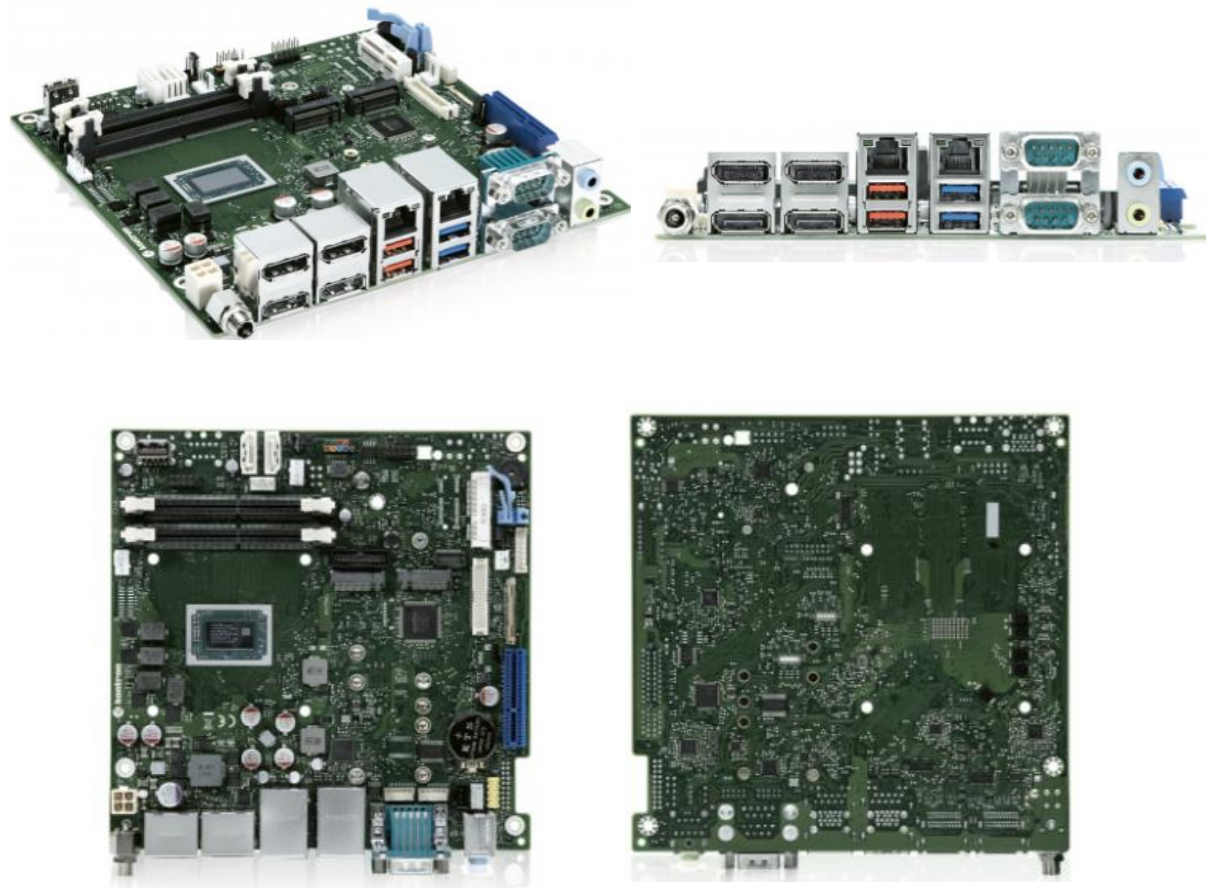


CEX – D3713-V/R mITX

AMD Embedded V1000/R1000 Series SoC Platform for AMD FP5 SoC Processor



⚙️ Features

- AMD Radeon™ Vega Graphics (within SoC)
- Up to 4x DisplayPort V1.4
- Dual Channel LVDS (24 Bit) and eDP V1.3 (4 k) onboard
- Designed for Fan less operation
- M.2 Key-B & M.2 Key M & Mini-PCI Express® supported

Specifications

System	
Processor	AMD Ryzen™ Embedded V1000 / R1000 Series V1: AMD Embedded V1202B SoC V2: AMD Embedded V1605B SoC V4: AMD Embedded V1807B SoC R1: AMD Embedded R1102G SoC R2: AMD Embedded R1305G SoC R4: AMD Embedded R1606G SoC
Memory	DDR4 2400/DDR4 3200 (D3713-V4) SDRAM, Dual Channel 2x SO DIMM sockets, up to 32 GByte memory, ECC/non-ECC **)
Video	
Graphics	AMD Radeon™ Vega Graphics Up to 4x DPP V1.4 incl. DP++ support* 1x embedded DP (eDP V1.3; supporting 4K resolutions) 1x Dual-Channel 24bit LVDS Following max. display combinations are supported: V-Series: 2x DPP + 1x LVDS + 1x eDP, 3x DPP + 1x LVDS or eDP, 4x DPP D3713-R2/R4: 1x DPP + 1x LVDS + 1x eDP, 2x DPP + 1x LVDS or eDP, 3x DPP D3713-R1: 1x LVDS + 1x eDP, 1x DPP + 1x LVDS or eDP, 2x DPP
Audio	
Audio Codec	Realtek ALC256
Audio Interface	5.1-channel, High-Definition Audio Codec
Network Connection	
Ethernet	Intel® i210 & Realtek RTL8111H with 10/100/1000 MBit/s, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display, Teaming Support
Peripheral Connection	
USB	2x USB 2.0 (by header), 2x USB 3.1 Gen1, 2x USB 3.1 Gen1 (by header), 2x USB 3.1 Gen2, 1x USB 2.0 stick socket
Serial Port	1x RS232/422/485; 3x RS232 (2x by header)

Other I/Os	GPIO (by header)
Storage & Expansion	
SATA	2x Serial ATA III 600 Interface (up to 6GBit/s), NCQ, AHCI,
PCIe/PCI Slots	<p>1x M.2 PCIe x4 (Key-M: 2230/2242/2280), 1x Mini PCIe (Gen3, halfsize/fullsize)</p> <p>1x PCIe x4 Gen3; 1x M.2 PCIe x2/USB 2.0/SATA (Key B: 2242/3052/2260/2280)</p> <p>Note (M.2 Key-M): R-Series: M.2 Key-M socket shared with PCIe x4 slot (M.2 or PCIe slot usable; BIOS Setup option) Supports PCIe-based NVME SSD modules</p> <p>Note (M.2 Key-B): V-Series: PCIe x2 ; R-Series: PCIe x1</p> <p>SATA line shared with onboard SATA Port1 (only if a SATA-based M.2 module is installed) Supports PCIe-based NVME SSD modules, SATA-based SSD modules, and industrial multipurpose modules based on PCIe / SATA / USB</p>
Power	
Connector	External/Internal DC-In (DC Jack/4-Pin Mini-Fit)
Input Voltage	DC Input 8 V-32 V/36 V *) (max. 10 A /max. 130 W)
Firmware	
BIOS	<p>AMI Aptio 5.x (UEFI) BIOSmodified and adapted by Kontron; Recovery BIOS, SM-BIOS (DMI), BIOS Update, Quick Boot, Logo Boot, Quiet Boot, Plug & Play, Automatic DRAM Configuration, BIOS Support for S.M.A.R.T.,Advanced Power Management, ACPI S3/S4, Wake on time from S5. Boot support for M.2 SSD (AHCI / NVME), Watchdog Support No legacy OS support, no MBR installation (UEFI only)</p>
Watchdog	3 level HW Watchdog (BIOS POST/BIOS Boot/OS)
Real Time Clock	Integrated
TPM	AMD integrated TPM V2.0
System Control	
FP HEADER	1x Header for Reset button, HDD LED, Power button, Power LED
Security	Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial-/

	USB-Port Access Protection, Write Protection for Flash BIOS, EraseDisk (BIOS Feature), AMD integrated TPM V2.0, socket for optional TPM upgrade module				
Cooling					
Fan	2x PWM fan (CPU/System)				
Software					
OS Support	MS Windows 10 Linux-64 No legacy OS support, no MBR installation (UEFI only)				
Mechanical					
Dimensions (L x W)	Mini-ITX: 6.7" x 6.7" (170 x 170 mm)				
Certifications					
EMC & Safety	CE Class-B, FCC-B verified cTÜVus acc. IEC62368-1				
Power Supply Requirements					
DC-In (wide range)	Voltage Range	Min. PS Load	Max. Voltage Tolerance	TYP. Motherboard Input Power*	Max. Motherboard Input Power**
	8 V - 32 V/36 V (***)	0 A	± 5 %	<10 W/40 W	130 W
<p>*) Motherboard incl. Memory and M.2 NVME SSD (approximations for MS Windows 10 Idle Mode / Full Processor Load @ 25 W TDP)</p> <p>**) Motherboard incl. Memory, M.2, PCIe/Mini-PCIe devices, USB Devices, LVDS / eDP devices, SATA devices</p> <p>***) 8 V - 36 V for D3713-Vx2/Rx2 versions</p>					
Motherboard Versions					
	Processor (APU)	Graphics Radeon™ Vega		Max. Memory Speed	
-V4	V1807B Quad-Core 3.35/3.8 GHz **) Supported TDP Limits: 54 W (***)/45 W/35 W	GPU @ 1.3 GHz 11x CU ****) up to 4 displays (eDP, LVDS, DPP1, DPP2, DPP3, DPP4)		DDR4-3200 Two sockets (ECC supported)	
-V2	V1605B Quad-Core 2.0/3.6	GPU @ 1.1 GHz 8x CU ****) up to 4		DDR4-2400 Two sockets	

	GHz **) Supported TDP Limits: 25 W ***)/15 W/12 W	displays (eDP, LVDS, DPP1, DPP2, DPP3, DPP4)	(ECC supported)
-V1	V1202B Dual-Core 2.3/3.2 GHz **) Supported TDP Limits: 25 W ***)/15 W/12 W	GPU @ 1.0 GHz 3x CU *****) up to 4 displays (eDP, LVDS, DPP1, DPP2, DPP3, DPP4)	DDR4-2400 Two sockets (ECC supported)
-R4	R1606G Dual-Core 2.6/3.5 GHz **) Supported TDP Limits: 25 W ***)/15 W/12 W	GPU @ 1.2 GHz 3x CU *****) up to 3 displays (eDP, LVDS, DPP1, DPP2, DPP4)	DDR4-2400 Two sockets (ECC supported)
-R2	R1305G Dual-Core 1.5/2.8 GHz **) Supported TDP Limits: 10 W ***)/8	GPU @ 1.0 GHz 3x CU *****) up to 3 displays (eDP, LVDS, DPP1, DPP2, DPP4)	DDR4-2400 Two sockets (ECC supported)
-R1	R1102G Dual-Core 1.2/2.6 GHz **) Supported TDP Limit: 6	GPU @ 1.0 GHz 3x CU *****) up to 2 displays (eDP, LVDS, DPP1, DPP2)	DDR4-2400 One socket (ECC supported)