

DESCRIPTION

The new JetSys-2010 is an industrial-rugged AI-Box in Small Form Factor format with a sophisticated passive cooling concept, featuring the new Nvidia® Jetson Orin™ NX 16 GB and the Nvidia® JetPack ecosystem. EN50155 compliant, the JetSys-2010 is application-ready for industries like Railway, Transportation, Industrial automation and many more. A wide range of interfaces and a robust product design provides state-of-the-art AI computing power even for challenging environments.



Features

- Semi-rugged AI-Box in Small Form Factor formate with a sophisticated passive cooling concept
- Featuring the new Nvidia® Jetson Orin™ NX 16 GB and the Nvidia® JetPack ecosystem
- EN50155 compliant
- Power, 2 x GBit Ethernet, USB and common serial Interface off the shelf
- Additional maintenance interfaces like USB-Console and Display port (limited access)
- Optional extension and I/O ready like GMSL camera interfaces (on request)

NOTICE: The tests for the EN50155 certifications are pending, until then our system will be recognized as a design-to-meet system.

SOFTWARE SUPPORT

The design of the JetSys-2010 was kept close to the Nvidia® Jetson Orin™ Developer Kit. As a result, the JetSys-2010 can leverage Nvidia's extensive AI toolset and the Nvidia® JetPack SDK. Contact Elma for available support package and pre-install options.

APPLICATIONS

Elma's JetSys-2010 is built for AI processing in demanding environments like railway, transportation or industrial automation.

RELATED PRODUCTS



JetKit-3020



JetSys-5330

- AI embedded computing board with CompactPCI Serial interface based on NVIDIA® Jetson Orin™
- Rugged AI embedded computing platform in small form factor

SPECIFICATIONS

Dimensions

Height	64 mm
Width	182 mm
Depth	161 mm
Weight	1.5 kg

Processor

Nvidia® Jetson Orin™ NX 16 GB	operating mode max. 25 W
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Storage

M.2, 512 GB; 2242 NVMe SSD	default
M.2, 1TB; 2242 NVMe SSD	
M.2, 2TB 2242 NVMe SSD	

Interfaces

2x Gigabit Ethernet, 1x USB 2.0, 1x User defined, S1 Option 1 RS 232 default Option 2 RS 485 Option 3 1x CAN
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Cooling

Cooling concept	Passive, conduction cooled
Protection class	IP 4x

Power supply unit

Output (max.)	50 W
Output voltages per unit (max.)	12 VDC
Input voltage	24 – 110 VDC

Environmental

Input Voltage	24V – 110VDC / Hold-Up Class: S2 (10ms) according to EN 50155
Operating Temperature	-20°C - +70°C
Cooling	Natural convection
Storage Temperature Range	-30°C - +85°C
Altitude Class	Class Ax (>1400 m)
Polution Degree	PD2 according to EN 50124-1
Shock and Vibration	According to EN 61373:2010
Rapid Temperature Variation	Class H1 according to EN 50155
Protective Coating	Class PC2 according to EN 50155
Fire behaviour	EN 45545-2

Jet Pack Support

Jet Pack 5.1.3 and higher

EMC

Test	Standard	Performance criteria
Surges	EN 50155:2021, EN 50121-3-2:2016	A
Electrostatic discharge	EN 50155:2021, EN 50121-3-2:2016	A
Fast transients	EN 50155:2021, EN 50121-3-2:2016	A
Radio-frequency common mode	EN 50155:2021, EN 50121-3-2:2016	A
Radio-frequency electromagnetic field	EN 50155:2021, EN 50121-3-2:2016	A
Conducted emissions	EN 50155:2021, EN 50121-3-2:2016	Compliant with EN 55032 Class A
Radiated emissions	EN 50155:2021, EN 50121-3-2:2016	Compliant with EN 55032 Class A

Safety standards

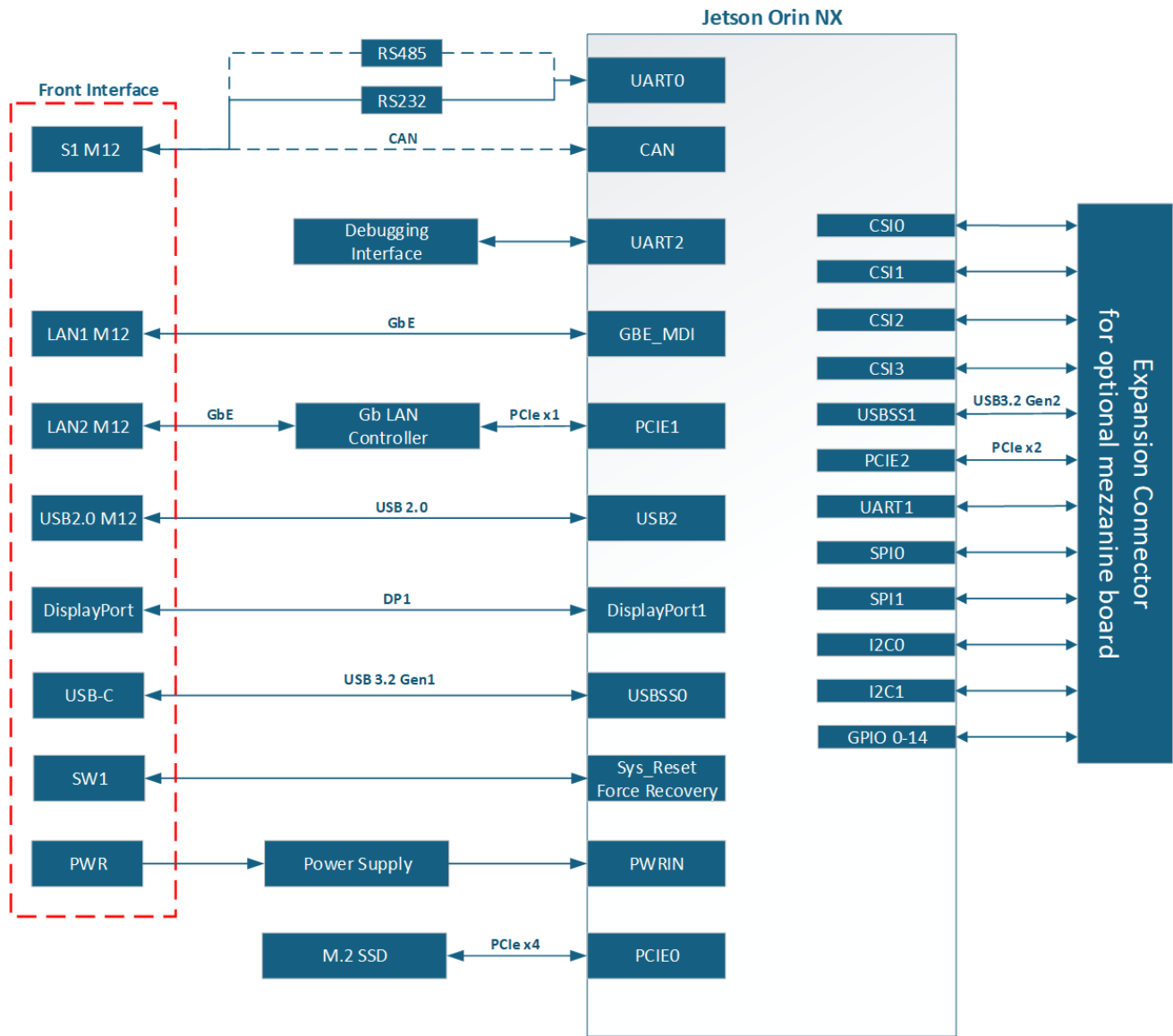
	EN 50155, EN 62368-1 (pending)
Insulation Coordination	According to EN 50124-1

EXAMPLE ORDER NUMBER

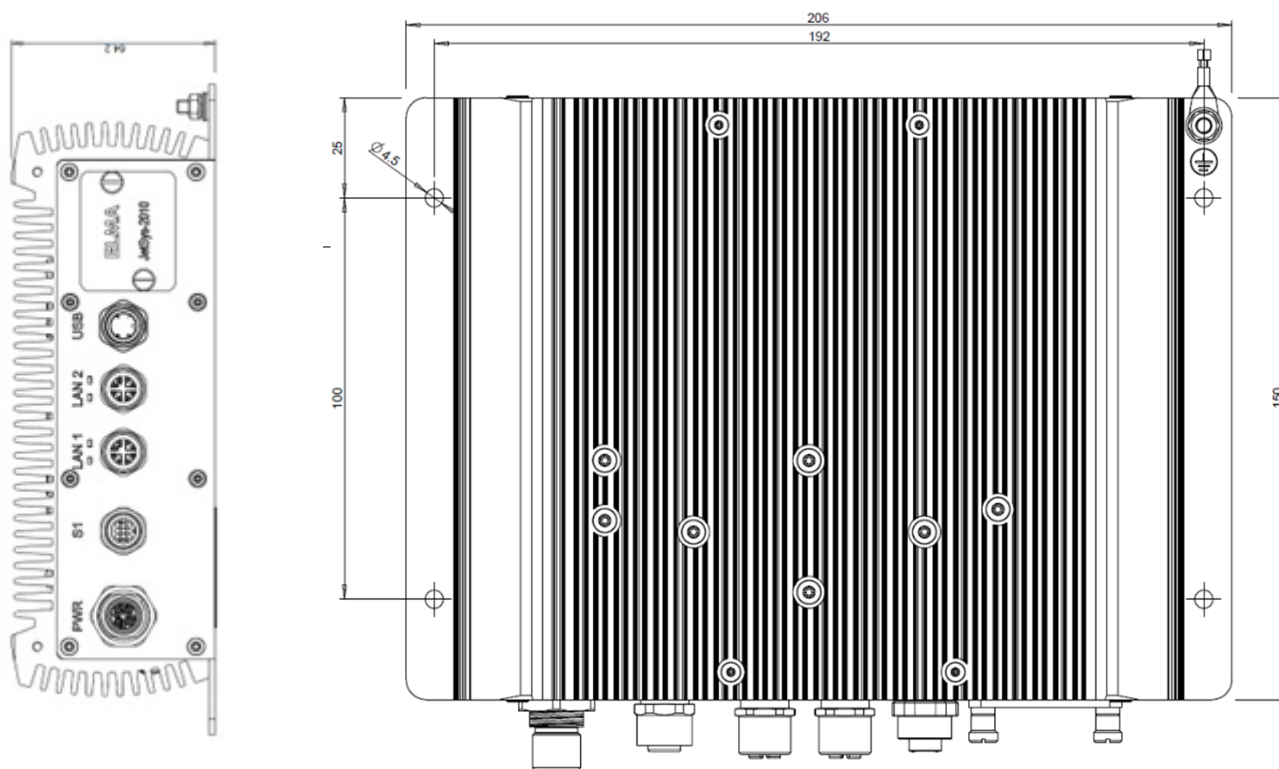
PART NUMBER

JetSys-2010	070-080
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BLOCK DIAGRAM



DIMENSIONS



CABLING OPTIONS

Cable Kit		
Pos	Elma PN	Description
1	072-852	Cablekit 1 - 2x M12 to RJ45, 2m - 1x M12 to USB 2.0, 2m - 1x M12 to RS232, 2m - 1x USB Adapter F/F
2	072-857	Cablekit 2 - 2x M12 to RJ45, 2m - 1x M12 to USB 2.0, 2m - 1x M12 to RS485, 2m - 1x USB Adapter F/F
3	072-861	Cablekit 3 - 2x M12 to RJ45, 2m - 1x M12 to USB 2.0, 2m - 1x M12 to CAN, 1m - 1x USB Adapter F/F

Individual cabling		
Pos	Elma PN	Description
1	071-869	1x M12 to RJ45, 2m
2	072-758	1x M12 to USB 2.0, 2m
3	072-759	1x M12 to RS232, 2m
4	072-922	1x M12 to RS485, 2m
5	072-760	1x M12 to CAN, 1m
6	072-854	1x USB Adapter F/F

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