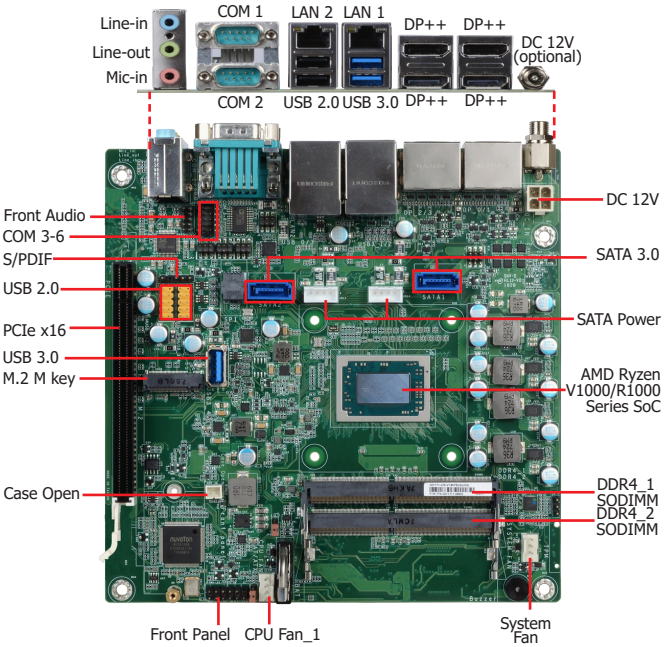
AMD® Ryzen™ V1000/R2000/R1000 Series Mini-ITX

GH171



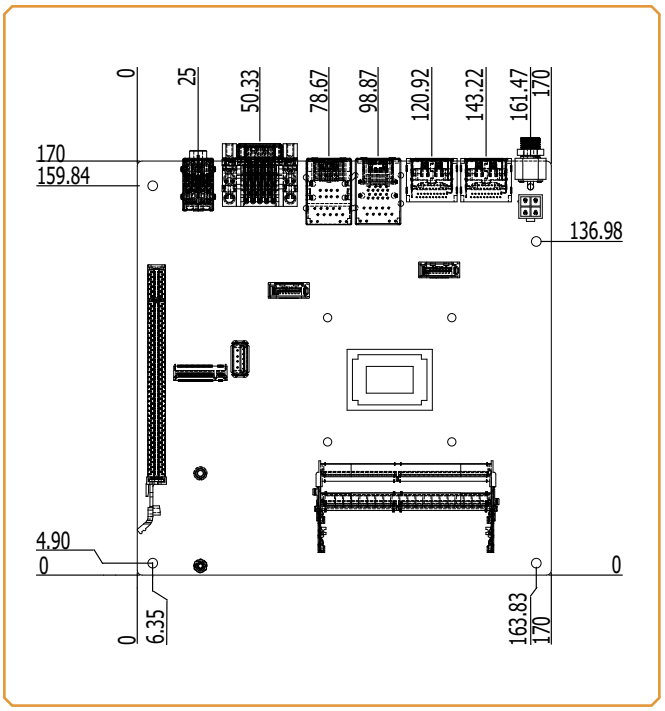
Features

- 2 DDR4 SODIMM up to 32GB
- Four independent displays: DP++ + DP++ + DP++ + 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

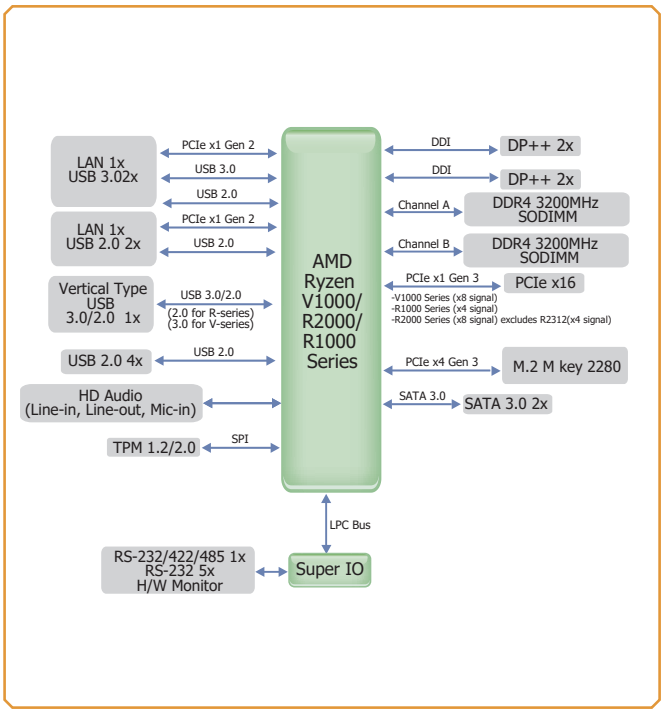
Ordering Information

Model Name	P/N	Processor	Memory	GbE	DP	COM	USB 3.0	USB 2.0	Power	Thermal	Temp.
GH171-V1807B	770-GH1712-000G	V1807B 35-54W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-V1756B	770-GH1712-100G	V1756B 35-54W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-V1202B	770-GH1712-200G	V1202B 12-25W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-V1605B	770-GH1712-300G	V1605B 12-25W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-R1505G	770-GH1712-400G	R1505G	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-R1606G	770-GH1712-500G	R1606G	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-R2312B	770-GH1712-600G	R2312 12~25W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-R2314B	770-GH1712-700G	R2314 12~35W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-R2514B	770-GH1712-800G	R2514 12~35W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C
GH171-R2544B	770-GH1712-900G	R2544 35~54W	2 SODIMM	2	4	6	3	6	12V DC	Active	0 to 60°C

Mechanical Drawing



Block Diagram



Specifications

SYSTEM	**Processor**	AMD® Ryzen™ Embedded V1807B, 4C/8T, 2MB Cache, 11 CU, 3.35GHz (3.8GHz), 45W (35-54W) AMD® Ryzen™ Embedded V1756B, 4C/8T, 2MB Cache, 8 CU, 3.25GHz (3.6GHz), 45W (35-54W) AMD® Ryzen™ Embedded V1605B, 4C/8T, 2MB Cache, 8 CU, 2.0GHz (3.6GHz), 15W (12-25W) AMD® Ryzen™ Embedded V1202B, 2C/4T, 1MB Cache, 3 CU, 2.3GHz (3.2GHz), 15W (12-25W) AMD® Ryzen™ Embedded R1606G, 2C/4T, 3 CU, 2.6GHz (3.5GHz), 15W AMD® Ryzen™ Embedded R1505G, 2C/4T, 3 CU, 2.4GHz(3.3GHz),15W AMD® Ryzen™ Embedded R2312, 3C/4T, 2MB Cache, 3CU, 2.7GHz (3.5GHz), 12~25W AMD® Ryzen™ Embedded R2314, 6C/12T, 4MB Cache, 6 CU, 2.1GHz (3.5GHz), 12~35W AMD® Ryzen™ Embedded R2514, 6C/12T, 4MB Cache, 8 CU, 2.1GHz (3.7GHz), 12~35W AMD® Ryzen™ Embedded R2544, 4C/8T, 4MB Cache, 8 CU, 3.35GHz (3.7GHz), 35~54W
	Memory	Two 260-pin SODIMM up to 32GB Dual Channel DDR4 up to 3200MHz (ECC/non ECC support)
	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**	1x PCIE x16 slot -V1000 Series (x8 signal) -R1000 Series(x4 signal) -R2000 Series (x8 signal) excludes R2312(x4 signal) 1 x M.2 2280 M Key (x4 signal with V1000 series, x2 signal with R1000 series) (support 2242 by BOM opt.)
AUDIO	**Audio Codec**	Realtek ALC887-VD2-CG
ETHERNET	**Controller**	2 x Realtek RTL8111HN-CG (10/100/1000Mbps)
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 series) 3 x DP++ (R1000 series)
	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 series) 1 x Vertical Type A USB 2.0 (R1000 series)
	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
WATCHDOG TIMER	**Output & Interval**	System Reset, Programmable via Software from 1 to 255 Seconds
SECURITY	**TPM**	TPM2.0
POWER	**Type**	Single 12V +/-5% DC
	Connector	Straight Type Connector (4-pin) DC-in Jack (available upon request) Right Angle Connector (4-pin) (available upon request)
	Consumption	Idle: 1.2A@14.4W Max: 6.1A@73.4W
	RTC Battery	CR2032 Coin Cell
OS SUPPORT	**Microsoft/Linux**	Windows 10 Linux
ENVIRONMENT	**Temperature**	Operating: 0 to 60°C Storage: -40 to 85°C
	Humidity	Operating: 10 to 90% RH Storage: 10 to 90% RH
	MTBF	536,492 hrs @ 25°C 334,201 hrs @ 45°C 223,268 hrs @ 60°C
MECHANICAL	**Dimensions**	Mini-ITX Form Factor 170mm (6.7") x 170mm (6.7")
	Height	PCB: 1.6mm Top Side: 20mm, Bottom Side: 3mm
CERTIFICATION		CE, FCC, RoHS, UL, UKCA

Packing List

• 1 GH171 motherboard	
• 1 I/O shield	A49-GH1710-000G
• 1 Cooler (For 25W, height:35mm) (For 35W~54W, height:47mm)	A71-108114-010G A71-108113-000G

Optional Items

• SATA signal and power cable (Length: 300mm)	A81-002013-000G
• USB port cable (Length: 200mm)	332-253010-026G
• COM port cable (Length: 300m)	A81-015041-018G

DFI reserves the right to change the specifications at any time prior to the product's release. Changes thereafter will be based on the product's revision. Please contact your sales representative for the exact revision offered in your area. All product names mentioned are trademarks of their respective companies. © November 27, 2025 DFI Inc.