

# BOXER-6841M Series

Embedded Edge AI & Machine Vision System with Intel® Core™ i7/i5/i3, Xeon® 6th/ 7th Gen.

## Features

- Intel® Core™, Xeon® 6th/7th Gen. CPUs
- DDR4 SODIMM RAM, up to 32GB
- Intel® H110 / C236 chipset
- Supports 1x PCIe x16, 2x PCIe x8 and 1x PCIe x1
- Supports GPUs up to max. 250W



## BOXER-6841M Series – Strong computing power and robust design

The BOXER-6841M series is a fanless embedded machine vision system with impressive computing power. Depending on the series model, the embedded PC series offers various PCIe x16 slots, which allow the integration of high-performance NVIDIA graphics cards up to 250W. With optional PCIe x8 slots, users can also use frame grabber cards. BRESSNER Technology can integrate high-performance Intel® Skylake or Kaby Lake Core™ desktop processors (i7/i5/i3) or alternatively server-grade Xeon® E3 CPUs. Ideal for use in Edge AI or image / video processing applications as well as in Smart Factories or in automation technology.

## High computing power with intelligent power consumption

With clock speeds of up to 3.8 GHz (for server-grade variants), supplemented by a maximum of 32 GB DDR4 ECC or non-ECC SODIMM RAM, the BOXER-6841M series delivers high performance capacities. To meet the high power consumption of high-level GPUs, an intelligent design feature has been integrated: Two 12VDC power inputs. This feature not only saves costs but also ensures more stable operation. The embedded systems are designed without fans, but can also be delivered with Smart Fan including PWM function for high performance requirements. Various I/O interfaces, such as three expansion slots with full-size Mini Card and PCIe socket, allow configurable applications and additional functions. With five Intel® LAN chips, dual HDDs (exchangeable) and dual mSATA slots, additional AI@Edge functionalities are supported. In addition, a COM port (four additional RS-232 slots available as an option) and two HDMI connections (VGA as an option) are available. Depending on the configuration of the BOXER-6841M system, the devices operate in a temperature range of -20°C ~ 55°C (or -20°C ~ 45°C with TDP 73W processor).

## Ordering Information

	BOXER-6841M-A1	BOXER-6841M-A2	BOXER-6841M-A3	BOXER-6841M-A4	BOXER-6841M-A5	BOXER-6841M-A6	BOXER-6841M-A7
Processor	Intel® Core™, Xeon® 6th/ 7th Gen CPU						
Chipset	Intel® H110	Intel® H110	Intel® C236	Intel® C236	Intel® C236	Intel® C236	Intel® C236
COM	1x RS-232/422/485	1x RS-232/422/485	1x RS-232/422/485	1x RS-232/422/485	1x RS-232/422/485	1x RS-232/422/485 4x RS-232	1x RS-232/422/485
Expansion	2x Full-Size Mini Card 1x PCIe x16 1x PCIe x1	2x Full-Size Mini Card 1x PCIe x16 1x PCIe x1	2x Full-Size Mini Card 1x PCIe x16 1x PCIe x1	2x Full-Size Mini Card 1x PCIe x16 1x PCIe x1	2x Full-Size Mini Card 2x PCIe x8 2x PCIe x1	2x Full-Size Mini Card 2x PCIe x8 2x PCIe x1	2x Full-size Mini Card 1x PCIe x1 1x PCIe x16
Power	12 ~ 24VDC 120W (w/o GPU) 330W (with 180W GPU)	12 ~ 24VDC 120W (w/o GPU) 240W (w/ 250W GPU)	12 ~ 24VDC 120W (w/o GPU) 330W (w/ 180W GPU)	12 ~ 24VDC 120W (w/o GPU) 240W (w/ 250W GPU)	12 ~ 24VDC 120W (w/o GPU) 240W (w/ 180W GPU)	12 ~ 24VDC 120W (w/o GPU) 240W (w/ 180W GPU)	12 ~ 24VDC 120W (w/o GPU) 240W (w/ 180W GPU)
Dimensions	155 x 200 x 400 mm	155 x 200 x 400 mm	155 x 200 x 400 mm	155 x 200 x 400 mm	155 x 200 x 260 mm	155 x 200 x 260 mm	155 x 200 x 260 mm
Weight	8.3kg	8.3kg	8.3kg	8.3kg	5.8kg	5.8kg	5.8kg

# BOXER-6841M Series

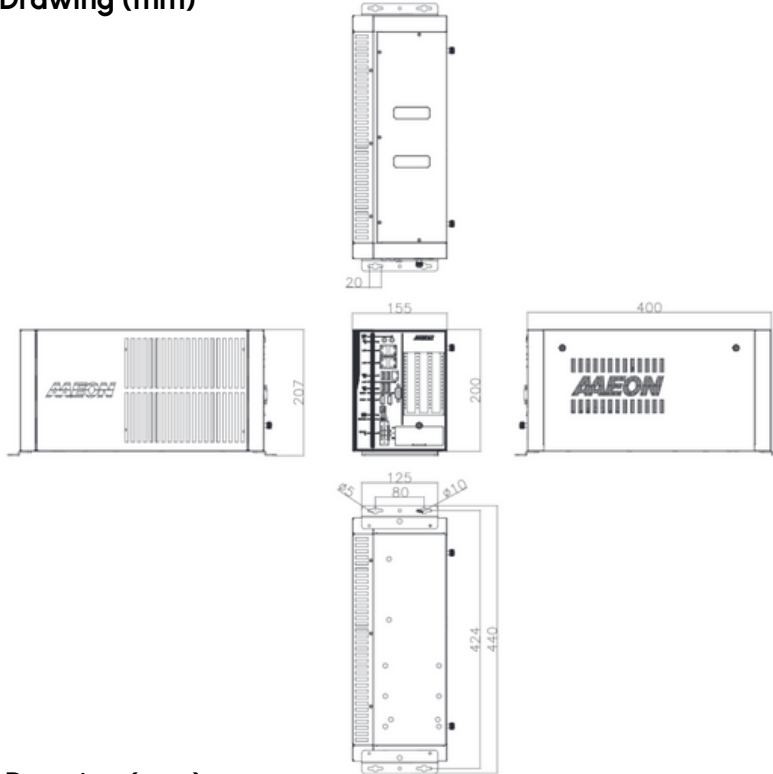
Embedded Edge AI & Machine Vision System with Intel® Core™ i7/i5/i3, Xeon® 6th/ 7th Gen.

Specifications	BOXER-6841M Series
<b>SYSTEM</b>	
CPU	Supports Intel® Core™, Xeon® 6th/ 7th Gen. desktop CPUs – Intel® Core™ i7-6700TE, 2.4 GHz – Intel® Core™ i5-6500TE, 2.3 GHz – Intel® Core™ i3-6100TE, 2.7 GHz – Intel® Core™ i7-7700, 3.6 GHz – Intel® Core™ i7-7700T, 2.9 GHz – Intel® Core™ i3-7101TE, 3.4 GHz – Intel® Xeon® E3-1268L v5, 2.40 GHz – Intel® Xeon® E3-1275 v6, 3.80 GHz
Chipset	Intel® H110 PCH / C236 PCH
RAM	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Storage	2x 2.5" SATA drives
Expansion	<b>A1/A3:</b> – 2x Full-size Mini card (USB, w/ 1 SIM slot) – 1x PCIe x1 – 1x PCIe x16 – Power Consumption of GPU card max. 180W – Max. size of GPU card 312 x 113 x 40 mm – (Option) Max. size of GPU card 312 x 113 x 60 mm (Riser Card: 9697T50300) <b>A2/A4:</b> – 2x Full-size Mini card (USB, w/ 1 SIM slot) – 1x PCIe x1 – 1x PCIe x16 – Power Consumption of GPU card max. 250W – Max. size of GPU card 312 x 113 x 40 mm – (Option) Max. size of GPU card 312 x 113 x 60 mm (Riser Card: 9697T50300) <b>A5/A6:</b> – 2x Full-size Mini card (USB, w/ 1 SIM slot) – 2x PCIe x8 – Extension card size limit: 114.55mm(H) x 192mm (L) – 1x PCIe x1 <b>A7:</b> – 2x Full-size Mini card (USB, w/ 1 SIM slot) – 1x PCIe x1 – 1x PCIe x16 – Power Consumption of GPU card max. 180W – Max. size of GPU card 190 x 113 x 40 mm – (Option) Max. size of GPU card 190 x 113 x 60 mm (Riser Card: 9697T50300)
Operating System	Skylake S: Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake: Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
<b>INTERFACE</b>	
Ethernet	5x RJ-45 for Gigabit Ethernet (4x Intel® i211AT, 1x i219LM)
USB	4x USB 3.0
COM	1x RS-232/422/485, 4x RS-232 (A6 only)
Video	2x HDMI 1.4b 1x VGA für A6
Audio	2x Mic-in and Line-out
Power	1x 3-pin DC input (+, -, GND)
<b>ENVIRONMENTAL</b>	
Cooling	Fanless
Power Supply	<b>A1/A3:</b> DC-In 12 ~ 24V (H110 PCH) – CPU < 65W, No Graphic Card: 120W Adapter – CPU ≤ 65W, 180W Graphic Card: 330W Adapter(C236 PCH) – CPU < 73W, No Graphic Card: 120W Adapter – CPU ≤ 73W, 180W Graphic Card: 330W Adapter <b>A2/A4:</b> DC-In 12 ~ 24V (H110 PCH) – CPU < 65W, No Graphic Card: 120W Adapter – CPU ≤ 65W, 180W < Graphic Card < 250W: 240W Adapter x 2 (C236 PCH) – CPU < 73W, No Graphic Card: 120W Adapter – CPU ≤ 73W, 180W < Graphic Card < 250W: 240W Adapter x 2 <b>A5~A6:</b> DC-In 12 ~ 24V – CPU = 35W: 120W Adapter – 35W < CPU ≤ 73W: 240W Adapter <b>A7:</b> DC-In 12 ~ 24V – CPU < 73W, No Graphic Card: 120W Adapter – CPU ≤ 73W, 180W Graphic Card: 330W Adapter
Remote Control & LED	1x Power LED, 1x HDD active LED2 pin Remote Power on/off connector
Operating Temperature	<b>A1/ A2:</b> -20° ~ 55°C <b>A3/A4/A5/A6/A7 with 35W CPU:</b> -20° ~ 55°C <b>A3/A4/A5/A6/A7 with 73W CPU:</b> -20° ~ 45°C
Storage Temperature	-40° ~ 80°C
Vibration / Shock Resistance	Vibration: Random, 1Grms, 5~500Hz, Anti-vibration design
Humidity	5 ~ 95%, non-condensing
Dimensions	<b>A1/A2/A3/A4:</b> 155 (W) x 200 (D) x 400 (H) mm <b>A5/A6/A7:</b> 155 (W) x 200 (D) x 260 (H) mm
Weight	<b>A1/A2/A3/A4:</b> 8.3kg <b>A5/A6/A7:</b> 5.8kg
Mounting	Wallmount
Certifications	CE/FCC Class A

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## A1 ~ A4 Drawing (mm)



## A5 ~ A6 Drawing (mm)

