

HEPTAGON

S Y S T E M S

RUGGED FANLESS SERVERS

COMPANY OVERVIEW

Founded in 2015, Heptagon Systems was on a mission to build a small but powerful fanless server for harsh environments.

In 2016 we launched our first server the HQ- BOX and since then have continued to bring to market more powerful and expandable options to meet the fast-growing emerging technology landscape.

Heptagon systems offers distributors and end-users, customization and OEM option to meet specific applications.

We are headquartered in Malborne, Australia with an additional R&D center in Yokneam, Israel, and continue to grow our global distribution through our partners.

PRODUCTS

HQ-Box2 Series

Intel® Xeon D-1700 / Xeon D-1800 based Edge server / Networking with four models to choose from

[More information](#)



Edge server HQ-Box2 2X with dual slot PCIe for Add-On Cards like image capture, Industrial control, AI accelerators etc..

YB3x Series

Intel® Atom C3000-based 1U vCPE / Network appliance / Industrial server, with seven models to choose from

[More information](#)



HQ-Box2 SERIES

- The HQ-Box2 was designed for the (hard) Edge and networking applications. The HQ-Box2 utilizes Intel®'s densest compute and connectivity SOC, with integrated Intel® QuickAssist Technology (QAT) and Inline IPSec accelerators.
- Combined with a flexible 8-port Ethernet controller, the HQ-Box is the best fit for 5G / Edge network applications.
- Security features such as Intel® Boot Guard, Intel® SGX & Intel® TME-MT ensure better protection in hostile environments.
- Real-Time Features TSN (Time Sensitive Networking) and Intel® TCC (Time Coordinated Computing) are supported.
- The ability to create a mix of storage and AI accelerators with the HQ-Box2 Storage-M can greatly enhance the capabilities of AI inferencing and deep learning applications.
- The built-in Board Management Controller is based on Aspeed most advanced AST2600 BMC enabling secure and safe remote administration and recovery. ith Display Port video

FLEXIBLE & POWERFUL IOT-EDGE / NETWORKING SERVER

Intel® Xeon® D-1700 / D-1800 CPU,
4-10 cores, 36-83W

Up to 384GB DDR4
with ECC

Up to 7x M.2 slots for
NVMe SSD and/or
AI accelerators

2x M.2 slots for
SATA/ 5G w/SIM
and Wi-Fi

8x 10G SFP+ (4x
25G) + 2x 2.5GbE +
1x GbE

16-lane PCIe Gen 4 +
8-lane PCIe Gen 3

Fanless and
Maintenance free

-30°C..+60°C
operating temperature
range (+75 °C on
selected SKU's)

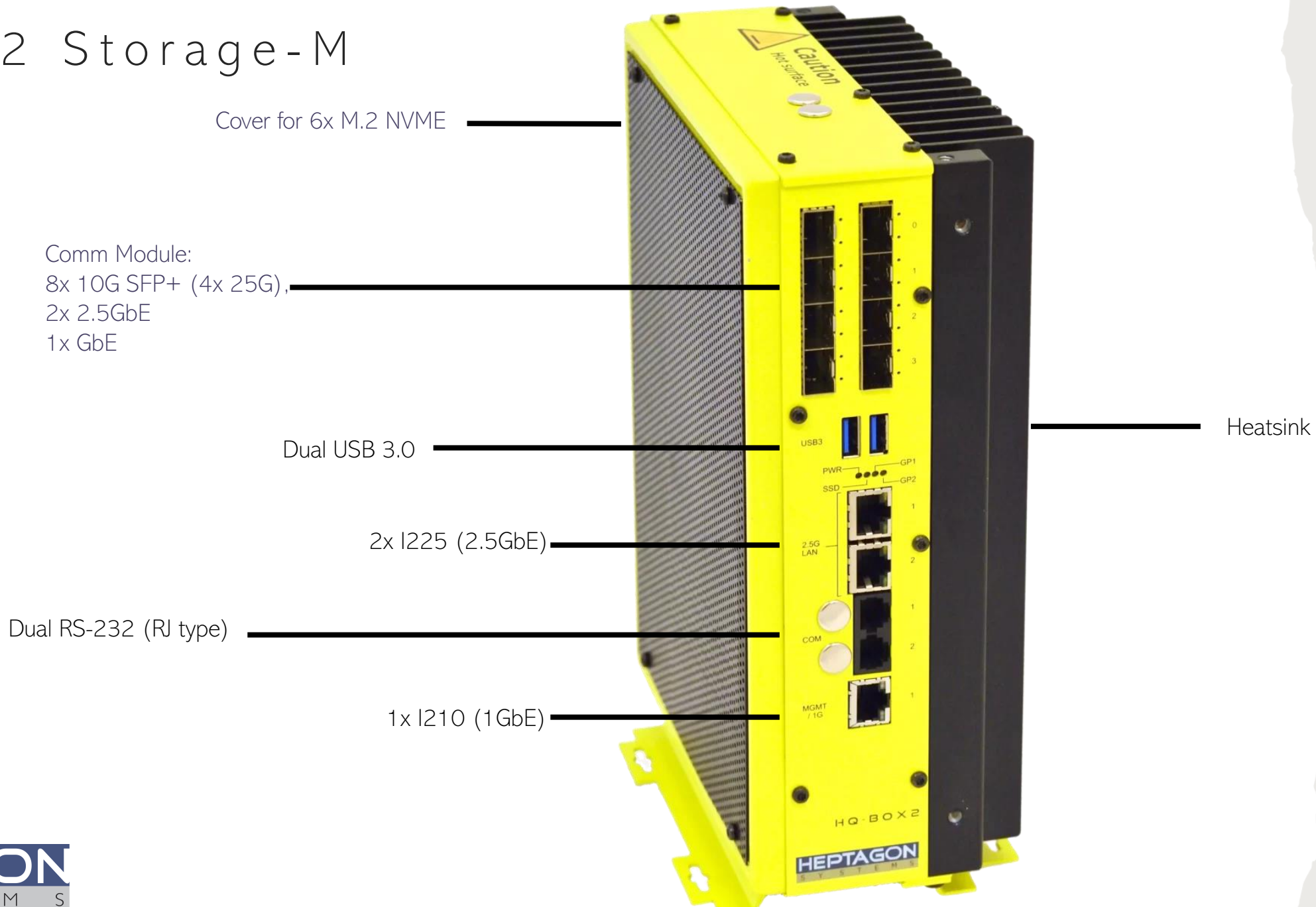
Aspeed AST2600
BMC with Display
Port video

Latest OpenBMC
based IPMI 2.0

Up to 2xVROC
bootable RAID
volumes support
(0/1/5/10) with VMD

TPM 2.0
Hardware
implemented

HQ-Box2 Storage-M



HQ-Box2 MODELS

Model	PCIe G4 Slot	PCIe G3 Slot	M.2 SSD	U.3* / U.2 2.5" Bay	2.5G / GbE	SFP+	BMC	Wi-Fi / 5G
<u>Bare</u>	-	-	1x NVMe G3 1x SATA	-	2/1	4+4	AST2600	M.2-B W.Sim M.2-E
<u>2X</u>	1	1	1x NVMe G3 1x SATA	-	2/1	4+4	AST2600	M.2-B W.Sim M.2-E
<u>Storage-M / M6</u>	-	-	4x NVMe G4 1x NVMe G3 1x SATA M6: +2x NVMe G3	-	2/1	4+4	AST2600	M.2-B W.Sim M.2-E
<u>Combo-S</u>	-	1	1x NVMe G3 1x SATA	4x U.3/U.2 hot-swap	2/1	4+4	AST2600	M.2-B W.Sim M.2-E
<u>AI</u>	1		2x NVMe G4 3x NVMe G3 1x SATA	-	2/1	4+4	AST2600	M.2-B W.Sim M.2-E

* 2.5" U.3 drives are PCIe Gen 4, supporting 15mm/17mm thick drives. U.2 drives are also supported.



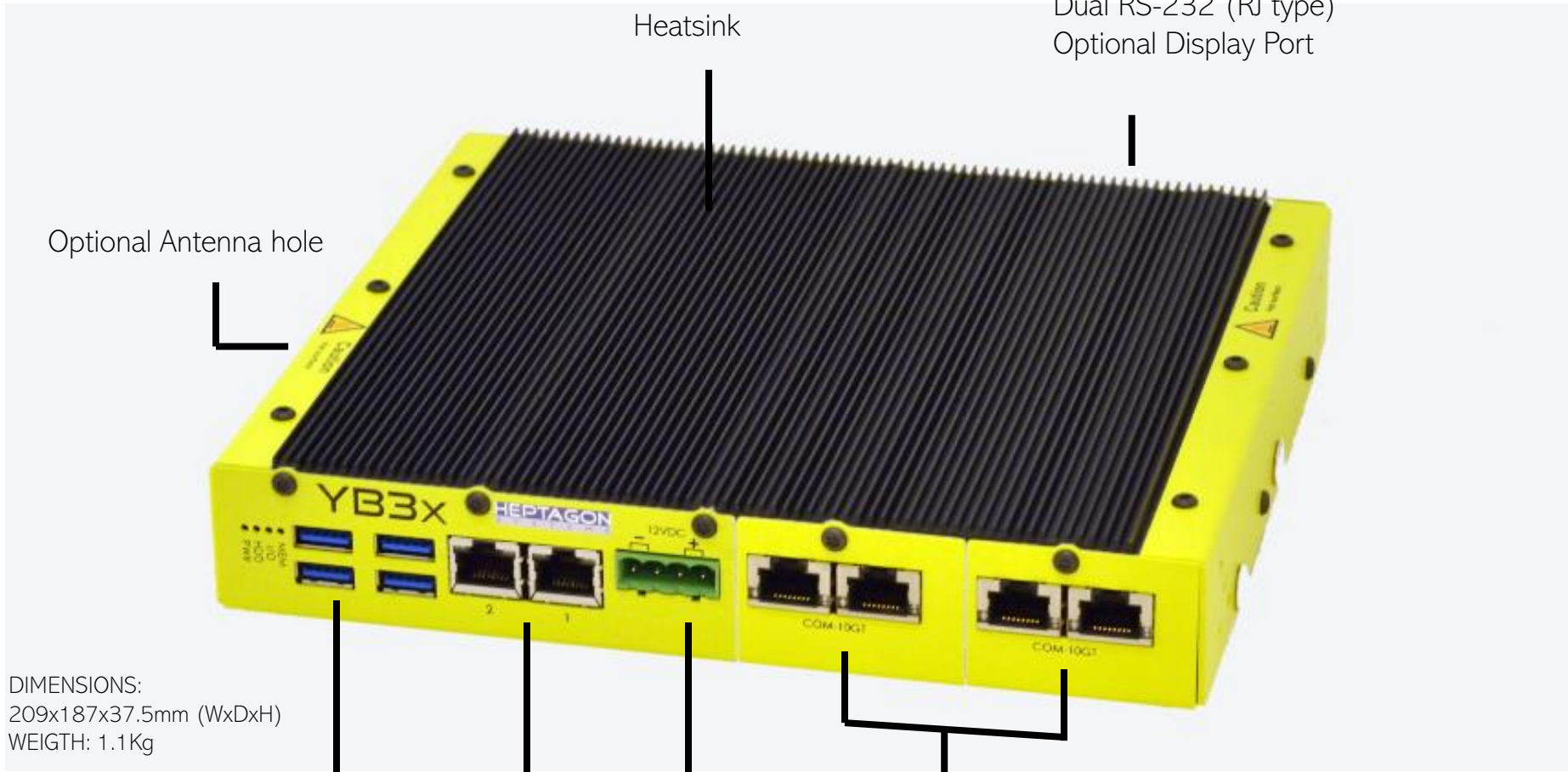
YB3x SERIES

- YB3x series are rugged, fanless edge devices designed for IoT, CPE, SD-WAN, virtualization and networking appliance in harsh environments.
- Tailored for versatility and adaptability, the YB3x offers seven models of different communication ports to suit a wide range of use cases.
- Custom configurations can be effortlessly integrated with a quick turnaround time to meet specific requirements.
- Powered by the Intel® Atom® C3000 SOC, featuring a 4..16-core processor, 128GB DDR4-ECC memory and integrated Quad 10Gb Ethernet, the YB3x sets a new standard in performance for embedded computing solutions.
- Its robust design ensures reliability in harsh conditions, while its energy-efficient architecture enhances operational efficiency and reduces total cost of ownership.

FLEXIBLE & POWERFUL IOT-EDGE / NETWORK APPLIANCE

- Intel Atom C3000, 4-16 cores
- Compact 1U enclosure
- SOC built-in Quad 10Gb Ethernet
- Fanless -40°C to +72°C operating temperature
- Optional Aspeed AST2600 with latest OpenBMC with IPMI 2.0
- Optional PCIe add-on card (AOC)

YB3x TT



DIMENSIONS:
209x187x37.5mm (WxDxH)
WEIGHT: 1.1Kg

Quad USB 3.0

Dual 1Gbe

DC supply 9-28V

Dual slot Comm Module
4x 10G SFP+
4x 10G- BASE- T
4x 1Gbe



Optional PCIe 3.0 x8 slot extension which can accommodate full height PCIe Add-on card.

YB3x MODELS

Model	1GbE RJ45	1GbE SFP	10GbE RJ45	10GbE SFP+	Total ports	BMC w/DP	SSD*	PCIe Slot
<u>Bare</u>	2	0	0	0	2	Optional	3	Optional
<u>SFP+</u>	2	0	0	2	4	Optional	3	Optional
<u>I</u>	2	0	2	0	4	Optional	3	Optional
<u>ST</u>	2	0	2	2	6	Optional	3	Optional
<u>TI</u>	2	0	4	0	6	Optional	3	Optional
<u>Ten</u>	2	4	0	4	10	Optional	3	Optional
<u>Six</u>	6	0	0	0	6	Optional	3	Optional

* - SSD options: M.2 NVMe + M.2 SATA + eMMC



CUSTOMER STORY

Transportation Sector



AUTONOMOUS VEHICLE TRAINING

Customer challenge:

A large autonomous driving company was faced with a challenge when its vehicle hardware used for R&D in its autonomous driving application requires multiple hardware components. Sourcing of parts such as the server, the SSD hot swappable bay and the DC-to-DC converter for automotive applications was becoming challenging. Moreover, the time-consuming assembly required dedicated personnel using valuable resources for self assembly, further prolonging lead-time to deployment.

AUTONOMOUS VEHICLE TRAINING

Solution:

With custom modification to the HQ-Box2, Heptagon systems was able to offer a single box containing a powerful board and ample hot swappable SSD storage slots. In addition, the HQ-Box2 came with its own dedicated power supply with ignition awareness and vehicle mounting to support the customers demanding in-vehicle applications.

Instead of purchasing the components separately, having to assemble and integrate them , the company was now able to receive the ready to mount server, load its image and go.

This resulted in the innovative autonomous driving company's ability to meet all its technical requirements in one enclosed solution dramatically reducing deployment time using less manpower and reducing risk, resulting in faster time to market.