



## Specifications

CPU	Onboard AMD Ryzen™ Embedded V1000 / R1000 Series
PCH	N/A
Memory	2x DDR4 SO-DIMM, Max. 32GB
BIOS	AMI
Watchdog Timer	256 levels
H/W Monitor	Yes
Storage Device Interface	N/A
Expansion Slots	V1000 Series: 1x PEG(8x)(Gen3), 4x PCI-E(1x)(Gen3), 2x PCI-E(1x) R1000 Series: 1x PEG(4x)(Gen3), 3x PCI-E(1x)(Gen3), 3x PCI-E(1x)
Graphics Controller	AMD Radeon™ Vega GPU integrated
Video Output	V1000 Series: 3x DDI R1000 Series: 2x DDI 1x LVDS or 1x eDP (By option)
Ethernet	Intel® I211AT or I210AT Gigabit LAN
I/O Chipset	Fintek F81804U-I
Serial Port	2x UART (Tx/Rx only)
USB 2.0	8x USB 2.0 Port [USB 2.0 Hub x 3 ports, (VL822-Q7)]
USB 3.X	1x USB 3.1 port (10G), 3x USB 3.1 ports (VL822-Q7)
Serial ATA	2x SATA III via carrier board
Audio	AMD Ryzen™ built-in HD audio controller
TPM	TPM (2.0)
Others	Digital I/O (4in/4-out)
Dimensions (L X W)	125mm x 95mm (4.92" x 3.74")
Power Consumption	AMD V1605B w/ 2x 8GB DDR4-2133, +12V: 3.28A AMD R1606G w/ 2x 8GB DDR4-2133, +12V: 3.43A
Operating Temperature	0°C~60°C (32°F~140°F)
Storage Temperature	-20°C~80°C (-4°F~176°F)
Relative Humidity	90% (non-condensing @60°C)

## Features

- Onboard AMD Ryzen™ Embedded V1000/ R1000 Series
- 2x DDR4-2400 SO-DIMM sockets, Max. 32GB, ECC compatible
- Supports up to 4x independent displays (HDMI/DVI/ DisplayPort, LVDS, and eDP) via the carrier board
- 4x USB 3.1, 8x USB 2.0, 2x SATA III
- Supports TPM (2.0)

## Ordering Information

ET977-1605LV	COM Express (Type-6) CPU Module with AMD Ryzen™ V1605B QC APU (2.0GHz~3.6GHz), DDR4 dual-channel memory, LVDS support
ET977-1606LV	COM Express (Type-6) CPU Module with AMD Ryzen™ R1606G DC APU (2.6GHz~3.5GHz), DDR4 dual-channel memory, LVDS support
ET977-1505LV	COM Express (Type-6) CPU Module with AMD Ryzen™ R1505G DC APU (2.4GHz~3.5GHz), DDR4 dual-channel memory, LVDS support
HSET977-A	Heatsink with fan for ET977
HSET977-1	Heat spreader for ET977

## Dimensions and Drawing

