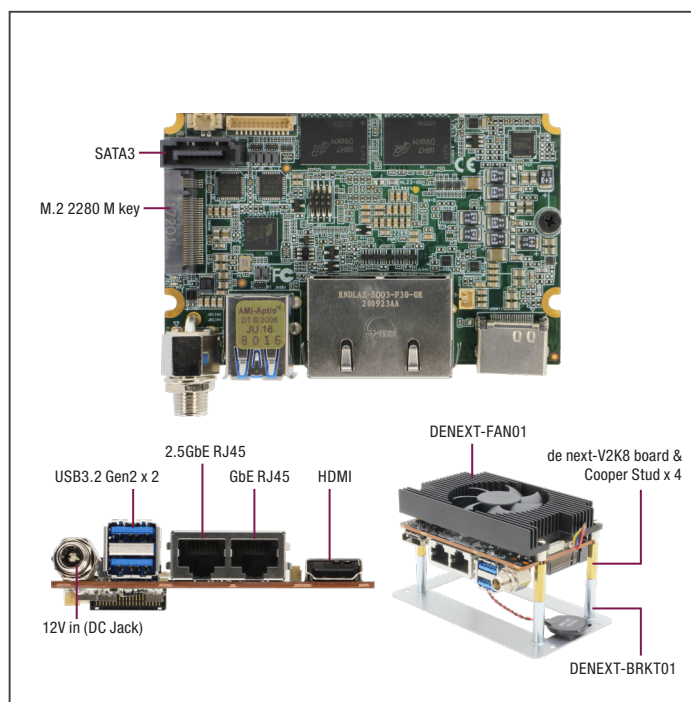


# de next-V2K8

86mm x 55mm Single Board with AMD Ryzen™ Embedded V2000 Series Processors



## Specifications

SYSTEM	
FORM FACTOR	86mm x 55mm, Single Board Computer
CPU	AMD Ryzen™ Embedded V2000 Series Processor AMD Ryzen™ Embedded V2718 with Radeon™ Graphics (8C/16T, 1.7GHz, 25W) AMD Ryzen™ Embedded V2516 with Radeon™ Graphics (6C/16T, 2.1GHz, 25W)
CHIPSET	Integrated with AMD SoC
MEMORY TYPE	Onboard LPDDR4x 3200 , up to 16GB
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	fTPM
RTC BATTERY	Lithium Battery 3V/240mAh
DIMENSION	3.38" x 2.17" (86mm x 55mm)
OS SUPPORT	Windows 10 (64bit) Ubuntu 22.04 (kernel 5.15)
POWER	
POWER REQUIREMENT	+12V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	DC Jack Connector (Optional : Phoenix 2-Pin Connector)
POWER CONSUMPTION	V2718 , LPDDR4 16GB, 3.07A @12V, 36.84W (TYPICAL) V2718 , LPDDR4 16GB, 3.92A @12V, 47.04W (MAX)
DISPLAY	
CONTROLLER	AMD V-Series V2000 with Radeon™ Graphics
LVDS/eDP	eDP 1.4 x 1 , up to 3840 x 2160
Display Interface	HDMI 1.4 x 1 , up to 3840 x 2160@30Hz
Multiple Display	2 Simultaneous Displays
AUDIO	
CODEC	—
AUDIO INTERFACE	—
Speaker	—
EXTERNAL I/O	
ETHERNET	Realtek RTL8111, 1GbE RJ-45 x 1 Intel® i226, 2.5GbE RJ-45 x 1
USB	USB 3.2 Gen 2 x 2
SERIAL PORT	—
VIDEO	HDMI 1.4b x 1

## Features

- Onboard AMD Ryzen™ Embedded V2718/V2516 Processor
- Onboard LPDDR4x 3200MHz, up to 16GB
- HDMI 1.4b x 1, eDP x 1
- 2.5GbE x 1, GbE x 1
- USB 3.2 Gen 2 x 2, USB 2.0 x 4
- M.2 2280 M-Key x 1 (PCIe [x2]), FPC (PCIe [x4] x 1)
- COM Port x 2, DIO 8-bit, SATA III x 1
- 12V-In DC Jack

INTERNAL I/O	
USB	USB 2.0 x 4 Note : USB2.0 x 2 shared with adapter card PER-T642 / PER-T643. (de next-V2K8-A11 only)
SERIAL PORT	COM1 , COM2 (RS232/422/485, support 5V/RI)
VIDEO	eDP 1.4 x 1
SATA	SATA 6.0 Gbps x 1 with +5V SATA Power Connector x 1
AUDIO	—
DIO/GPIO	GPIO 8 bits
SMBus/I2C	Optional
Touch	—
FAN	4 Pin Smart Fan
SIM	—
Front Panel	Power Button, Reset Button, Power LED, SATA LED, Buzzer
Others	—
EXPANSION	
Mini PCI-E/mSATA	—
M.2	M.2 2280 M-key x 1 (PCIe[x2] x 1 or PCIe[x1] x 2, selected by BIOS)
Others	FPC Connector x 1 (PCIe 3.0 [x4] x 1)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP	32°F ~ 140°F (0°C ~ 60°C)
STORAGE TEMP	-40°F ~ 176°F (-40°C ~ 80°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	609,263
EMC	CE/FCC Class A

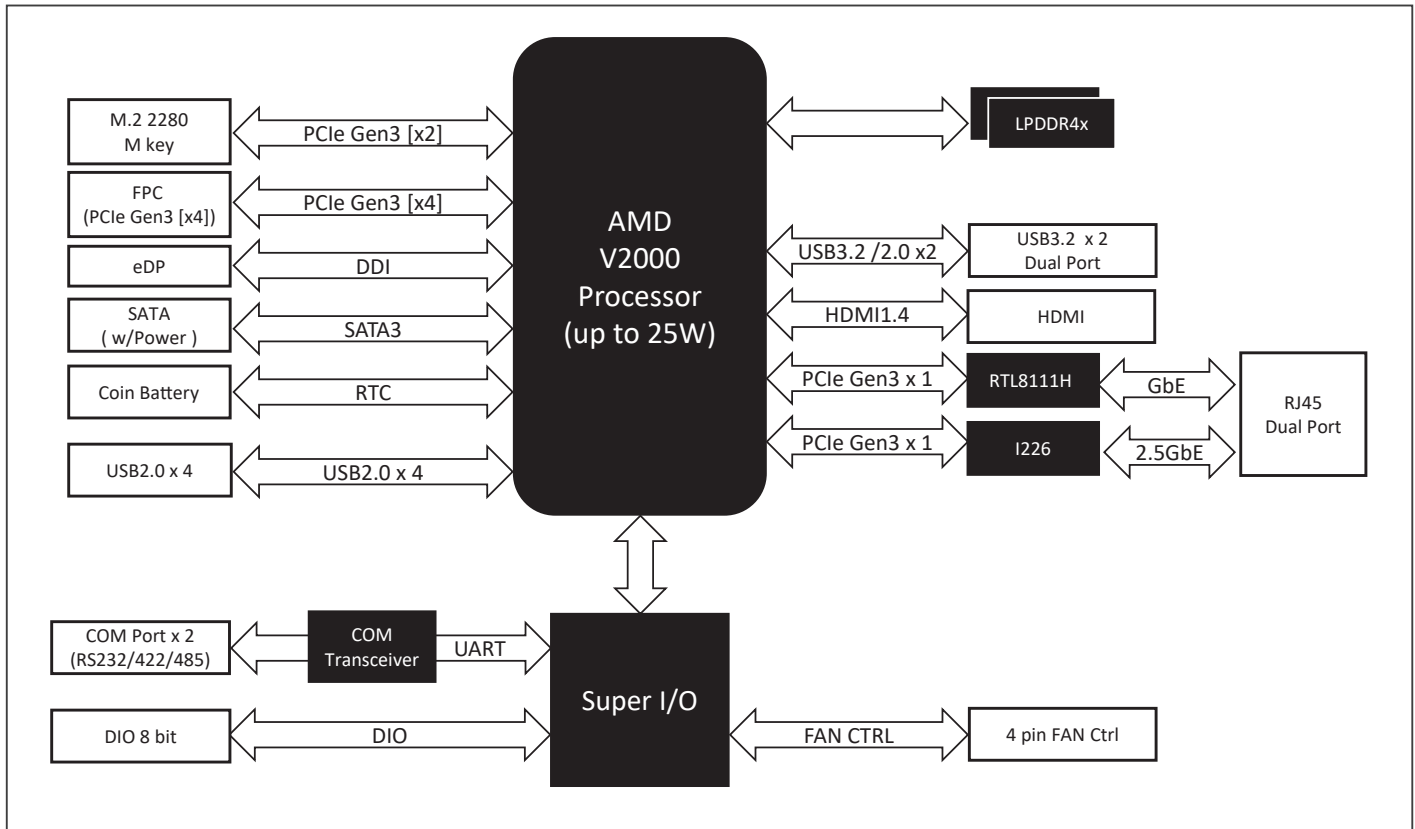
## Optional Accessories

- **170X000512**  
de next 40 pin cable for USB2.0 x 4, COM Port x 2, DIO 8 bit
- **170X000603**  
Front Panel Cable for de next use.Length 10 cm
- **1709070200**  
SATA Cable,180D.Length 20cm
- **170X000322**  
SATA Power Cable.Length 6cm
- **170X000577**  
de next cable for USB 2.0 x 2, COM Port x 2, DIO 8 bit, adapter card connector
- **DENEXT-FAN01**  
CPU cooler for de next-TGU8 / de next-V2K8
- **DENEXT-BRKT01**  
Easy bracket for de next series use
- **DENEXT-HSP01**  
Heatspreader for de next-TGU8/V2K8
- **PER-T642-A03-0001**  
M.2 M 2280 adaptor card to M.2 B key 2242 & M.2 E key 2230 (Only support DENEXT-V2K8-A11)
- **PER-T643-A01-0001**  
M.2 M 2280 adaptor card to M.2 B key 2242 & M.2 B key 3052 (Only support DENEXT-V2K8-A11)

## Packing List

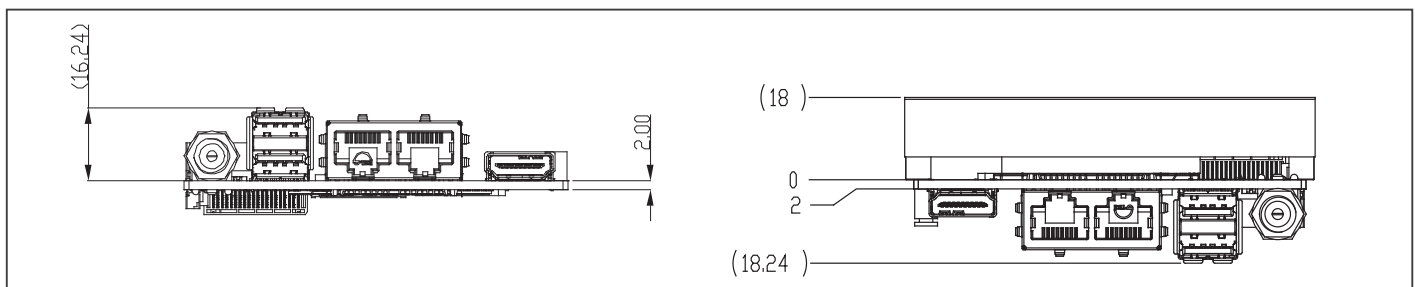
- de next-V2K8 x 1
- Copper Stud.M2.5 x 4

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Memory	Display	Storage	LAN	USB	COM Port	Expansion	TPM	Power	Operating Temperature	Others
DENEXT-V2K8-A11-0001	V2718	Onboard LPDDR4x 16GB	eDP x 1 , HDMI x 1	SATA 6.0 Gbps x 1	2.5GbE x 1, GbE x 1	USB 3.2 Gen 2 x 2 , USB 2.0 x 4	RS232/422/485 x 2	M.2 2280 M-key x 1 , FPC Connector x 1	fTPM	+12V in (DC Jack)	0°C – 60°C	GPIO 8 bits
DENEXT-V2K8-A11-0002	V2516	Onboard LPDDR4x 16GB	eDP x 1 , HDMI x 1	SATA 6.0 Gbps x 1	2.5GbE x 1, GbE x 1	USB 3.2 Gen 2 x 2 , USB 2.0 x 4	RS232/422/485 x 2	M.2 2280 M-key x 1 , FPC Connector x 1	fTPM	+12V in (DC Jack)	0°C – 60°C	GPIO 8 bits
DENEXT-V2K8-A11-0003	V2718	Onboard LPDDR4x 16GB	eDP x 1 , HDMI x 1	SATA 6.0 Gbps x 1	2.5GbE x 1, GbE x 1	USB 3.2 Gen 2 x 2 , USB 2.0 x 4	RS232/422/485 x 2	M.2 2280 M-key x 1 , FPC Connector x 1	fTPM	+12V in (2 Pin Phoenix Connector)	0°C – 60°C	GPIO 8 bits
DENEXT-V2K8-A11-0004	V2516	Onboard LPDDR4x 16GB	eDP x 1 , HDMI x 1	SATA 6.0 Gbps x 1	2.5GbE x 1, GbE x 1	USB 3.2 Gen 2 x 2 , USB 2.0 x 4	RS232/422/485 x 2	M.2 2280 M-key x 1 , FPC Connector x 1	fTPM	+12V in (2 Pin Phoenix Connector)	0°C – 60°C	GPIO 8 bits