

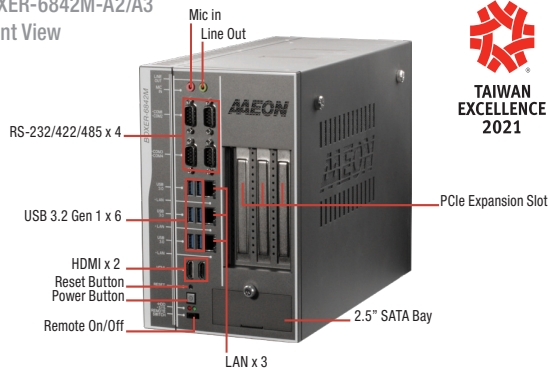
# BOXER-6842M

Fanless Embedded Controller with 8th/9th Generation Intel® Processor

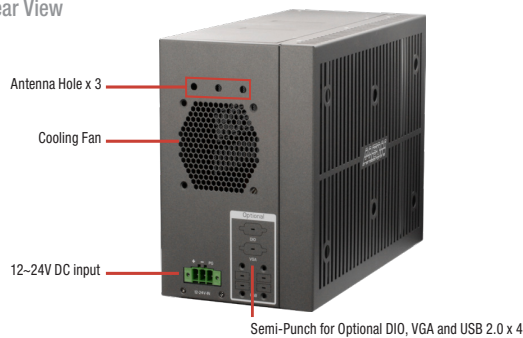
Vision System BOX PC Solutions

BOXER-6842M-A2/A3

Front View



Rear View



BOXER-6842M-A4

Front View



Rear View



BOXER-6842M-A5

Front View



Rear View



## Features

- High Computing Power
- Intel® Coffee Lake-S LGA 1151 Desktop Processor
- HDMI x 2 for Dual Display
- Support C246 PCH
- Support PCIe x16 + PCIe x4 / 2PCIe x8 (in x16 slot) + PCIe x4
- Single Power Input (for both System & one Graphics Card)
- Fanless System (A3) or Fan System with PWM function (A2/A4/A5)
- Support dual Graphics Cards with Two Power Inputs (A4)



|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Storage Device         | 2.5" SATA Drive Bay x2 (4 SATA Port w/ RAID Function)<br>mSATA x1 (optional)<br>M.2 2280 NVMe SSD slot x1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Ethernet               | RJ-45 x3 for GbE (Intel i211AT x2, i219LM x1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| I/O                    | HDMI x2<br>Audio (Mic-in, Line-out)<br>USB 3.2 Gen1 x6<br>DB-9 x4 for RS-232/422/485 with automatic flow control<br>3 pin DC Power input x1 (+, -, GND)<br>Power ON/OFF switch x1<br>2 pin Remote power on/off connector<br>Reset switch                                                                                                                                                                                                                                                                                                                                                                          |
| Expansion              | A2/A3/A4/A5<br>Full-size Minicard x1 (PCIe + USB with 1 SIM Slot)<br>Half-size Minicard x1 (PCIe + USB, optional for mSATA)<br>M.2 M key (2280) x1 (PCIe x4)<br>- Max. Power Consumption of GPU card 250W<br>- Max. Size of GPU card 280mm x150mm x40mm<br>A2<br>PCIe [x4] x1 + PCIe [x16] x1<br>A3<br>PCIe [x4] x1 + PCIe [x8] (in x16 slot) x2<br>A4<br>PCIe [x4] x1 + PCIe [x8] (in x16 slot) x2<br>Support dual Graphics Cards with two power inputs<br>A5<br>Built in Nvidia A2 x1<br>PCIe [x4] x1 + PCIe [x8] x1 (in x16 slot)<br>Note: A3 is fanless system. A2 & A4 & A5 is fan system with PWM function. |
| Reserved Connector     | Internal, SATA x2; Internal, 8bit DIO x1; Internal, USB 2.0 x4; Internal, LPC x1; Internal, Secondary System Fan Connector x1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Indicator              | System Power LED x1 (Green), Storage Active LED x1 (Red)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| OS Support             | Windows® 10 Enterprise 64 bit, Ubuntu 18.04.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Power Supply</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Power Requirement      | A2/A3/A4<br>DC In 12-24V with 3-pin terminal block<br>No Graphics Card: CPU 35W->120W Adapter x1, CPU 71W->240W Adapter x1<br>With 250W Graphics Card x1: 480W Adapter x1                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | A4<br>DC In 12-24V with 3-pin terminal block<br>With 250W Graphics Card x2: 330W Adapter x1 + 480W Adapter x1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                        | A5<br>DC In 12-24V with 3-pin terminal block<br>With A2 x1: 240W Power Adapter x1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                        | With A2 x2: 330W Power Adapter x1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Mechanical</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Mounting               | Wallmount                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Dimensions (W x H x D) | A2/A3/A5: 6.17" x 8.92" x 12.8" (156.7mm x 226.5mm x 325mm)<br>A4: 7.77" x 8.92" x 12.8" (197.3mm x 226.5mm x 325mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Gross Weight           | A2/A3: 18.52 lb (8.4 Kg); A4: 20.72 lb (9.4 Kg); A5: 20.5 lb (9.3 Kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Net Weight             | A2/A3: 15.65 lb (7.1 Kg); A4: 17.86 lb (8.1 Kg); A5: 17.64 lb (8 Kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Environmental</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Operating Temperature  | Without Graphics Cards: -4°F ~ 149°F (-20°C ~ 65°C) with 0.5m/s airflow<br>With 250W Graphics Card: 32°F ~ 113°F (0°C ~ 45°C) with 0.5m/s airflow<br>A5: 32°F ~ 113°F (0°C ~ 40°C) with 0.5m/s airflow                                                                                                                                                                                                                                                                                                                                                                                                            |
| Storage Temperature    | -49°F ~ 176°F (-45°C ~ 80°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Storage Humidity       | 5 ~ 95% @ 40°C, non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Anti-Vibration         | HDD: Random, 1Grms, 5-500Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Anti-Shock             | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Certification          | CE / FCC class A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Specifications

| System            |                                                                                                                                                                                                                                  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU               | Intel® Xeon® E-2124G; Intel® Core™ i9-9900T; Intel® Core™ i7-8700T; Intel® Core™ i5-9500TE; Intel® Core™ i5-8500T; Intel® Core™ i3-8100T; Intel® Pentium® G5400T; Intel® Celeron® G4900T<br>Note: Support max. TPD 71W Processor |
| Chipset           | C246, No H310 downward support                                                                                                                                                                                                   |
| System Memory     | DDR4 SO-DIMM socket x4 (double deck)<br>Support max. 2666MHz up to 128GB<br>Support un-buffered and ECC / non-ECC type SODIMM                                                                                                    |
| Display Interface | HDMI x2<br>Support Dual Independent Display, 4K Ultra HD displays                                                                                                                                                                |

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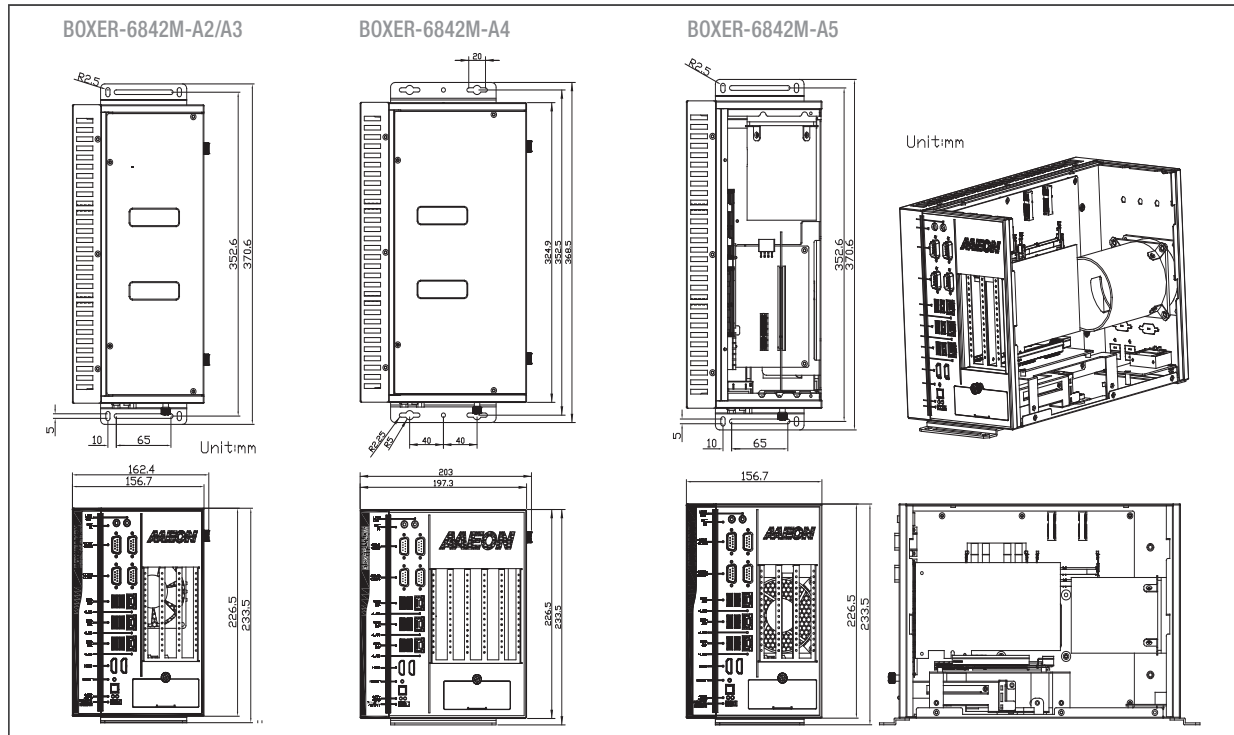
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Note: All specifications are subject to change without notice.

# BOXER-6842M

Vision System BOX PC Solutions

## Dimension Unit: mm



## Ordering Information

| Part Number         | CPU | PCH  | LAN | Fan            | USB 3.2 Gen1 | RS-232/422/485 | RS-232 | Digital I/O | Audio                  | Storage                                                                       | Display  | Expansion                                                                                                                                 | Mounting  | Power                                  | Operation temp.                  |
|---------------------|-----|------|-----|----------------|--------------|----------------|--------|-------------|------------------------|-------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------|----------------------------------|
| BOXER-6842M-A2-1010 | —   | C246 | 3   | Fan System     | 6            | 4              | —      | —           | Mic-in<br>Line-out x 1 | 2.5" SATA Drive bay x 2<br>mSATA x 1 (optional)<br>M.2 2280 NVMe SSD slot x 1 | HDMI x 2 | Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, PCIe [x4] x 1, PCIe [x16] x 1                                       | Wallmount | DC In 12-24V with 3-pin terminal block | -20°C ~ 65°C with 0.5m/s airflow |
| BOXER-6842M-A3-1010 | —   | C246 | 3   | Fanless System | 6            | 4              | —      | —           | Mic-in<br>Line-out x 1 | 2.5" SATA Drive bay x 2<br>mSATA x 1 (optional)<br>M.2 2280 NVMe SSD slot x 1 | HDMI x 2 | Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, PCIe [x4] x 1, PCIe [x8] x 2 (in x16 slot)                          | Wallmount | DC In 12-24V with 3-pin terminal block | -20°C ~ 65°C with 0.5m/s airflow |
| BOXER-6842M-A4-1010 | —   | C246 | 3   | Fan System     | 6            | 4              | —      | —           | Mic-in<br>Line-out x 1 | 2.5" SATA Drive bay x 2<br>mSATA x 1 (optional)<br>M.2 2280 NVMe SSD slot x 1 | HDMI x 2 | Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, PCIe [x4] x 1, PCIe [x8] x 2 (in x16 slot)                          | Wallmount | DC In 12-24V with 3-pin terminal block | -20°C ~ 65°C with 0.5m/s airflow |
| BOXER-6842M-A5-1010 | —   | C246 | 3   | Fan System     | 6            | 4              | —      | —           | Mic-in<br>Line-out x 1 | 2.5" SATA Drive bay x 2<br>mSATA x 1 (optional)<br>M.2 2280 NVMe SSD slot x 1 | HDMI x 2 | Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, Built in Nvidia A2 x 1, PCIe [x4] x 1 + PCIe [x8] x 1 (in x16 slot) | Wallmount | DC In 12-24V with 3-pin terminal block | 0°C ~ 40°C with 0.5m/s airflow   |

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6842M

## Optional Accessories

- **1255901209**  
120W Power Adapter
- **1255902400**  
240W Power Adapter
- **1255903300**  
330W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **9697T60101-D**  
Riser card with 1 PCIe x 16 + 1 PCIe x 4
- **9697T62100-D**  
Riser card with 2PCIe x 8 (in x 16 slot) +1PCIe x 4
- **1255X00021**  
480W Power Adapter (DIN Rail)

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## 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.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660