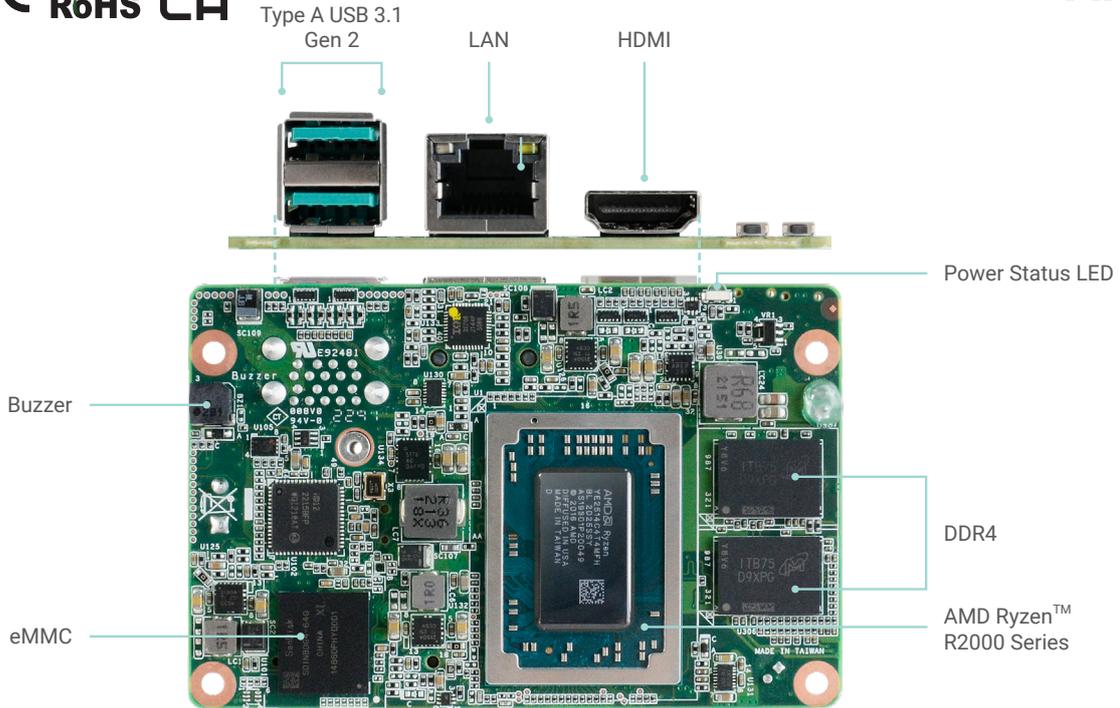


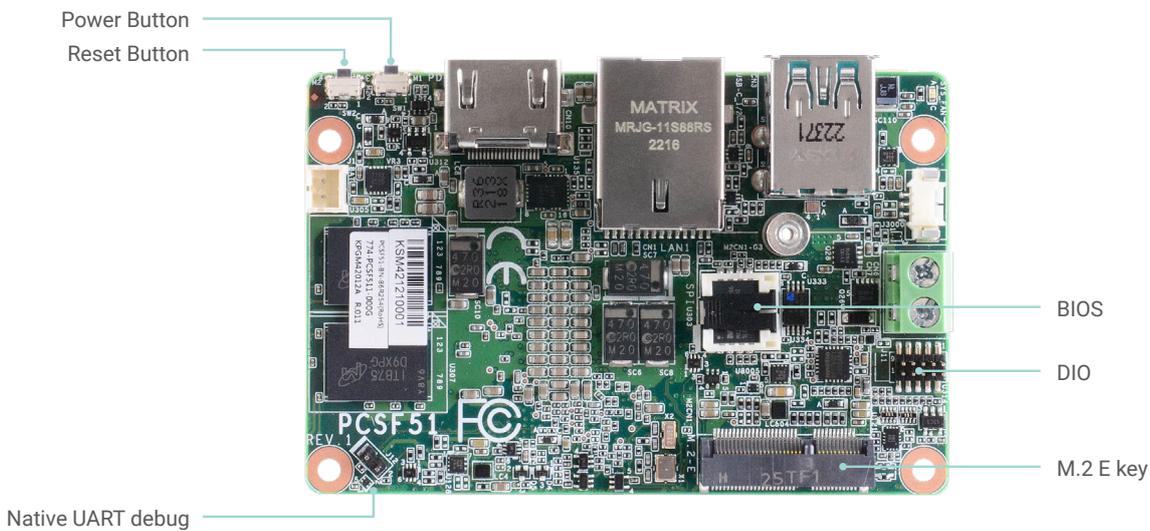
# PCSF51



AMD Ryzen™ Embedded R2000 Series  
Picasso  
1.8" SBC



Bottom View



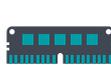
Top View

## KEY FEATURES



### 1.8" SBC

AMD R2000 1.8" SBC



### DDR4

1 DDR4 Memory Down  
up to 4GB/8GB



### 4K High Resolution

HDMI 1.4 resolution  
supports up to  
4096 x 2160 @ 24Hz



### Storage up to 128GB

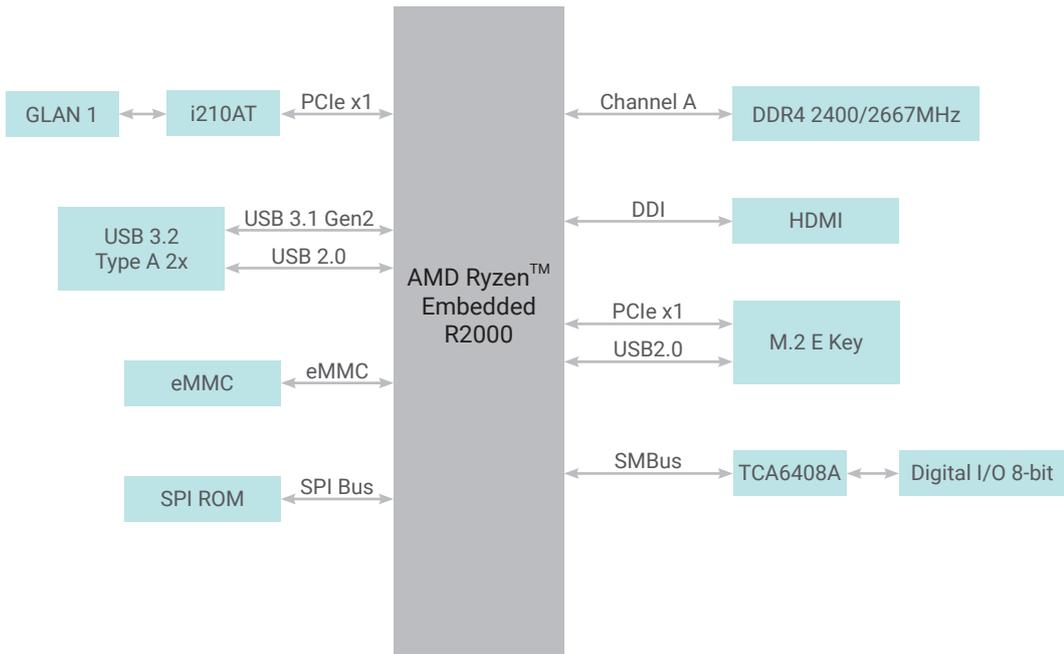
eMMC 32GB/ 64GB/  
128GB



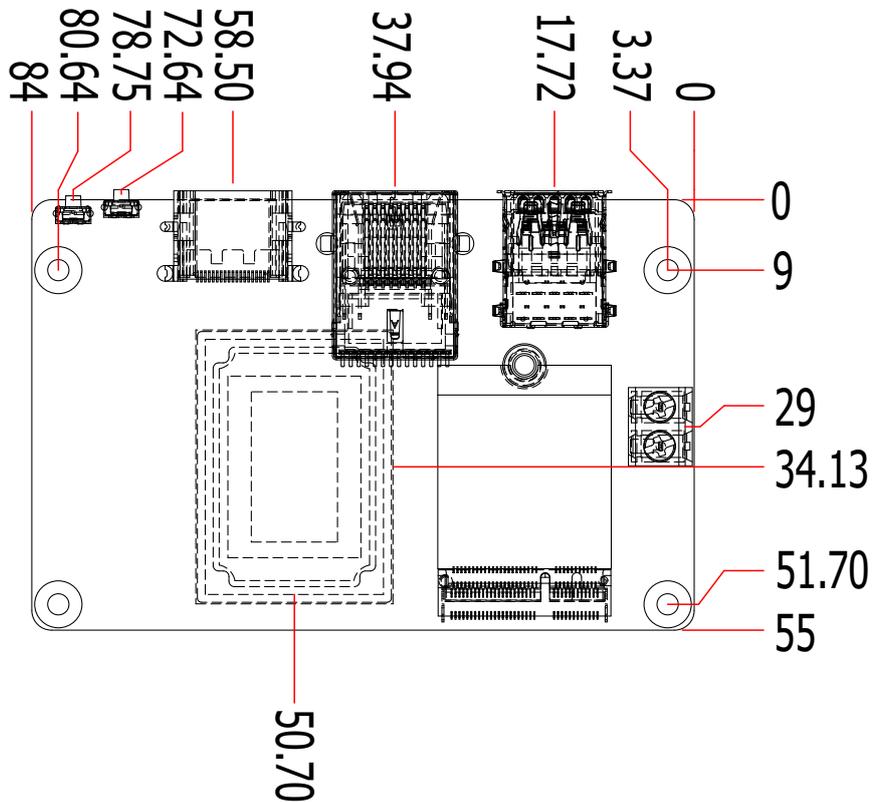
### Rich I/O

1 Intel GbE,  
2 USB 3.1 Gen2 Type A,  
1 HDMI

## BLOCK DIAGRAM



## MECHANICAL DRAWING



## SPECIFICATION

SYSTEM	Processor	AMD® Ryzen™ Embedded R2514, Quad Core, 2MB Cache, 8 CU, 2.1GHz AMD® Ryzen™ Embedded R2314, Quad Core, 2MB Cache, 6 CU, 2.1GHz AMD® Ryzen™ Embedded R2312, Dual Core, 1MB Cache 3 CU, 2.7GHz 12W support	
	Memory	DDR4 Memory Down up to 4GB/8GB Single Channel DDR4-2667 (R2312 with DDR4-2400)	
	BIOS	AMI SPI 128Mbit	
GRAPHICS	Controller	AMD Vega GPU with up to 8 computing units	
	Feature	H.265 decode/encode support, VP9 decode	
	Display	1 x HDMI	HDMI 1.4: resolution up to 4096x2160 @ 24Hz
EXPENSION	Interface	1 x M.2 E key (PCIe x1 / USB 2)	
ETHERNET	Controller	1 x Intel® I210AT PCIe (10/100/1000Mbps)	
REAR I/O	Ethernet	1 x GbE (RJ-45)	
	USB	2 x Type A USB 3.1 Gen 2	
	Display	1 x HDMI (HDMI 1.4)	
INTERNAL I/O	DIO	1 x 8-bit DIO	
STORAGE	eMMC 5.0	1 x 32GB/64GB/128GB eMMC	
WATCHDOG TIMER	Output & Interval	Software Reset, Programmable via Software from 1 to 655,535 Seconds	
SECURITY	TPM	fTPM 2.0	
POWER	Type	Single 12V +/-5% DC	
	Connector	2-pin Terminal Block	
	Consumption	Typical: 12V @ 0.78A (9.36Watt) Max.: 12V @ 1.62A (19.44Watt)	
	RTC Battery	CR2032 Coin Cell	
OS SUPPORT	Microsoft	Windows 10 IoT Enterprise 64-bit	
	Linux	Linux (Kernel 5.4) Ubuntu 20.04 LTS	
ENVIRONMENT	Temperature	Operating: 0 to 60°C	
		Storage: -40 to 85°C	
	Humidity	Operating: 5 to 90% RH	
Storage: 5 to 90% RH			
MTBF	841,810 hrs @ 25°C; 642,344 hrs @ 45°C; 482,909 hrs @ 60°C excluding accessories Calculation Model: Telcordia Issue 4 Environment: GB, GC – Ground Benign, Controlled		
MECHANISM	Dimensions	1.8" SBC Form Factor	84mm (3.31") x 55mm (2.17")
	Height	PCB: 1.60mm	Top Side: TBD, Bottom Side: TBD
STANDARDS AND CERTIFICATIONS	Certifications	CE, FCC, RoHS, UKCA	

## ORDERING INFORMATION

Model Name	P/N	Processor	Memory	eMMC	Display	GbE	USB 3.1 Gen2	Power	Thermal	Temp.
PCSF51-BN-86R254	770-PCSF511-000G	R2514	8 GB	64 GB	1 HDMI	1	2	12VDC	Fanless	0 to 60°C
PCSF51-BN-86R234	770-PCSF511-100G	R2314	8 GB	64 GB	1 HDMI	1	2	12VDC	Fanless	0 to 60°C
PCSF51-BN-46R232	770-PCSF511-200G	R2312	4 GB	64 GB	1 HDMI	1	2	12VDC	Fanless	0 to 60°C
PCSF51-EN-46R232	770-PCSF511-400G	R2312	4 GB	64 GB	1 HDMI	1	2	12VDC	Fanless	-20 to 70°C

## PACKING LIST

• 1 PCSF51 board	
• 1 Heat spreader (Height: 7 mm)	A71-808349-000G
• 1 Screw of M.2 card	

## OPTIONAL ITEMS

• 2-pole terminal to DC Jack cable	A81-004013-000G
• Power adapter (60W, 12V, DC jack)	671-106012-000G
• DIO cable	A81-009203-018G
• Heat sink for 0~60°C	A71-008179-000G