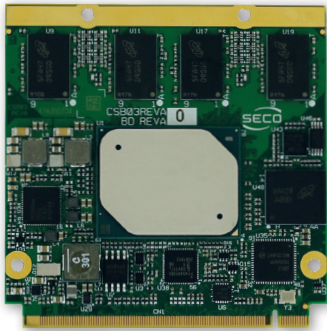




NAOS Qseven® Rel. 2.1 compliant module with Intel® Atom X Series, Intel® Celeron® J / N Series and Intel® Pentium® N Series (formerly Apollo Lake) Processors

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	CONNECTIVITY 2x USB 3.0; 4x PCI-e; 6x USB 2.0
GRAPHICS Intel® HD Graphics 500 series controller with up to 18 Execution Units	MEMORY up to 8GB Dual-Channel DDR3L-1866

Available in Industrial Temperature Range



MAIN FIELDS OF APPLICATION



FEATURES

Processor Intel® Atom™ x5-E3930 Dual Core @1.3 GHz (Burst 1.8GHz), 2MB L2 Cache, 6.5W TDP Intel® Atom™ x5-E3940 Quad Core @1.6 GHz (Burst 1.8GHz), 2MB L2 Cache, 9.5W 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 Intel® Celeron® J3455 , Quad Core @1.5GHz (Burst 2.3GHz), 2MB L2Cache, 10W TDP Intel® Celeron® J3355 , Dual Core @2.0GHz (Burst 2.5GHz), 2MB L2Cache, 10W TDP	Networking Gigabit Ethernet interface Intel® I210 or I211 Controller (MAC + PHY)
Max Cores 4	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
Max Thread 4	PCI-e 4 x PCI-e Root Ports (including the PCI-e port used for Gigabit Ethernet controller)
Memory Dual Channel Soldered Down DDR3L-1866 memory, up to 8GB	Audio HD Audio interface
Graphics Integrated Intel® HD Graphics 500 series controller with up to 18 Execution Units 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	Serial Ports 1 x UART, TTL interface
Video Interfaces eDP interface or Single/Dual Channel 18/24bit LVDS interface HDMI or DP++ interface	Other Interfaces I2C Bus LPC Bus SM Bus SPI interface Watch Dog Timer Thermal / FAN management Power Management Signals
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	Power Supply +5V _{DC} and +5V _{SB} (optional)
Mass Storage Optional eMMC 5.0 drive soldered on-board 2 x external S-ATA Gen3 Channels SD interface	Operating System Microsoft® Windows 10 Enterprise (64 bit) Microsoft® Windows 10 IoT Core Linux Yocto (64 bit)
	Operating Temperature* 0°C ÷ +60°C (Commercial version) -40°C ÷ +85°C (Industrial version)
	Dimensions 70 x 70 mm (2.76" x 2.76")

*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.

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BLOCK DIAGRAM

