

QBOX-300S Series

Standard / Extended Temperature
Fanless Mini Box PC
with Intel® Apollo Lake SoC Processors



- Intel® Apollo Lake SoC Processors
- 2x DDR3L SO-DIMM Socket
- 2x HDMI for video output
- 2x GbE LAN for Ethernet
- 4x USB3.0, 2x RS-232/422/485 for peripheral connection
- 1x Micro SD Cage, 1x mSATA / mPCIe, 2x M.2 for expansion
- Passive cooling design without fans nor vents
- Extended temperature model available: -20°C ~ 70°C



Product Overview

QBOX-300S Series is a fanless box PC based on low-power Intel® Apollo Lake SoC Processors, ideal for entry-level computer or intelligent digital display. In addition to 2x HDMI, 2x GbE LAN, 4x USB3.0 and 2x RS-232/422/485 for

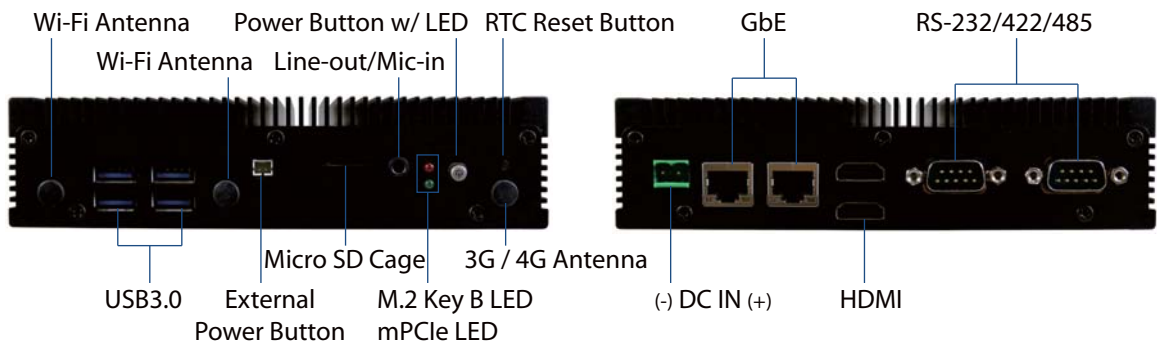
display output, Ethernet and peripheral connection, QBOX-300S has 1x mSATA / mPCIe, 1x M.2 Key A and 1x M.2 Key B, allowing users to expand wireless connection, storage and other functionality.

Technical Information

CPU Support
Intel® Celeron® N3350 (Dual Core, 2M Cache, up to 2.4 GHz, FCBGA1296, 6 W TDP)
Intel® Pentium® N4200 (Quad Core, 2M Cache, up to 2.5 GHz, FCBGA1296, 6 W TDP)
Intel® Atom™ x5-E3930 (Dual Core, 2M Cache, up to 1.80 GHz, FCBGA1296, 6.5W TDP)
Intel® Atom™ x5-E3940 (Quad Core, 2M Cache, up to 1.80 GHz, FCBGA1296, 9.5W TDP)
Intel® Atom™ x7-E3950 (Quad Core, 2M Cache, up to 2.00 GHz, FCBGA1296, 12W TDP)
Memory
2x DDR3L 1867 SO-DIMM up to 8GB non-ECC
Graphic Controller
Intel® HD Graphics 505 (Atom™ x7-E3950 / Pentium® N4200) Intel® HD Graphics 500 (Atom™ x5-E3940 / x5-E3930 / Celeron® N3350)
Display Interfaces
2x HDMI 1.4b (on rear)
Multiple Display
Dual
Audio Chipset
Realtek ALC662
Audio Interfaces
1x Line-out/Mic-in (on front)
Ethernet
2x GbE LAN (RJ-45 on rear, Intel® I210)
USB
4x USB3.0 (Type A on front)
Serial Ports
2x RS-232/422/485 (DB9 on rear)
Storage & Expansion
1x Micro SD Cage (on front, w/o boot support) 1x mSATA / mPCIe (mixed with USB2.0, SATA & PCIe, switchable via BIOS) 1x M.2 Key A (mixed with mPCIe) 1x M.2 Key B (mixed with USB2.0 & SATA) 1x Micro SIM Card Cage (switch for M.2 Key B & mPCIe)

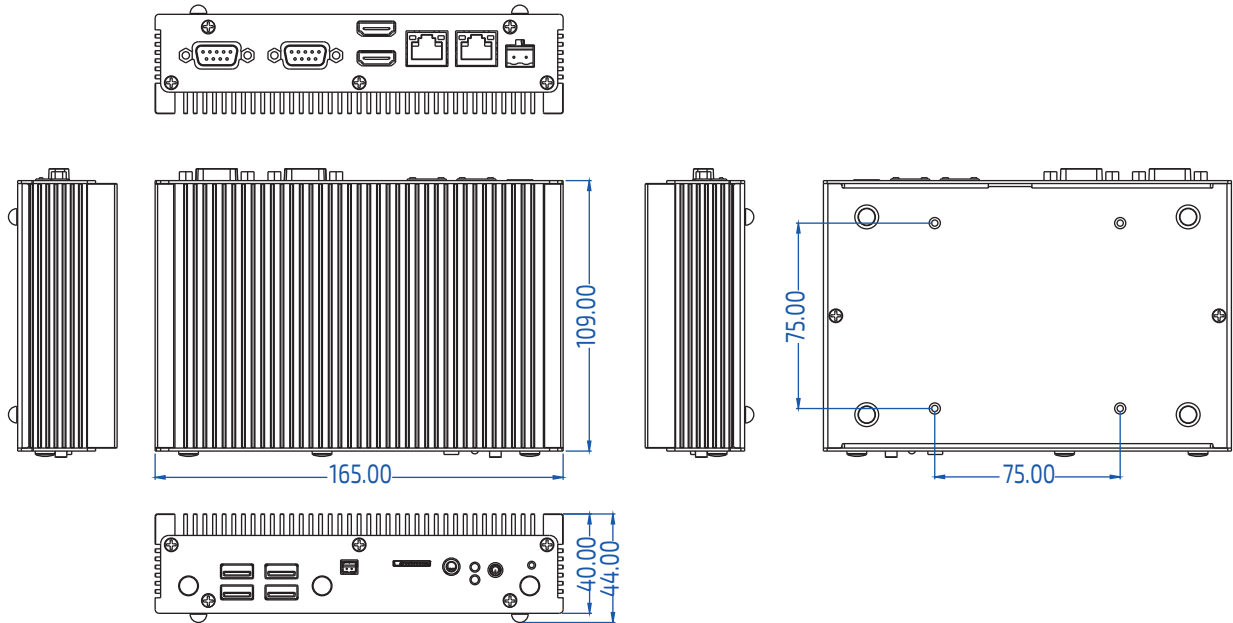
Power Supply
Connector: Phoenix Connector (on rear) Input Voltage: DC 9V ~ 24V
Firmware
BIOS: AMI uEFI BIOS w/ 128Mb SPI Flash Watchdog: Programmable WDT to generate system reset event H/W Monitor: Voltages, Temperatures Real Time Clock: SoC integrated RTC TPM: optional (Infineon SLB9665 TPM 2.0)
System Control & Monitoring
1x Power Button w/ LED (on front) 1x RTC Reset Button (on front) 1x External Power Button (on front) 1x M.2 Key B Activity LED (on front) 1x mPCIe Activity LED (on front)
Cooling
Passive
OS Support
Windows 10, Linux
Construction
Aluminum Chassis
Dimensions (W x D x H)
165 x 109 x 40 mm / 6.50" x 4.29" x 1.57" (standard temperature model) 165 x 109 x 48 mm / 6.50" x 4.29" x 1.89" (extended temperature model)
Environmental Characteristics
Operation Temp.: 0°C ~ 50°C / 32°F ~ 122°F (Standard) -20°C ~ 70°C / -4°F ~ 158°F (Extended) Storage Temp.: -20°C ~ 80°C / -4°F ~ 176°F Humidity: 0% ~ 90%
Mounting
VESA Mount
Certification
CE, FCC Class A

Front & Rear I/O Panels

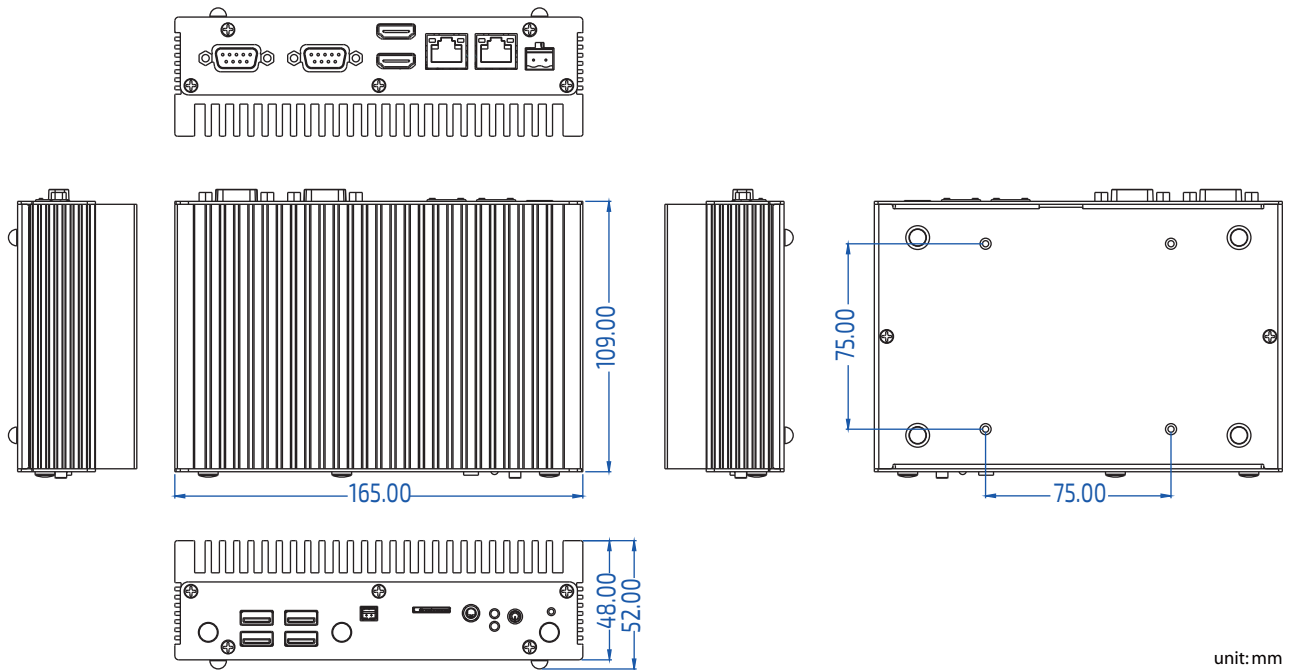


Mechanical Dimensions

Standard Temperature Model



Extended Temperature Model



unit:mm

Ordering Information

Article	Description
QBOX-300S	Intel® Celeron® N3350, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: 0°C ~ 50°C
QBOX-301S	Intel® Pentium® N4200, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: 0°C ~ 50°C
QBOX-302S	Intel® Atom™ x5-E3930, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: 0°C ~ 50°C
QBOX-303S	Intel® Atom™ x5-E3940, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: 0°C ~ 50°C
QBOX-304S	Intel® Atom™ x7-E3950, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: 0°C ~ 50°C
 QBOX-302ST	Intel® Atom™ x5-E3930, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: -20°C ~ 70°C
 QBOX-303ST	Intel® Atom™ x5-E3940, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: -20°C ~ 70°C
 QBOX-304ST	Intel® Atom™ x7-E3950, 2x DDR3L SO-DIMM, 2x HDMI, 2x GbE, 4x USB3.0, 2x RS-232/422/485, 1x Micro SD Cage, 1x mSATA / mPCIe, 1x M.2 Key A, 1x M.2 Key B, Op. temp.: -20°C ~ 70°C

Optional Accessories

Product Name	Description
VESA Mounting Kit	Hole pattern: 75 mm x 75 mm
Power Adapter	Input: AC 100V ~ 240V, Output: DC 12V 40W