

# UbiQ-100 Series

Standard / Extended Temperature IoT Gateway  
with Intel® Bay Trail SoC Processor



- Intel® Bay Trail SoC Processor, Atom™ E3815/E3825 / Celeron® N2930
- 2GB/4GB DDR3L memory onboard
- 16GB/32GB eMMC onboard, 1x Micro SD Card Cage for storage
- 1x HDMI for video output
- 2x USB2.0, 1x USB3.0, 2x COM, 1x Audio for peripheral connection
- 2x LAN for wired network connection
- 2x mPCIe for wireless network expansion (eg. Wi-Fi, 3G, LTE, Bluetooth, RFID, ...)
- Built-in management software by request
- Fanless design
- Extended temperature model available: -20°C ~ 70°C



## Product Overview

UbiQ-100 Series is a fanless IoT gateway integrating Intel® Bay Trail Atom™ E3815/E3825 / Celeron® N2930 SoC Processor into a small footprint. Combining two GbE LAN ports and two mPCIe slots for wireless expansion, it enables flexible connections between edge devices and data center through the wired or wireless networks.

With 1x HDMI, 1x USB3.0, 2x USB2.0, 2x COM, 1x Audio and 1x Micro SD card cage, it offers the possibility for more peripheral applications and storage expansion.

Enclosed in a highly reliable rugged case with passive cooling design, UbiQ-100 Series not only has good resistance to EMI, cold and heat, but also satisfies the requirement for noiseless operation. Also, it allows operation under extreme temperatures for some models and enables effortless deployment in various environments.

UbiQ-100 series, supporting a variety of IoT protocols, including TR-069, MQTT, OMA-DM, XMPP, AIIIS, OSGI and OIC, allows seamless connection to most cloud platforms such as Microsoft Azure, Amazon Web Services (AWS), Google, Baidu, etc.

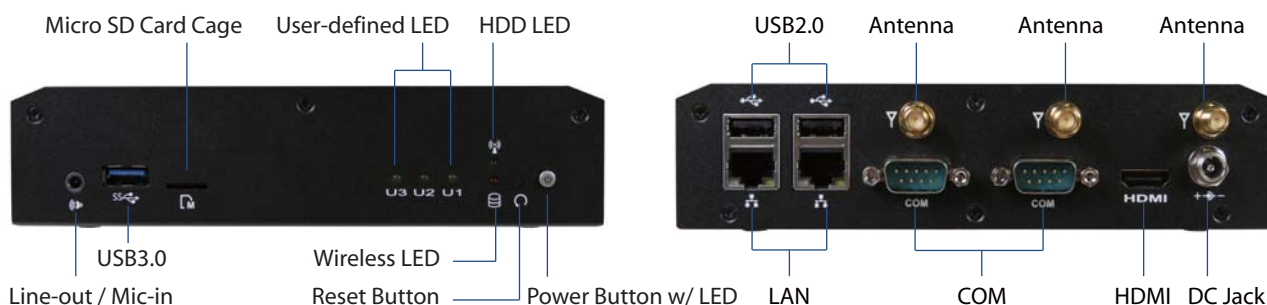
In addition, Quanmax can offer an integration service that combines possible accessory / peripheral hardware (eg. RF modules for desired wireless communication technologies, sensors / nodes installed in possible application domains) and management software into the IoT Gateway. The management software offered to pre-load by request includes 1) security management; 2) remote monitoring management; 3) wireless monitoring; 4) industry data collection & translation; 5) image / video management; or 6) digital signage management based on the target application and functionality.

## Technical Information

Processor
UbiQ-100/T: Intel® Atom™ E3815 (Single Core, 512K Cache, 1.46 GHz)
UbiQ-110/T: Intel® Atom™ E3825 (Dual Core, 1M Cache, 1.33 GHz)
UbiQ-120: Intel® Celeron® N2930 (Quad Core, 2M Cache, up to 2.16 GHz)
Memory
2GB DDR3L 1067 Memory (UbiQ-100/100T)
4GB DDR3L 1067 Memory (UbiQ-110/110T)
4GB DDR3L 1333 Memory (UbiQ-120)
Graphics Controller
Intel® HD Graphics (integrated)
Display Interfaces
1x HDMI (on rear, 1920 x 1080 @ 60Hz)
Audio Chipset
Realtek ALC662
Audio Interfaces
1x Line-out/Mic-in (on front)
Ethernet
2x LAN (on rear, 1x Intel® I210-AT, 1x Intel® I211-AT)
USB
1x USB3.0 (Type A on front)
2x USB2.0 (Type A on rear)
Serial Port
2x RS-232/422/485 (DB9 on rear)
Storage & Expansion
16GB eMMC onboard (UbiQ-100/T)
32GB eMMC onboard (UbiQ-110/T/120)
1x Micro SD Card Cage (on front)
2x mPCIe (full size)
Power Supply
Connector: Lockable DC Jack (on rear)
Input Voltage: DC 12V
Power Adapter: AC to DC, 100V ~ 240V

Firmware
BIOS: AMI uEFI BIOS w/ 64Mb SPI Flash
Watchdog: Programmable WDT to generate system reset event
H/W Monitor: Voltages, Temperatures
Real Time Clock: SoC integrated RTC
System Control & Monitoring
1x Power Button w/ LED (on front)
1x Reset Button (on front)
1x HDD LED (on front)
1x Wireless LED (on front)
3x User-defined LED (on front)
Cooling
Fanless
OS Support
Windows 8, Linux Ubuntu 14.04
Construction
Aluminum Chassis
Dimension (W x D x H)
170 x 89.5 x 39.8 mm / 6.69" x 3.52" x 1.57"
Weight
0.5 kg / 1.10 lb
Environmental Characteristics
Operating Temperature: 0°C ~ 60°C / 32°F ~ 140°F (Standard)
-20°C ~ 70°C / -4°F ~ 158°F (Extended)
Storage Temperature: -20°C ~ 80°C / -4°F ~ 176°F
Humidity: 0% ~ 90%
Certification
CE, FCC Class A

## UbiQ-100 Series I/Os



## Ordering Information

Article	Part No.	Description
UbiQ-100	SUBQ010000010T00	Intel® Atom™ E3815, 2GB DDR3L onboard, 16GB eMMC onboard, 1x Micro SD Cage, 1x HDMI, 2x USB2.0, 1x USB3.0, 2x LAN, 2x COM, 2x mPCIe, Op. temp.: 0°C ~ 60°C
UbiQ-110	SUBQ011000010T00	Intel® Atom™ E3825, 4GB DDR3L onboard, 32GB eMMC onboard, 1x Micro SD Cage, 1x HDMI, 2x USB2.0, 1x USB3.0, 2x LAN, 2x COM, 2x mPCIe, Op. temp.: 0°C ~ 60°C
UbiQ-120	SUBQ012000010T00	Intel® Celeron® N2930, 4GB DDR3L onboard, 32GB eMMC onboard, 1x Micro SD Cage, 1x HDMI, 2x USB2.0, 1x USB3.0, 2x LAN, 2x COM, 2x mPCIe, Op. temp.: 0°C ~ 60°C
UbiQ-100T	SUBQ010T00010T00	Intel® Atom™ E3815, 2GB DDR3L onboard, 16GB eMMC onboard, 1x Micro SD Cage, 1x HDMI, 2x USB2.0, 1x USB3.0, 2x LAN, 2x COM, 2x mPCIe, Op. temp.: -20°C ~ 70°C
UbiQ-110T	SUBQ011T00010T00	Intel® Atom™ E3825, 4GB DDR3L onboard, 32GB eMMC onboard, 1x Micro SD Cage, 1x HDMI, 2x USB2.0, 1x USB3.0, 2x LAN, 2x COM, 2x mPCIe, Op. temp.: -20°C ~ 70°C



## Solution Diagram

