



## Features

- 1 x DDR5 4800MHz SODIMM Slot, up to 32GB
- 2 x HDMI 2.0b, 1 x Type CDP1.4a
- 2 x 2.5GbE
- 1 x RS485/422/232, 3 x RS232
- 1 x USB 3.2 Gen2, 6 x USB2.0, 1 x USB3.2 Type C
- 1 x M.2 2280 M-key, 1 x M.2 2230 E-key, 1 x M.2 3042 B-key
- MB support Wide DC Input 12-28V
- Support 64GB eMMC & TPM2.0 (optional)

## Applications

- IoT Solution, Edge Computing, Automation Industry

## Packing List

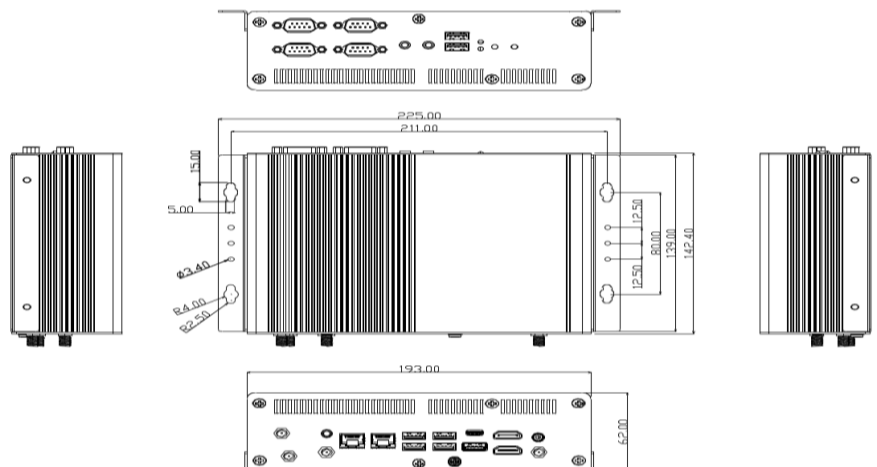
| Description                 | QTY |
|-----------------------------|-----|
| BFDADN1-N97 SERIES          | 1   |
| Wallmount/DIN Rail brackets | 2   |
| DIN RAIL KITS               | 2   |
| Adapter DC12V_60W           | 1   |
| Screw Package               | 1   |
| Power cord                  | 1   |

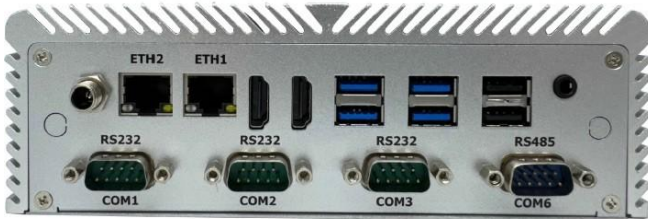
## Optional Accessories

| Description            | QTY per Board |
|------------------------|---------------|
| Antenna 2.4G/5G 2.8dBi | 1             |

## Specifications

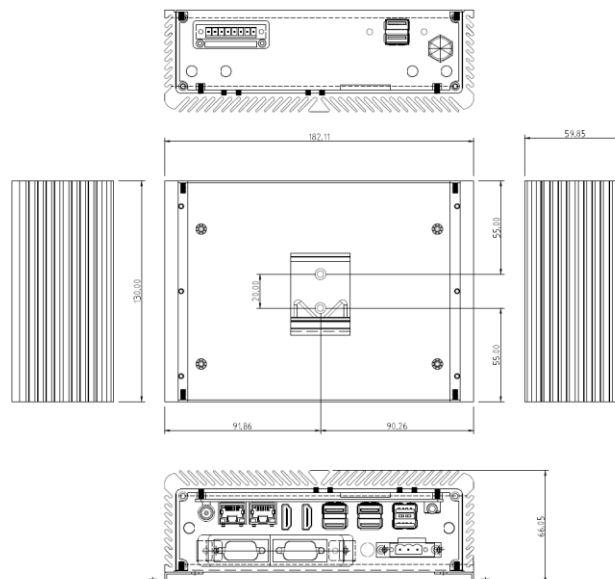
| SYSTEM                      |                                                                                                                                                                                                        |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                         | Intel® Processor N97 (TDP 12W)                                                                                                                                                                         |
| CHIPSET                     | —                                                                                                                                                                                                      |
| SYSTEM MEMORY               | 1 x DDR5 4800MHz SODIMM up to 32GB                                                                                                                                                                     |
| DISPLAY INTERFACE           | 2 x HDMI 2.0b (Max Resolution: 4096x2160@60Hz)<br>1 x DisplayPort for DP1.4a from external USB Type C (Max Resolution : 4096x2304@60Hz)                                                                |
| STORAGE DEVICE              | 1 x 2.5" SATAIII Drive Bay internal drive bay (Max. Height 9.5 mm)<br>1 x M.2 2280 M-key (PCIe Gen3x2 interface) support NVMe<br>64GB eMMC 5.1 onboard (optional)                                      |
| ETHERNET                    | 2 x Intel® I225-V, 2.5GbE                                                                                                                                                                              |
| Front I/O                   | Power button<br>Reset button<br>Power LED<br>HDD LED<br>2 x USB2.0<br>1 x Line-out<br>1 x Mic<br>1 x DB-9 for RS-232/422/485<br>3 x DB-9 for RS-232                                                    |
| Rear I/O                    | 4 x SMA Antenna Hole<br>1 x Combo Audio (Mic-in, Line-out)<br>2 x RJ45<br>4 x USB2.0<br>1 x USB3.2 Gen2 Type-C support DP1.4a display output<br>1 x USB3.2 Gen2<br>Ground screw<br>2 x HDMI<br>DC jack |
| EXPANSION                   | 1 x M.2 2230 E-Key for WiFi module<br>1 x M.2 3042/3052 B-Key for 4G / 5G module                                                                                                                       |
| INDICATOR                   | 1 x Power LED<br>1 x HDD LED                                                                                                                                                                           |
| OS SUPPORT                  | Windows® 10<br>Windows® 11<br>Linux                                                                                                                                                                    |
| POWERSUPPLY                 |                                                                                                                                                                                                        |
| POWER REQUIREMENT           | MB : DC Input 12~28V<br>Adapter : AC100~240V / DC12V_5A_60W                                                                                                                                            |
| MECHANICAL                  |                                                                                                                                                                                                        |
| MOUNTING                    | Desktop, Wallmount, Din Rail                                                                                                                                                                           |
| DIMENSIONS (W x H x D)      | 193(W) x 142.4(D) x 62(H) mm (7.6" x 5.6" x 2.44")                                                                                                                                                     |
| GROSS WEIGHT                | 3.5 kg (7.7 lb)                                                                                                                                                                                        |
| NET WEIGHT                  | 2.2 kg (4.8 lb)                                                                                                                                                                                        |
| ENVIRONMENT & CERTIFICATION |                                                                                                                                                                                                        |
| OPERATING TEMPERATURE       | -20°C ~ 60°C (-4°F ~ 140°F)<br>(Under the condition of using M.2 interface SSD)<br>0°C ~ 50°C (32°F ~ 122°F)<br>(Under the condition of using 2.5" SATA HDD)                                           |
| STORAGE TEMPERATURE         | -40°C ~ 85°C (-40°F ~ 185°F)                                                                                                                                                                           |
| OPERATING HUMIDITY          | 10 ~ 95% @40°C, non-condensing                                                                                                                                                                         |
| ANTI-VIBRATION              | —                                                                                                                                                                                                      |
| ANTI-SHOCK                  | —                                                                                                                                                                                                      |
| CERTIFICATION               | CE/FCC Class A, LVD                                                                                                                                                                                    |





- Intel Alder Lake-N N95/N97/N100/i3-N305 Processor
- 6 x COM, 9 x USB, 2 x Gigabit LAN
- 2 x M.2, 1 x SIM card wafer, 1 x M.2 NVMe/SATA SSD, 1 x SATA
- Support triple displays for 1 x HDMI, 1 x DP, 1 x LVDS/eDP
- Support DC 12/19/24V Power Input, optional 9-36V

|             |                                                              |
|-------------|--------------------------------------------------------------|
| USB         | 4 x USB 3.0<br>2 x USB 2.0 (Optional extra 2 x USB 2.0)      |
| Display I/O | 1 x HDMI<br>1 x DP                                           |
| Audio I/O   | 1 x Line-out + MIC                                           |
| LAN I/O     | 2 x RJ-45, Intel Giga LAN                                    |
| Serial Port | 3 x RS-232, 1 x RS-485, (Optional extra 2 x RS-232)          |
| PS/2 Port   | -                                                            |
| Others      | 1 x DC 12/19/24V Power Input Connector/ 2-pin terminal block |



|                       |                                                                                                                                                                                                           |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                   | Intel N95, 4E-core, up to 3.40 GHz, TDP is 15W<br>Intel N97, 4E-core, up to 3.60 GHz, TDP is 12W<br>Intel N100, 4E-core, up to 3.40 GHz , TDP is 6W<br>Intel i3-N305, 8E-core, up to 3.80 GHz, TDP is 15W |
| System Memory         | DDR4-3200 MHz, 1 x non-ECC SO-DIMM, up to 16GB                                                                                                                                                            |
| Chipset               | SoC integrated                                                                                                                                                                                            |
| BIOS                  | AMI                                                                                                                                                                                                       |
| Storage               | 1 x SATA 3.0 7P Connector (with 1 x SATA power header)<br>1 x M.2 Key-M Slot (PCIe x1 NVMe / SATA SSD, 2280,auto detect)                                                                                  |
| Watchdog Timer        | 1 - 255 steps by software program                                                                                                                                                                         |
| Expansion Slot        | 1 x M.2 Key-E Slot (PCIe + USB 2.0, Support Wifi + BT, 22<br>1 x M.2 Key-B Slot (USB 3.0 + USB 2.0, Support 5G/4G,2242/3052)                                                                              |
| Power Input           | DC-in 12V/24V with lockable power adapter<br>Wide range 9-36V Phoenix connector (Optional)                                                                                                                |
| Dimensions            | 182.12 x 130 x 59.85 mm                                                                                                                                                                                   |
| Weight                | 1.2 Kg                                                                                                                                                                                                    |
| Operating Temperature | -20°C to +70°C                                                                                                                                                                                            |
| Storage Temperature   | -25°C to +75°C                                                                                                                                                                                            |
| Humidity              | 10% to 95% relative humidity, non-condensing                                                                                                                                                              |

|              |                                                                                                                                                                                                                            |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chipset      | For N95, Intel UHD Graphics, up to 16 EUs, 1.20GHz    For N97, Intel UHD Graphics, up to 24 EUs, 1.20GHz    For N100, Intel UHD Graphics, up to 24 EUs, 750 Mhz<br>For i3-N305, Intel UHD Graphics, up to 32 EUs, 1.25 GHz |
| VGA          | -                                                                                                                                                                                                                          |
| DVI          | -                                                                                                                                                                                                                          |
| HDMI         | Up to 4096 x 2160 @ 30Hz                                                                                                                                                                                                   |
| Display Port | Up to 4096 x 2304 @ 60Hz                                                                                                                                                                                                   |
| LVDS         | Up to 1920 x 1200 @ 60Hz (Default)                                                                                                                                                                                         |
| eDP (Option) | Up to 4096 x 2160 @ 60Hz                                                                                                                                                                                                   |

|                |                               |
|----------------|-------------------------------|
| OS Support     | Windows 10, Windows 11, Linux |
| Certifications | CE / FCC Class B              |