**KEY FEATURES**

1. **1.8" SBC**
   - AMD R2000 1.8" SBC

2. **DDR4**
   - 1 DDR4 Memory Down up to 4GB/8GB

3. **4K High Resolution**
   - HDMI 1.4 resolution supports up to 4096 x 2160 @ 24Hz

4. **Storage up to 128GB**
   - eMMC 32GB/ 64GB/ 128GB

5. **Rich I/O**
   - 1 Intel GbE, 2 USB 3.1 Gen2 Type A, 1 HDMI
### 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 64Mbit

**GRAPHICS**
- Controller: AMD Vega GPU with up to 8 computing units
- Feature: H.265 decode/encode support, VP9 decode
- Display: 1 x HDMI

**EXPANSION**
- 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
- Type: TPM 2.0

**POWER**
- Type: Single 12V +/-5% DC
- Connector: 2-pin Terminal Block
- Consumption: TBD

**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: TBD

**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

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

### PACKING LIST

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

### 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

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