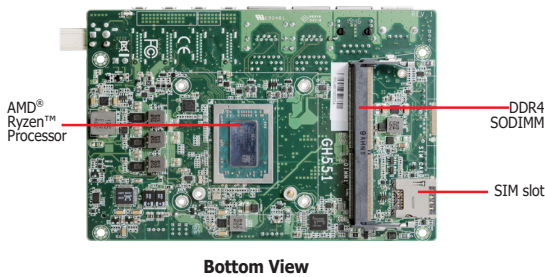
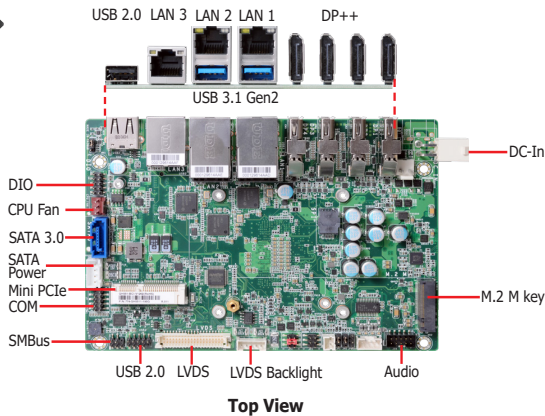




AMD[®] Ryzen[™] V1000/R1000 Series 3.5" SBC



GH551

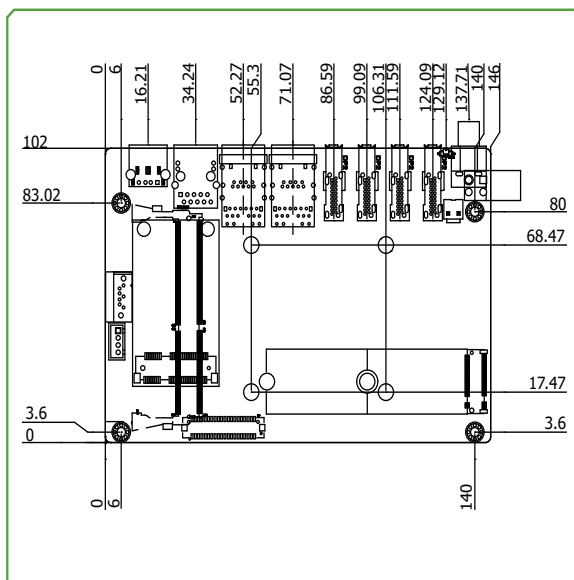


Features

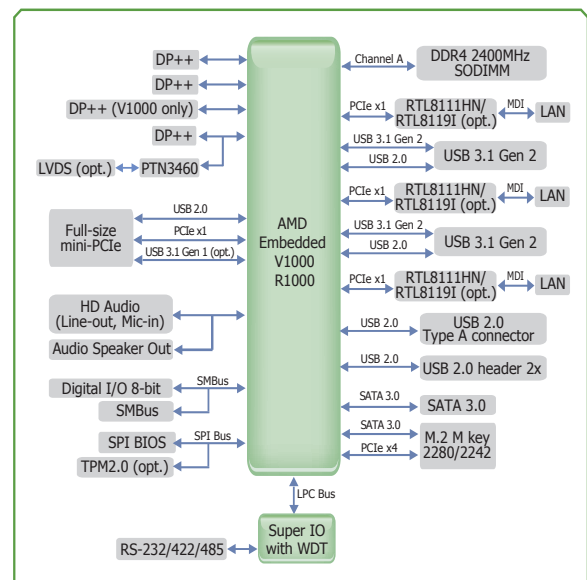
- 1 DDR4 2400MHz SODIMM up to 16GB
- Multiple displays: max. 4 DP++/3 DP++ + LVDS
- DP++ resolution up to 4096x2160 @ 120Hz
LVDS resolution up to 1920x1200 @ 60Hz
- Support Audio Speaker out
- Multiple Expansion: 1 M.2 M Key, 1 Mini PCIe
- Rich I/O: 3 Intel GbE, 2 USB 3.1 Gen2, 1 USB 2.0



Mechanical Drawing



Block Diagram





Specifications

SYSTEM	Processor	AMD [®] Ryzen™ Embedded V1605B, 4C/8T, 2MB Cache, 8 CU, 2.0GHz (3.6GHz), 15W AMD [®] Ryzen™ Embedded V1202B, 2C/4T, 1MB Cache, 3 CU, 2.3 GHz (3.2GHz), 15W AMD [®] Ryzen™ Embedded V1404I, 4C/8T, 2MB Cache, 8 CU, 1.6GHz (2.8GHz), 15W 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	
	Memory	1 x 260-pin SODIMM up to 16GB	Single Channel DDR4 up to 2400MHz
	BIOS	AMI SPI 64Mbit	
	Controller	AMD [®] Radeon™ Vega Graphics	
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	V1000: 4 x DP++ (1 x LVDS opt.) R1000: 3 x DP++(1 x LVDS opt.)	DP++: resolution up to 4096x2160 @ 120Hz LVDS: resolution up to 1920x1200 @ 60Hz
	Multiple Displays	V1000: 4 x DP++ (1 x LVDS opt.) R1000: 3 x DP++(1 x LVDS opt.)	
	Interface	1 x Full-size mini-PCIe (PCIe/USB 2.0, opt.: USB 3.1 Gen 1) 1 x M.2 2280/2242 M key (Support SATA/PCIe SSD)	
EXPANSION	Audio Codec	Realtek ALC262	
AUDIO	Controller	3 x Realtek [®] RTL8111HN/RTL8119I (10/100/1000Mbps)	
ETHERNET	Ethernet	3 x GbE (RJ-45)	
	USB	2 x USB 3.1 Gen2 1 x USB 2.0	
	Display	V1000: 4 x DP++ R1000: 3 x DP++	
	Serial	1 x RS-232/422/485 (2.0mm pitch)	RS485 support auto flow control
INTERNAL I/O	USB	1 x USB 2.0 (2.0mm pitch)	
	Display	1 x LVDS LCD Panel Connector	1 x Backlight Power
	Audio	1 x Mic-in 1 x Line-out 1 x Speaker-out (2 x 3W, 8ohm)	
	SATA	1 x SATA 3.0 (up to 6Gb/s) 1 x SATA Power	
	DIO	1 x 8-bit DIO	
	SMBus	1 x SMBus	
	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
	TPM 2.0	fTPM2.0 (default)	dTPM2.0 (opt.)
SECURITY	Type	Single 12V DC	
	Connector	4-pin Right Angle Type Connector (default)	DC Jack (available upon request) 4-pin Vertical Type Connector (available upon request)
	Consumption	TBD	
	RTC Battery	CR2032 coin cell	
POWER		Windows 10 IoT Enterprise (64-bit)	Linux
OS SUPPORT	Temperature	Operating: -5 to 65°C, -30 to 80°C Storage: -40 to 85°C	
	Humidity	Operating: 10 to 90% RH	Storage: 10 to 90% RH
	MTBF	TBD	
	Dimensions	3.5" SBC Form Factor	146mm (5.75") x 102mm (4.02")
MECHANICAL	Height	PCB: 1.6mm	Top Side: 15.5mm, Bottom Side: 4.0mm
		CE, FCC Class B, RoHS	
CERTIFICATIONS			

Ordering Information

Model Name	P/N	Processor	Memory	GbE	Display	USB 3.1 Gen2	USB 2.0	RS-232/422/485	Power	Temp.
GH551-BCI-V1605B	770-GH5511-000G	V1605B	1 SODIMM	3	4 x DP++	2	2	1	12V DC	-5 to 65°C
GH551-BCI-V1202B	770-GH5511-100G	V1202B	1 SODIMM	3	3 x DP++ / 1x LVDS	2	2	1	12V DC	-5 to 65°C
GH551-BCI-R1606G	770-GH5511-300G	R1606G	1 SODIMM	3	3 x DP++	2	2	1	12V DC	-5 to 65°C
GH551-BCI-R1505G	770-GH5511-400G	R1505G	1 SODIMM	3	2 x DP++ / 1x LVDS	2	2	1	12V DC	-5 to 65°C

Packing List

• 1 GH551 board	
• 1 COM cable (2P ports, Length: 250mm)	332-753040-000G
• SATA cable (Length: 500mm)	332-553001-005G
• SATA power cable (Length: 250mm)	A81-004041-016G
HEATSINK (Height: 35.00mm)	V series: A71-008136-010G R series: A71-008136-000G

Optional Items

• USB 2.0 cable (2 ports, Length: 200mm)	A81-001032-016G
• Audio cable (Length: 160mm)	A81-022007-016G
• Power adapter (60W,12V)	671-106012-000G

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.

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