People Sensing Edge Computing Unit

PS-ECU-X

Hella Aglaia

017.371-017

PS-ECU-X is a compact on-board computer for buses and trains, specially designed for video processing with AI.

This edge computing unit combines high performance and compactness. The independent unit can be deployed without an existing on-board IT infrastructure and features a modern system architecture.

PS.LOAD - LIVE OCCUPANCY WITH AI

What belongs together, comes together - with the edge computing unit PS-ECU-X and the AI-based software PS.LOAD.

The software turns cameras on buses and trains into intelligent devices by using algorithms to determine the actual passenger load in real time.

More insights into passenger flows offer new opportunities to optimize public transport operations. Smarter passenger guidance can increase efficiency and improve passenger interchange times.

This solution opens up many options to make travel more comfortable for passengers.

TECHNICAL SPECIFICATIONS

Power supply	12 V DC to 36 V DC nominal
	EN 50155 class S1 compliant
	EN 50498 compliant
	ITxPT compliant Ignition input, programmable
Energy consumption	Max. 10 W own consumption
	Max. 38 W for connected PoE devices
	Max. 48 W total
	< 10 mW in standby
	Min. 18V input voltage for use with PoE
Operating temperature	-25 °C to +70 °C (-13 °F to +158 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Humidity	Max. 95 % continuous,
	Max. 100 % occasional
Shock/vibration	IEC 60721, STM-E001, any orientation
Dimensions	161 mm x 110 mm x 71 mm
	(6,33 in x 4.33 in x 2,79 in)
Weight	950 g
Ingress protection	IP30
Fire protection	EN 45545 compliant, UL94-V0
Reliability	MTBF > 300.000 h
	in typical railway environment
Certifications	EN 50155 approval for railway vehicles
	ECE type approval for road vehicles
	CE and UKCA conformity
	Product safety 2001/95/EG

COMPUTER SPECIFICATIONS

CPU	NXP i.MX8M Plus SoC
RAM	2 GB
Storage	8 GB
Interfaces	1 x 1000 Mbit/s Ethernet, M12 X-coded
	1 x USB 3.0 type A
	2 x digital input (isolated)
	1 x digital output (isolated)
	3 x 100 Mbit/s Ethernet, M12 D-coded
	PoE class 0 Power Source (PSE), IEEE 802.3af
Mobile network	Worldwide certifications
	Quad-band 850/900/1800/1900 MHz
	LTE Cat M1, NB-IOT Cat NB2, EGPRS
	Upload max. 1119 kbps (LTE)
	Download max. 588 kbps (LTE)
	Micro-SIM slot in front plate
Geolocation	GPS, Galileo, BeiDou, GLONASS, QZSS
Other extras	6-axis acceleration sensor
	Programmable 3 color status LED
Operating system	Linux
User interfaces	Via IP network
	No monitor port (headless unit)

ACCESSORIES

- Mounting kit for surface mounting (275.611-07).
- Rack adapter to mount the PS-ECU-X in a 19 inch rack (275.610-07).
- Cable adapter for ITxPT conformity (017.538-007).

ⓘ PS-ECU-X is also available as a basic configuration PS-ECU.

What is the difference?

The smaller PS-ECU does not come with extra networks ports, LTE and GNSS module and is especially designed for boosting the AI capabilities of an existing CCTV or passenger counting system.