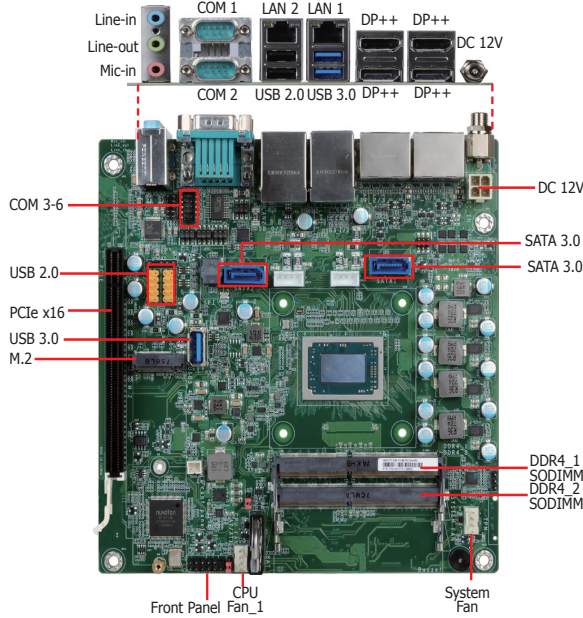




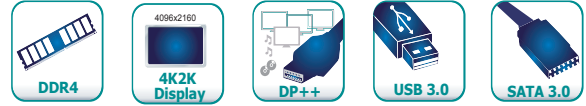
**AMD® Ryzen™ V1000/R1000 Series  
Mini-ITX**

**GH171**



**Features**

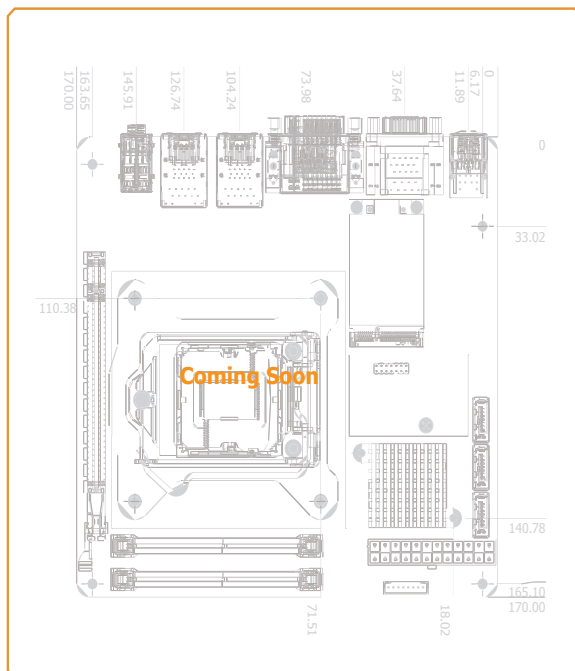
- 2 DDR4 SODIMM up to 32GB
- Four independent displays: 4 DP++
- DP++ resolution up to 4096x2160 @ 60Hz
- Expansion: 1 PCIe x16, 1 M.2 M Key
- Rich I/O: 2 GbE, 6 COM, 3 USB 3.0, 6 USB 2.0



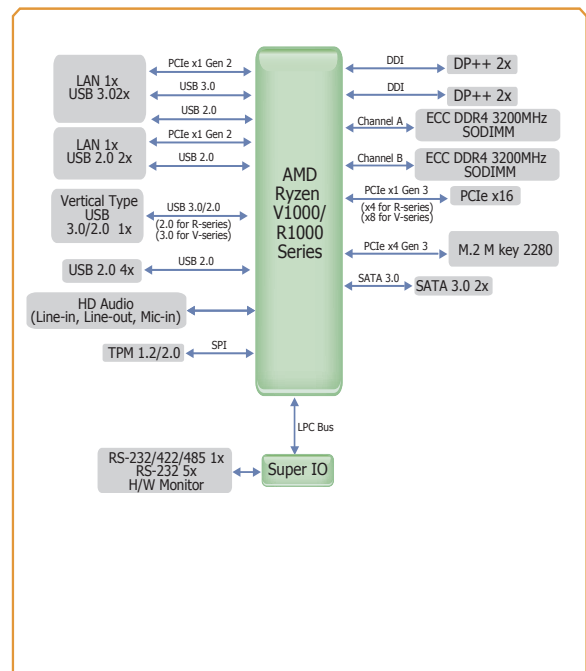
**Ordering Information**

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**

<b>SYSTEM</b>	<b>Processor</b>	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	
	<b>Memory</b>	Two 260-pin SODIMM up to 32GB	Dual Channel DDR4 up to 3200MHz
	<b>BIOS</b>	AMI BIOS	
	<b>GRAPHICS</b>	<b>Controller</b>	AMD® Radeon™ Vega Graphics
	<b>Feature</b>	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	
	<b>Display</b>	4 x DP++	DP++: resolution up to 4096x2160 @ 60Hz
<b>EXPANSION</b>	<b>Interface</b>	1 x PCIe x16 (x8 signal), (x4 signal with R1000) 1 x M.2 M Key (2280 PCIe x4), (x2 signal with R1000)	
<b>AUDIO</b>	<b>Audio Codec</b>	Realtek Audio Codec with 5.1 Channel Support	
<b>ETHERNET</b>	<b>Controller</b>	2 x Realtek Ethernet LAN Controller	
<b>REAR I/O</b>	<b>Ethernet</b>	2 x GbE (RJ-45)	
	<b>USB</b>	2 x USB 3.0 2 x USB 2.0	
	<b>Display</b>	4 x DP++ (V1000) 3 x DP++ (R1000)	
	<b>Audio</b>	1 x Mic-in 1 x Line-in 1 x Line-out	
	<b>Serial</b>	1 x RS-232/422/485 (DB-9) 1 x RS-232 (DB-9)	
	<b>INTERNAL I/O</b>	<b>Serial</b>	4 x RS-232 (2.0mm pitch) (TX/RX signal only)
	<b>USB</b>	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)	
	<b>Audio</b>	1 x S/PDIF 1 x Audio (Mic-in/Line-out)	
	<b>SATA</b>	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	
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>SECURITY</b>	<b>TPM</b>	TPM1.2/2.0	
<b>POWER</b>	<b>Type</b>	Single 12V DC	
	<b>Connector</b>	4-pin Vertical Type Connector (default) 4-pin Right Angle Type Connector (optional) DC-In Jack (optional)	
	<b>Consumption</b>	TBD	
	<b>RTC Battery</b>	CR2032 Coin Cell	
<b>OS SUPPORT</b>	<b>Microsoft/Linux</b>	Windows 10 Ubuntu 18.04LTS	
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: 0 to 60°C	Storage: -40 to 85°C
	<b>Humidity</b>	Operating: 10 to 90% RH	Storage: 10 to 90% RH
	<b>MTBF</b>	TBD	
<b>MECHANICAL</b>	<b>Dimensions</b>	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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## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508  
Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050  
Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28  
Business Registration Number: 07699660