

VIA  
**AMOS-820**

Fanless ultra-compact quad-core ARM system ruggedized for extreme environments



**Features**

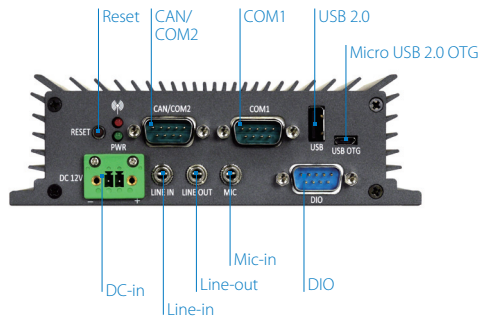
- 1.0GHz Freescale™ i.MX 6Quad Cortex-A9 quad-core SoC
- Power over Ethernet (PoE) option
- Wide operating temperature range, -20°C ~ 65°C
- Legacy I/O support including dual CAN bus, dual COM, and GPIO
- Android, Linux and WEC7 solution packs available

**Specifications**

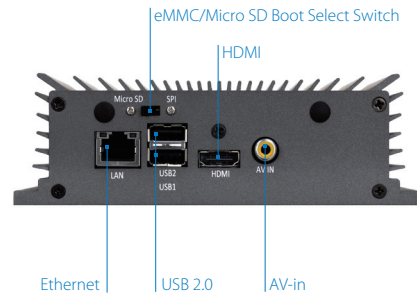
<b>Model Name</b>	<b>AMOS-820</b>
<b>Processor</b>	1.0GHz Freescale i.MX 6Quad Cortex-A9 quad-core SoC
<b>System Memory</b>	1GB DDR3 SDRAM onboard
<b>Onboard Storage</b>	4GB eMMC Flash memory
<b>Boot Loader</b>	512KB SPI Flash ROM
<b>Graphics</b>	Vivante GC2000 GPU 3 independent, integrated 3D/2D and video graphics processing units Graphics engine supporting OpenGL® ES 2.0, OpenCL and OpenVG™ 1.1 hardware acceleration Supports MPEG-2, VC-1 and H.264 video decoding up to 1080p Supports SD encoding
<b>LAN</b>	Micrel KSZ9031RNX Gigabit Ethernet transceiver with RGMII support
<b>Audio</b>	Freescale SGLT5000 low power stereo codec
<b>HDMI</b>	Integrated HDMI 1.4 transmitter
<b>USB</b>	SMSC USB2514 USB 2.0 high speed 4-port hub controllers
<b>CAN</b>	TI SN65HVD1050 EMC optimized CAN transceiver
<b>Expansion I/O</b>	1 miniPCIe slot
<b>Front Panel I/O</b>	1 USB 2.0 port 1 Micro USB 2.0 type B port supports OTG 1 COM (TX/RX) / 2 CAN bus port (supports CAN Protocol specification Version 2.0 B) 1 COM port supports 8-wire DTE mode 1 DIO port supports 8-bit GPIO (4 GPI + 4 GPO) 3 Audio jacks: Line-in, Line-out and Mic-in 1 Reset button 1 Power & WWAN/Wi-Fi LED 1 2-pole Phoenix DC jack
<b>Back Panel I/O</b>	2 USB 2.0 ports 1 HDMI port 1 Composite RCA jack 1 Gigabit Ethernet port (supports optional IEEE802.3 at type 2) 1 Micro SD/SPI boot switch
<b>Watchdog Timer</b>	Integrated watch dog timer supports two comparison points. Each comparison point can interrupt ARM core, 2nd comparison point capable of generating external interrupts on WDOG line.
<b>Power Supply</b>	12V DC-in (typical: 4.3W)
<b>Operating System</b>	Android 4.2.2, Linux Kernel 3.0.35
<b>Operating Temperature</b>	-20°C ~ 65°C (3G & Wi-Fi not included)
<b>Operating Humidity</b>	0% ~ 90% @ 45° C (non-condensing)
<b>Vibration Loading during Operation</b>	With onboard eMMC 7Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1 Oct./min, 1hr/axis
<b>Shock During Operation</b>	With onboard eMMC 70G, IEC 60068-2-27, half size, 11ms duration
<b>PoE Function</b>	Supports IEEE802.3 at compliant (type2) PD (AMOS-820-P)
<b>Bottom Opening Covers</b>	Open window with removable door plate to access Micro SD and miniPCIe slots
<b>Dimensions</b>	150.5mm(W) x 48.1mm(H) x 103.3mm(D) (5.9" x 1.9" x 4.1")
<b>Weight</b>	0.673kg (1.48lbs)



## Front System I/O



## Rear System I/O



## Ordering Information

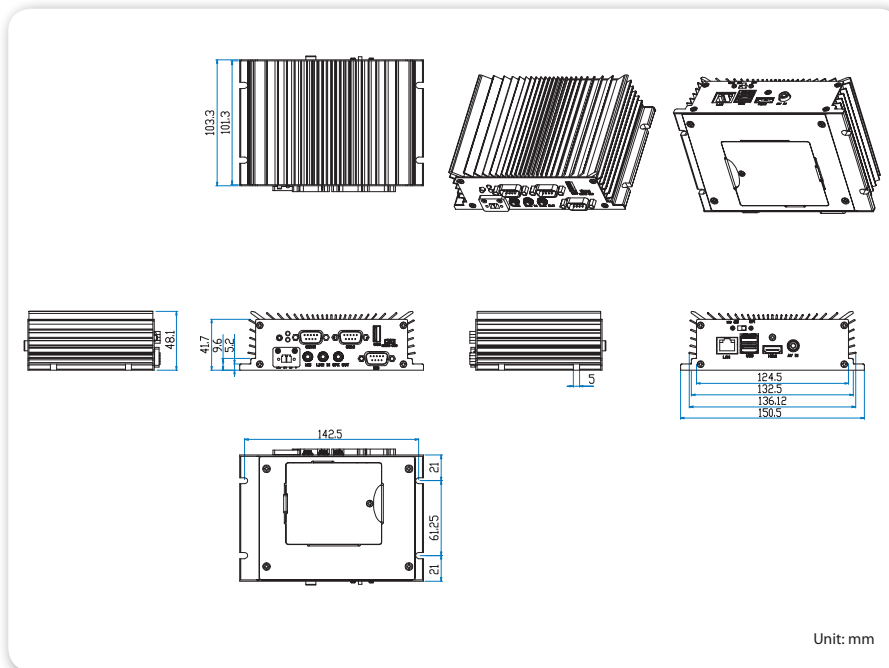
Part Number	System Built-in CPU	Description
AMOS-820-1Q10A1	1.0GHz Freescale i.MX 6Quad Cortex-A9 quad-core SoC	Fanless embedded system with 1GB DDR3 RAM, 4GB eMMC, 512KB SPI Flash ROM, HDMI, 3 USB 2.0, Micro USB 2.0 OTG port, 2 CAN bus, 2 COM, GPIO, Gigabit Ethernet, miniPCIe, RCA-in, 12V DC-in
AMOS-820-2Q1QA1	1.0GHz Freescale i.MX 6Quad Cortex-A9 quad-core SoC	Fanless embedded system with 1GB DDR3 RAM, 4GB eMMC, 512KB SPI Serial Flash, HDMI, 3 USB 2.0, Micro USB 2.0 OTG port, 2 CAN bus, 2 COM, Gigabit Ethernet, miniPCIe, RCA-in, PoE function, 12V DC-in

## Optional Accessories

### Wireless Accessories

Part Number	Description
00GO27100B62T050	VNT9271 IEEE 802.11b/g/n USB Wi-Fi module
00GO48500BE200C2	VNT9485 IEEE 802.11b/g/n miniPCIe Wi-Fi module
EMIO-2550-00A1	Ublox 3.75G HSPA/UMTS mobile broadband full size miniPCIe module with GPS combo
EMIO-2550-01A1	Ublox 3.75G HSPA/UMTS mobile broadband full size miniPCIe module

## Dimensions



## Packing List

- AMOS-820 system
- AC-to-DC adapter, 2-pole phoenix plug to DC jack
- Screw pack for mounting
- Washer rubbers pack
- Screw pack for Mini PCI-e card
- COM/CAN conversion cable