

ARK-2250S

6th Gen Intel Core i7-6822EQ QC/i5-6442EQ QC
Rugged FullHD NVR



Features

- Intel i7-6822EQ QC/ Intel i5-6442EQ QC SoC
- Support TPM2.0
- Extreme graphic performance, support up to 1080p 120fps video encode&decode
- Stackable extension design, option extension kit for applications
- Isolated 12 ~ 24V_{DC} wide-range power input
- Diversity communication extensible, ex. WLAN, WWAN
- Anti-vibration & shock proof, certified by MIL-STD-810G
- NEMA TS2-certified, -34 ~ 74 °C
- Certified for general standard, CE, FCC, CB, UL, CCC and BSMI
- Built-in Advantech remote management software WISE-PaaS/RMM

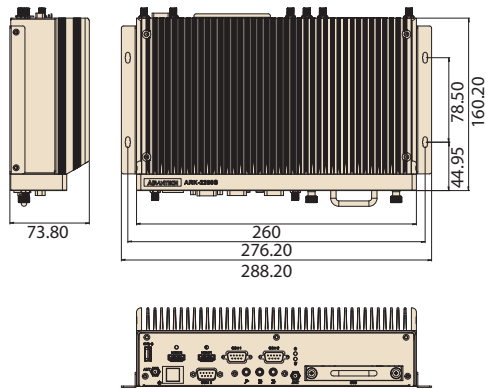
Specifications

| | | ARK-2250S-U0A1E | ARK-2250S-S9A1E |
|-------------------|----------------------------|--|------------------------|
| Processor System | CPU | Intel i7-6822EQ QC SoC | Intel i5-6442EQ QC SoC |
| | Frequency | 2.0GHz | 1.9GHz |
| | Cache | 8 MB | 6 MB |
| | BIOS | AMI EFI | |
| Memory | Technology | DDR4 2133MHz | |
| | Max. Capacity | 32G | |
| | Socket | 2 x 260-pin SO-DIMM | |
| Graphics | Chipset | QM170 | |
| | Graphic Engine | DirectX 11.3, OGL 4.4, OCL 2.1 Encode: H.264, MPEG2/4, VC1, WMV9 Decode: H.264, MPEG2 HEVC: H.265 | |
| | HDMI | HDMI 1.4a for HD video playback, 1080P at 60Hz | |
| | Dual Display | Dual HDMI | |
| Ethernet | LAN1 | 10/100/1000 Mbps Intel i219 GbE, support Wake On Lan | |
| | LAN2 | 10/100/1000 Mbps Intel i210 GbE, support Wake On Lan | |
| Audio | Interface | Realtek ALC888S, High Definition Audio. Line-out, Mic-in, Line-in | |
| IO Interface | Serial Ports | 3 x RS-232/422/485 port with auto flow control | |
| | USB Interface | 3 x USB3.0 Type A | |
| | GPIO | 4 x DI & 4 x DO w/ 1.5KV isolation, Input Voltage: 0 to 30 V _{DC} , Output Current: Max. 500 mA per channel, On-state Voltage: 24 V _{DC} nominal, open collector to 30 V _{DC} | |
| | CANBus | Optional | |
| Other | Watchdog timer | 255 levels timer interval, setup by software | |
| Expansion | Mini PCIe | #1, Full-size Mini PCIe (SATA/PCIe/USB) w/external SIM socket #2, Full-size Mini PCIe (PCIe/USB) w/external SIM socket #3, M.2 2230 E key | |
| Storage | SSD/HDD | 1 x 2.5" SATA drive bay | |
| | mSATA | 1 x full size mSATA socket (Mini PCIe #1) | |
| Software Support | Microsoft Windows | Win7, WES7, Win8, WSE8, Win10 | |
| | Linux | Support by project | |
| Power Requirement | Power Type | ATX | |
| | Power Input Voltage | 12-24V _{DC} w/isolation | |
| | Isolation | 1.5 KV | |
| Power Consumption | Typical | 22W | |
| | Max. | 45W | |
| Mechanical | Construction | Aluminum housing | |
| | Mounting | Wall mounting kit | |
| | Dimensions (W x H x D) | 260 x 73 x 160.2mm | |
| | Weight | 3.2 Kg | |
| Environment | Operating Temperature | With extended temperature peripherals: -20 ~ 70 °C with 0.7m/s air flow | |
| | Storage Temperature | - 40 ~ 85 °C (-40 ~ 185 °F) | |
| | Relative Humidity | 95% @ 40 °C (non-condensing) | |
| | Vibration During Operation | MIL-STD-810G, Method 514.6 | |
| | Shock During Operation | MIL-STD-810G, Method 516.6 | |
| | EMC | CE, FCC Class B, CCC, BSMI | |
| | Transportation | NEMA TS2-2016 Environmental | |
| | Safety | UL, CCC, BSMI, CB | |

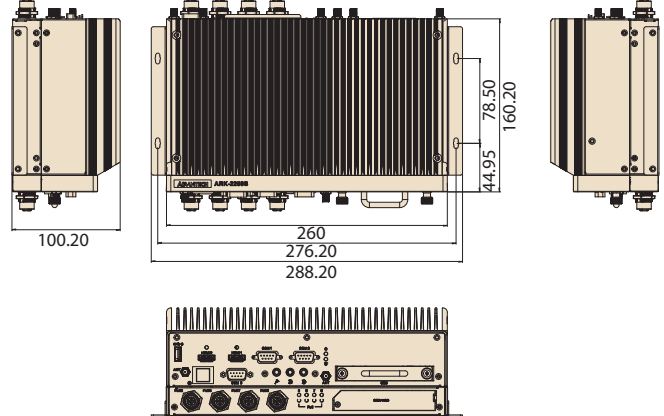
Dimensions

Unit: mm

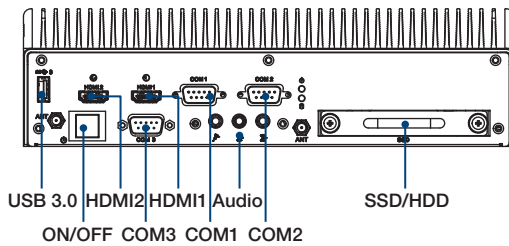
ARK-2250S



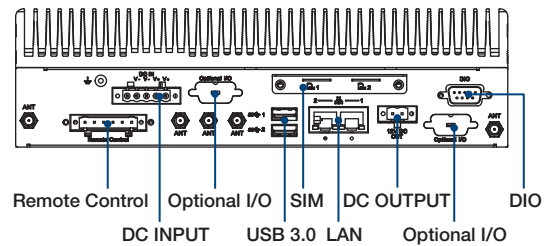
ARK-2250S+AMK-R100E



Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



Ordering Information

| Part No. | CPU | HDMI | GbE | USB 3.0 | DIO | RS-232/422/485 | Audio | MiniPCIe | M.2 | SIM | 2.5" SATA Drive Bay | Operating Temp. |
|---------------------|-------------------------|------|-----|---------|----------|----------------|-----------------------|----------|-----|-----|---------------------|-----------------|
| ARK-2250S-U0A1E | Intel Core i7-6822EQ QC | 2 | 2 | 3 | 4Di, 4Do | 3 | Lin-out, Line-in, MIC | 2 | 1 | 2 | 1 | -20 ~ 70 °C |
| ARK-2250S-U0A1EPOE* | Intel Core i7-6822EQ QC | 2 | 2 | 3 | 4Di, 4Do | 3 | Lin-out, Line-in, MIC | 2 | 1 | 2 | 1 | -20 ~ 70 °C |
| ARK-2250S-S9A1E | Intel Core i5-6442EQ QC | 2 | 2 | 3 | 4Di, 4Do | 3 | Lin-out, Line-in, MIC | 2 | 1 | 2 | 1 | -20 ~ 70 °C |
| ARK-2250S-S9A1EPOE* | Intel Core i5-6442EQ QC | 2 | 2 | 3 | 4Di, 4Do | 3 | Lin-out, Line-in, MIC | 2 | 1 | 2 | 1 | -20 ~ 70 °C |

* : This P/N is for AMK-R100E / AMK-R101E / AMK-R104E / AMK-R105E application
 Note: Memory, storage and operating system bundled by request.

Packing List

| Part Number | Description |
|----------------|----------------------------|
| - | 1 x ARK-2250S Unit |
| 1652001524 | 1 x Terminal Block 6P 5mm |
| 1652000177 | 1 x Terminal Block 5P 5mm |
| 1960071555N011 | 2 x Wall Mounting Brackets |

Optional Embedded OS

| Part Number | Description |
|----------------|---|
| 20706WX6HS0008 | Win10 IoT Ent LTSC 2016 MultiLang 64bit (ARK-2250S-U0A1E) |
| 20706WX9HS0025 | Win10 IoT Ent LTSC 2019 MultiLang 64bit (ARK-2250S-U0A1E) |
| 20706WX6VS0014 | Win10 IoT Ent LTSC 2016 MultiLang 64bit (ARK-2250S-S9A1E) |
| 20706WX9VS0028 | Win10 IoT Ent LTSC 2019 MultiLang 64bit (ARK-2250S-S9A1E) |
| 20706WE7ES0004 | WES7E 64bit ASIA 4 MUI |

Note: Default BIOS is for 64bit OS support only. 32bit OS will need to update BIOS

Optional Item for Default SKU

| Part Number | Description |
|-----------------|-----------------------------------|
| 96PSA-A150W24T2 | AC-to-DC Adapter, DC24V/150W |
| 1702002600 | Power cable 3-pin 183cm, USA type |
| 1702002605 | Power cable 3-pin 183cm, EU type |
| 1702031801 | Power cable 3-pin 183cm, UK type |

ARK-R Extended Modules

ARK-2250S+AMK-R100E

Extra 8 x GbE PoE + removable 2.5" drive bay



Specifications

| General | |
|---------------|---|
| Bus interface | MIOe |
| PoE | 8 x 10/100/1000Base T(X) PoE, 802.3at compliant |
| Drive bay | 1 x Removable 2.5" drive bay |
| Mechanical | |
| Dimension | 260 x 26.5 x 160.2 |

Build by T-P/N

| P/N | Description |
|-----------|---|
| AMK-R100E | 8 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay |

ARK-2250S+AMK-R101E

Extra 4 x GbE PoE + removable 2.5" drive bay



Specifications

| General | |
|---------------|---|
| Bus interface | MIOe |
| PoE | 4 x 10/100/1000Base T(X) PoE, 802.3at compliant |
| Drive bay | 1 x Removable 2.5" drive bay |
| Mechanical | |
| Dimension | 260 x 26.5 x 160.2 |

Build by T-P/N

| P/N | Description |
|-----------|---|
| AMK-R101E | 4 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay |

ARK-2250S+AMK-R104E

Extra 8 x 10/100 Mbps PoE + removable 2.5" drive bay



Specifications

| General | |
|---------------|---|
| Bus interface | MIOe |
| PoE | 8 x 10/100 Base T(X) PoE, 802.3at compliant |
| Drive bay | 1 x Removable 2.5" drive bay |
| Mechanical | |
| Dimension | 260 x 26.5 x 140 |

Build by T-P/N

| P/N | Description |
|-----------|---|
| AMK-R104E | 8 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay |

ARK-2250S+AMK-R105E

Extra 4 x 10/100 Mbps PoE + removable 2.5" drive bay



Specifications

| General | |
|---------------|---|
| Bus interface | MIOe |
| PoE | 4 x 10/100 Base T(X) PoE, 802.3at compliant |
| Drive bay | 1 x Removable 2.5" drive bay |
| Mechanical | |
| Dimension | 260 x 26.5 x 140 |

Build by T-P/N

| P/N | Description |
|-----------|---|
| AMK-R105E | 4 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay |

Note: When installing PoE extension modules with ARK-2250 series, please check ordering information or contact us for details.