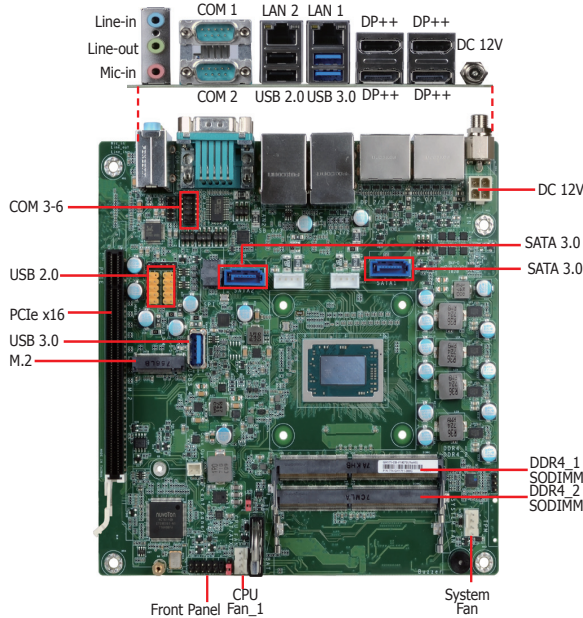




**AMD® Ryzen™ V1000/R1000 Series
Mini-ITX**

GH171



Features

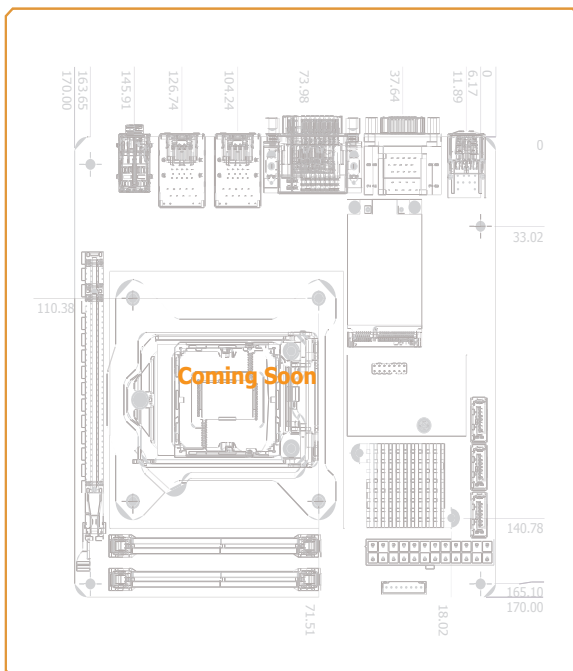
- 2 DDR4 SODIMM up to 32GB
- Four independent displays: 4 DP++
- DP++ resolution up to 4096x2160 @ 60Hz
- Expansion: 1 PCIe x16, 1 M.2 M Key
- Rich I/O: 2 GbE, 6 COM, 3 USB 3.0, 6 USB 2.0



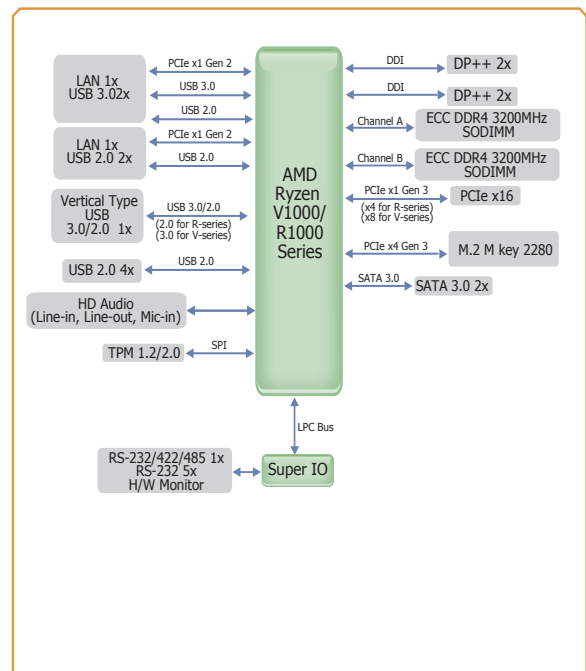
Ordering Information

Model Name	P/N	Processor	Memory	GbE	COM	USB 3.0	USB 2.0	Power	Thermal	Temp.
GH171-V1807B	770-GH1711-000G	V1807B 35-54W	2 SODIMM	2	6	3	6	12V DC	Active	0 to 60°C
GH171-V1756B	770-GH1711-100G	V1756B 35-54W	2 SODIMM	2	6	3	6	12V DC	Active	0 to 60°C
GH171-V1605B	770-GH1711-300G	V1605B 12-25W	2 SODIMM	2	6	3	6	12V DC	Active	0 to 60°C
GH171-V1202B	770-GH1711-200G	V1202B 12-25W	2 SODIMM	2	6	3	6	12V DC	Active	0 to 60°C

Mechanical Drawing



Block Diagram





Specifications

SYSTEM	Processor	AMD® Ryzen™ Embedded V1807, Quad Core, 2MB Cache, 11 CU, 3.35GHz (3.8GHz), 35-54W AMD® Ryzen™ Embedded V1756, Quad Core, 2MB Cache, 8 CU, 3.25GHz (3.6GHz), 35-54W AMD® Ryzen™ Embedded V1605, Quad Core, 2MB Cache, 8 CU, 2.0GHz (3.6GHz), 12-25W AMD® Ryzen™ Embedded V1202, Dual Core, 1MB Cache, 3 CU, 2.3GHz (3.2GHz), 12-25W AMD® Ryzen™ Embedded R1000 series	
	Memory	Two 260-pin SODIMM up to 32GB	Dual Channel DDR4 up to 3200MHz
	BIOS	AMI BIOS	
	GRAPHICS	Controller	AMD® Radeon™ Vega Graphics
	Feature	OpenGL 4.5, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9	
	Display	4 x DP++	DP++: resolution up to 4096x2160 @ 60Hz
EXPANSION	Interface	1 x PCIe x16 (x8 signal), (x4 signal with R1000) 1 x M.2 M Key (2280 PCIe x4), (x2 signal with R1000)	
AUDIO	Audio Codec	Realtek Audio Codec with 5.1 Channel Support	
ETHERNET	Controller	2 x Realtek Ethernet LAN Controller	
REAR I/O	Ethernet	2 x GbE (RJ-45)	
	USB	2 x USB 3.0 2 x USB 2.0	
	Display	4 x DP++ (V1000) 3 x DP++ (R1000)	
	Audio	1 x Mic-in 1 x Line-in 1 x Line-out	
	Serial	1 x RS-232/422/485 (DB-9) 1 x RS-232 (DB-9)	
	INTERNAL I/O	Serial	4 x RS-232 (2.0mm pitch) (TX/RX signal only)
	USB	4 x USB 2.0 (2.54mm pitch) 1 x Vertical Type A USB 3.0 (V1000), 1 x Vertical Type A USB 2.0 (R1000)	
	Audio	1 x S/PDIF 1 x Audio (Mic-in/Line-out)	
	SATA	2 x SATA 3.0 (up to 6GB/s) with 7-pin VCC support 2 x SATA Power for 2.5"/3.5" HDD/SSD	
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	TPM	TPM1.2/2.0	
POWER	Type	Single 12V DC	
	Connector	4-pin Vertical Type Connector (default) 4-pin Right Angle Type Connector (optional) DC-In Jack (optional)	
	Consumption	TBD	
	RTC Battery	CR2032 Coin Cell	
OS SUPPORT	Microsoft/Linux	Windows 10 Ubuntu 18.04LTS	
ENVIRONMENT	Temperature	Operating: 0 to 60°C	Storage: -40 to 85°C
	Humidity	Operating: 10 to 90% RH	Storage: 10 to 90% RH
	MTBF	TBD	
MECHANICAL	Dimensions	Mini-ITX Form Factor	170mm (6.7") x 170mm (6.7")

Packing List

• 1 GH171 motherboard	
• I/O shield	
• Cooler for 774-GH1711-000G & 774-GH1711-100G	A71-108113-000G
• Cooler for 774-GH1711-200G & 774-GH1711-300G	A71-108114-000G

Optional Items

• SATA signal and power cable (Length: 300mm)	A81-002013-000G
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