

# SF101-ADS

14th/13th/12th Gen Intel® Core®  
Desktop Box IPC



## KEY FEATURES



### Compact Size

Compact Size & Powerful Performance



### Increased CPU Performance

Supports 14th/13th/12th Generation  
Intel® Core™ Processors



### Create RAID or NVME

Configurable with dual M.2 Gen4 NVME  
Storage with RAID 0/1



### Stable & Reliable System Operation

Choice of 1.3" Touch LCD, OOB,  
Power Redundancy Decoupling



### Easy Integration

Supports Wallmount or Rackmount Installation

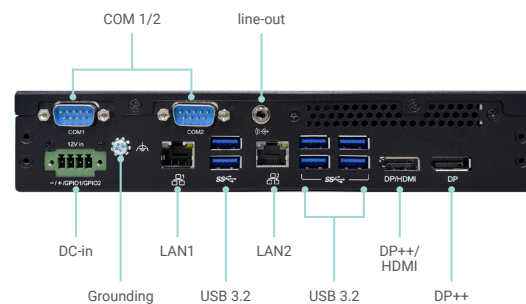


IoT Solutions  
Alliance

## PANEL

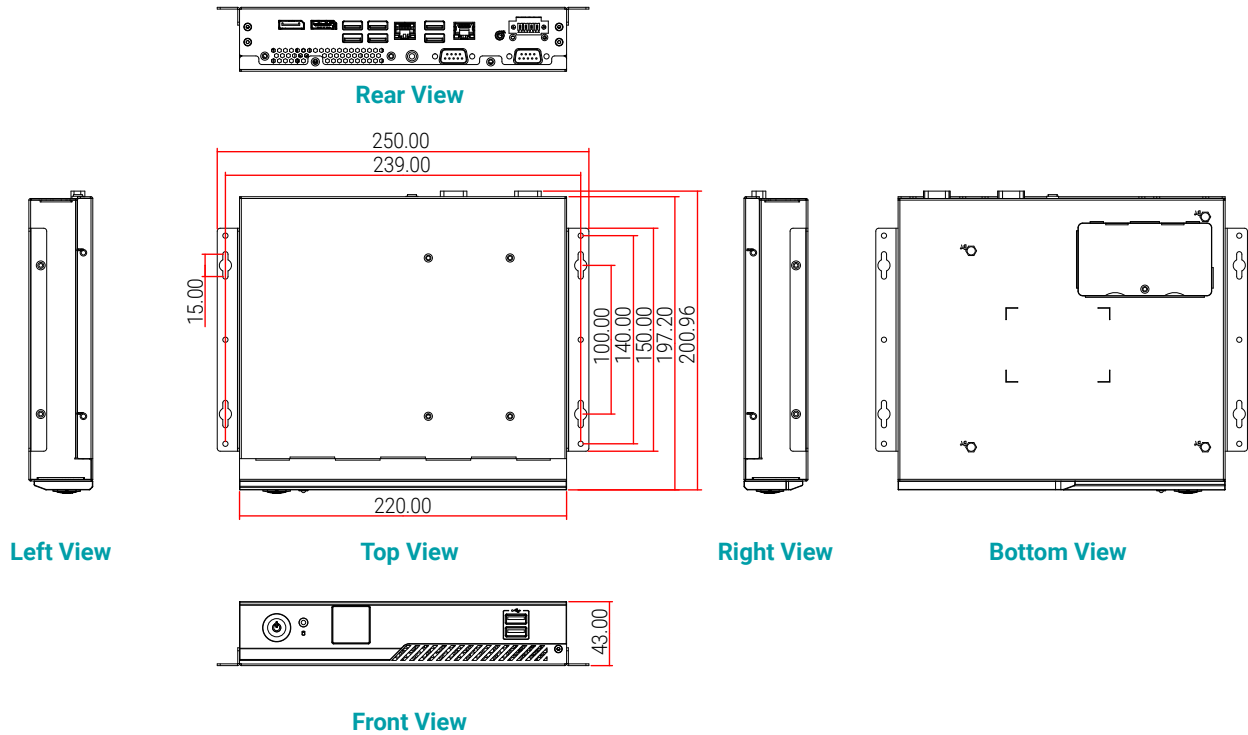


Front View



Rear View

## DIMENSIONS



## SPECIFICATION

|                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SYSTEM         | Processor           | 14th Generation Intel® LGA 1700 Socket Processors, TDP support up to 35W<br>Intel® Core™ i9-14900T (24 Cores, 36M Cache, up to 5.5 GHz); 35W<br>Intel® Core™ i7-14700T (20 Cores, 33M Cache, up to 5.2 GHz); 35W<br>Intel® Core™ i5-14500T (14 Cores, 24M Cache, up to 4.8 GHz); 35W<br>Intel® Core™ i5-14400T (10 Cores, 20M Cache, up to 4.5 GHz); 35W<br>Intel® Core™ i3-14100T (4 Cores, 12M Cache, up to 4.4 GHz); 35W<br><br>13th Generation Intel® LGA 1700 Socket Processors, TDP support up to 35W<br>Intel® Core™ i9-13900TE (24 Cores, 36M Cache, up to 5.0 GHz); 35W<br>Intel® Core™ i7-13700TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W<br>Intel® Core™ i7-13700T (16 Cores, 30M Cache, up to 4.9 GHz); 35W<br>Intel® Core™ i5-13500TE (14 Cores, 24M Cache, up to 4.5 GHz); 35W<br>Intel® Core™ i5-13500T (14 Cores, 24M Cache, up to 4.6 GHz); 35W<br>Intel® Core™ i3-13100TE (4 Cores, 12M Cache, up to 4.1 GHz); 35W<br>Intel® Core™ i3-13100T (4 Cores, 12M Cache, up to 4.2 GHz); 35W<br><br>12th Generation Intel® LGA 1700 Socket Processors, TDP support up to 35W<br>Intel® Core™ i9-12900TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W<br>Intel® Core™ i7-12700TE (12 Cores, 25M Cache, up to 4.6 GHz); 35W<br>Intel® Core™ i5-12500TE (6 Cores, 18M Cache, up to 4.3 GHz); 35W<br>Intel® Core™ i3-12100TE (4 Cores, 12M Cache, up to 4.0 GHz); 35W<br>Intel® Pentium® G7400TE (2 Cores, 6M Cache, 3.0 GHz); 35W<br>Intel® Celeron® G6900TE (2 Cores, 4M Cache, 2.4 GHz); 35W |
|                | Chipset             | Intel® R680E/Q670E/H610E Chipset                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                | Memory              | Two 260-pin SODIMM up to 64GB<br>Dual Channel DDR4 3200 MHz<br>R680E ECC Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                | BIOS                | AMI SPI 128Mbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                | Controller          | Intel® UHD Graphics 700 series                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GRAPHICS       | Feature             | OpenGL 4.5, DirectX 12, OpenCL 2.1<br>HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9<br>HW Encode: MPEG2, AVC/H.264, JPEG, HEVC/H.265, VP8, VP9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                | Display             | 1 x DP++<br>1 x DP++/HDMI<br>1 x 1.3" Front Capacitive Touch LCD (opt.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                | External / Internal | 1x 2.5" SATA bay<br>(R680E) 1 x M.2 2280 M Key (PCIe Gen4 x4/SATA)<br>RAID 0/1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| EXPANSION      | Interface           | 1 x PCIe x16 (Gen 5) (Max. 75W)<br>1 x M.2 2230 E Key (USB/PCIe x1)<br>(R680E)<br>1 x M.2 2280 M Key (PCIe Gen4 x4/SATA)<br>1 x M.2 2242/3042/3052 B Key (PCIe Gen3 x1/SATA/USB 3.2 Gen2/USB 2.0)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                | Audio Codec         | Realtek ALC888S-VD2-GR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ETHERNET       | Controller          | 1 x Intel® I226V PCIe(10/100/1000/2.5G speeds)<br>(R680E) 1 x Intel® I219LM PHY(10/100/1000 speeds) (support vPro/AMT)<br>1 x Intel® I210AT PCIe(10/100/1000 speeds)(Opt.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| LED            | Indicators          | 1 x Power LED<br>1 x HDD LED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| FRONT I/O      | USB                 | 2 x USB 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                | Button              | 1 x Power Button                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REAR I/O       | Ethernet            | 1 x 2.5GbE (RJ-45)<br>1 x GbE (RJ-45) (2x by Opt.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                | Serial              | 2 x COM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                | USB                 | (R680E) 4 x USB 3.2 Gen2 (Opt.: up to 6 x USB 3.2 Gen2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                | Display             | 1 x DP++<br>1 x DP++/HDMI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                | Audio               | 1 x line-out                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                | Grounding           | 1 x Grounding Post                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                | Output & Interval   | System Reset, Programmable via Software from 1 to 255 Seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| WATCHDOG TIMER | TPM                 | dTPM2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| SECURITY       | TPM                 | dTPM2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                | Type                | Single 12V +/-10% DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                | RTC Battery         | CR2032 Coin Cell                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                | Connector           | Terminal Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| POWER          | Consumption         | TBD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                | Microsoft           | Windows 10 IoT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                | Linux               | Linux                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| OS SUPPORT     | Microsoft           | Windows 10 IoT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                | Linux               | Linux                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                | MTBF                | TBD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ENVIRONMENT    | Temperature         | Operating: -5°C ~ 45°C<br>Storage: -40°C ~ 85°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                | Humidity            | Operating: 5% ~ 90% RH<br>Storage: 5% ~ 90% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                | MTBF                | TBD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## SPECIFICATION

|                              |                        |                                                                      |
|------------------------------|------------------------|----------------------------------------------------------------------|
| MECHANICAL                   | Construction           | Metal chassis + Aluminum front bezel                                 |
|                              | Mounting               | Wall mount<br>Rackmount                                              |
|                              | Dimensions (W x H x D) | 220 x 43 x 197.2mm                                                   |
|                              | Weight                 | 2.55kg                                                               |
| STANDARDS AND CERTIFICATIONS | Shock                  | Operating: 3G Non-operating: 5G                                      |
|                              | Vibration              | Operating: Random 5~500Hz 1G Non-operating: Sweep Sine 10~500Hz 1.5G |
|                              | Package Drop           | ISTA Project 1A                                                      |
|                              | Certifications         | CE, FCC class A, RoHS, UKCA                                          |

## OPTIONAL ITEMS

| Optional Items          | Part Number | Description                                                                       |
|-------------------------|-------------|-----------------------------------------------------------------------------------|
| Display                 | TBD         | 1 x 1.3" Front touchable and programable display showing Local System Information |
| Storage                 | TBD         | 1 x 2nd M.2 2280 NVME SSD (via additional PCIe riser card)                        |
| Power Redundancy Module | TBD         | RED01 Power Redundancy Module, decouple two power supplies                        |
| OOB Management          | TBD         | EXT-OOB for remote management                                                     |
| Mounting Kit            | TBD         | Wallmount Brackets                                                                |
|                         | TBD         | 2in1 Rackmount Brackets & cabinet screw kits.                                     |

## 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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