Carrier Board for Qseven® rel. 2.0 Compliant modules on 3.5" Form factor - HDMI - 2nd Ethernet Port - LVDS - Debug Port
QA42-0000-1121-10	Carrier Board for Qseven® rel. 2.0 Compliant modules on 3.5" Form factor - DisplayPort - 2nd Ethernet Port - eDP - Debug Port
QA42-0000-2121-10	Carrier Board for Qseven® rel. 2.0 Compliant modules on 3.5" Form factor - HDMI - 2nd Ethernet Port - eDP - Debug Port
QA30-Q7XDK-0000	Qseven® Cross Platform Development Kit 2.0
QA42-Q7XSK-1000	Q7 - Cross Platform Starter Kit 2.0 - DP++ - eDP
QA42-Q7XSK-1100	Q7 - Cross Platform Starter Kit 2.0 - DP++ - LVDS, 7" touch display included
QA42-Q7XSK-2000	Q7 - Cross Platform Starter Kit 2.0 - HDMI - eDP
QA42-Q7XSK-2100	Q7 - Cross Platform Starter Kit 2.0 - HDMI - LVDS, 7" touch display included