

# Nuvo-2615RL series

EN50155 and EN45545-compliant railway computer for NVR and video analytics

## Features

- › Compliant with EN 50155 mandatory tests and EN 45545-2
- › Intel® Elkhart Lake Atom® x6425E quad-core 2.0GHz/ 3.0GHz 12W CPU
- › 4x PoE+ GbE ports via M12 x-coded connectors
- › Built-in SuperCAP UPS for power interruptions > 30 sec (Nuvo-2615RL)
- › 1x front-accessible 2.5" 15mm HDD tray and 1x M.2 2280 SATA SSD
- › 43V to 160V wide-range DC input with 1500Vdc insulation
- › Fanless operation, compliant with EN 50155 Class OT4 (-40°C to 70°C)

PRELIMINARY



*Nuvo-2615RL rear*



**1x USB 3.1, 2x USB 2.0, VGA & DVI**



**2x full-size mini-PCIe sockets, 1x M.2 3042/3052 B Key**



**Rugged and fanless operation**

## Rugged transportation computer

The Nuvo-2615RL series is an EN50155 and EN45545-compliant, fanless Intel® Atom®-based railway computer for video-based rolling stock applications such as NVR (network video recorder) and video analytics. Nuvo-2615RL has a dedicated thermal design to meet EN50155 OT4 class (-40°C to 70°C) fanless operation with max CPU performance and up to 50W PoE+ delivery. To overcome the challenging railway conditions, from voltage fluctuations to power outage interruptions, Nuvo-2615RL is equipped with an isolated wide 43V to 160V DC input design and a built-in SuperCAP UPS to sustain more than 30 seconds of operation time without power supply. If power outage time exceed the sustainable duration, the internal microcontroller (MCU) will trigger a software shutdown before running out of SuperCAP energy to protect the hardware, data, and minimize maintenance costs.

Integrating an Intel Atom® quad-core x6425E, -40°C to 70°C fanless operations, M12 PoE+ connectivity, up to 5TB data storage capacity, 2500 watt-second SuperCAP UPS, 43V to 160V wide-range DC input, and EN50155 and EN45545 compliance, the Nuvo-2615RL series is the ideal rugged transportation computer for vision-based rolling stock applications.



*Nuvo-2610RL front I/O & rear*

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## Nuvo-2615RL series

### SYSTEM

Processor	Intel® Elkhart Lake Atom® x6425E quad-core 2.0GHz/3.0GHz 12W processor
Graphics	Integrated Intel® UHD Graphics
Memory	Up to 32 GB DDR4-3200 SDRAM by one SODIMM socket

### I/O

Power over Ethernet	4x IEEE 802.3at Gigabit PoE+ ports by Intel® I210 via M12 x-coded connectors Total PoE+ power budget: 50W (Nuvo-2615RL-H)
Isolated DIO	4-CH isolated DI and 4-CH isolated DO
USB	1x USB 3.1 gen1 ports with screw-lock 2x USB 2.0 port with screw-lock
Video	VGA and DVI dual display outputs via DVI-I connector
Serial port	1x isolated RS-485 port with 15 kV ESD protection (COM1) 3x 3-wire RS-232 ports (COM2/3/4) or 1x RS-422/485 (COM2)
Audio	1x 3.5 mm jack for mic-in and speaker-out

### EXPANSION BUS

Mini-PCle	1x full-size mini PCI Express socket with PCIe and USB 2.0 signal 1x full-size mini PCI Express socket with USB 2.0 signal
M.2 B key	1x M.2 3042/3052 B key (USB 3.1 + USB 2.0) for 4G/5G module with dual internal micro SIM socket

### STORAGE

SATA HDD	1x front-accessible HDD tray for 2.5" HDD/ SSD installation (up to 15mm height)
M.2 SATA	1x M.2 2280 M key (SATA interface only) socket for SATA SSD installation

### MECHANICAL

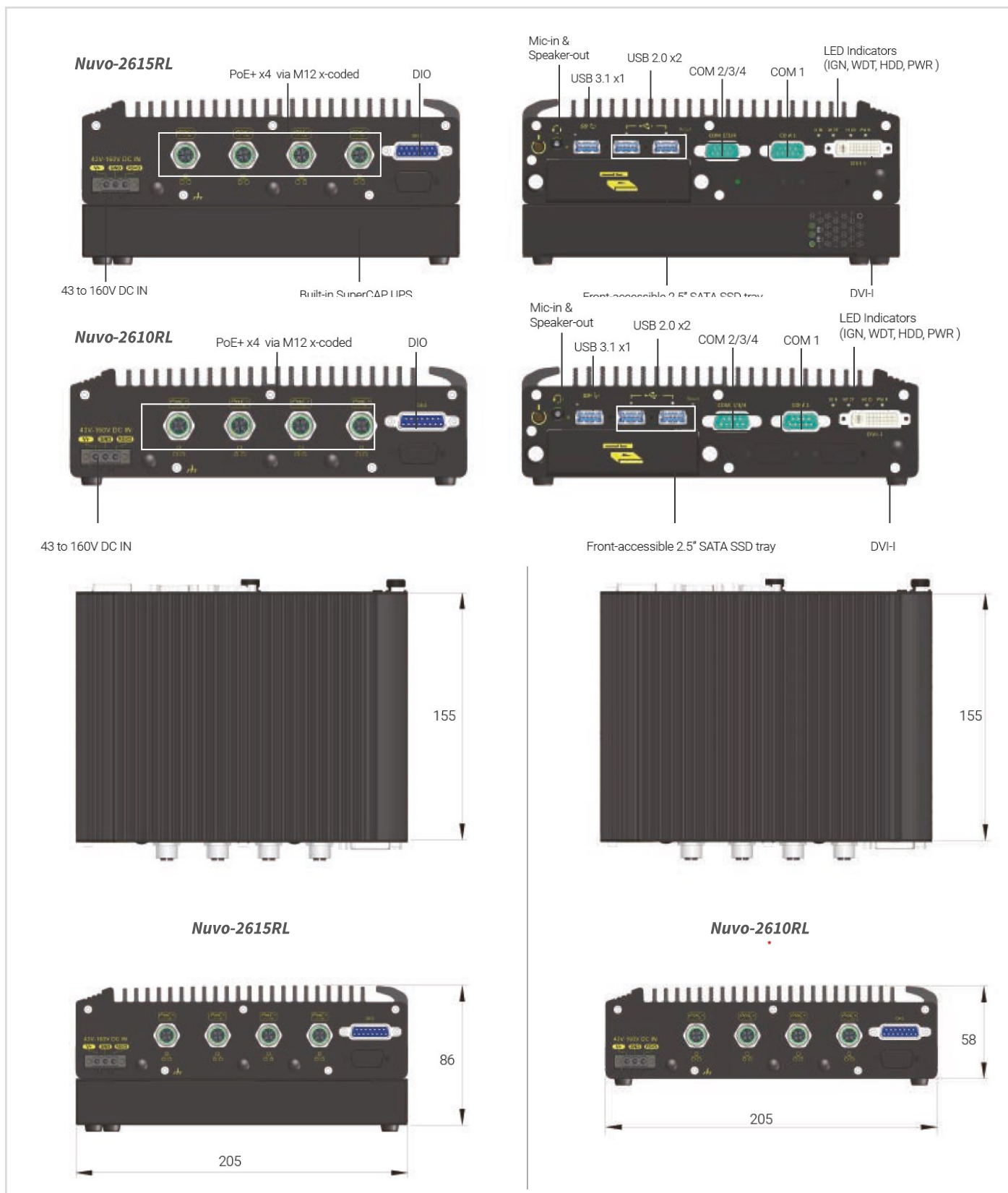
DC Input	1x 3-pin pluggable terminal block for isolated 43V to 160V DC input
Power Backup Capacity	2500 watt-second (Nuvo-2615RL only)
Dimensions	205 mm (W) x 155 mm (D) x 58 mm (H) (Nuvo-2610RL) 205 mm (W) x 156 mm (D) x 86 mm (H) (Nuvo-2615RL)
Weight	2.1kg (Nuvo-2610RL) 2.7kg (Nuvo-2615RL)
Mounting	Damping bracket (default) Wall-mount (optional)
Operating temperature	-40°C to 70°C*, compliant with EN50155 Class OT4
Storage temperature	-40°C ~ 85°C
Humidity	10% ~ 90%, non-condensing
Vibration	IEC61373:2010, Category 1, Class B Body Mounted (part of EN 50155)
Shock	IEC61373:2010, Category 1, Class B Body Mounted (part of EN 50155)
EMC	EN 50155:2017, Clause 13.4.8 CE/FCC Class A, according to EN 55032 & EN 55035
EN50155	All mandatory sections of EN 50155:2017 Nuvo-2610RL: EN50155 Class S1, EN50155 C1 Nuvo-2615RL: EN50155 Class S3, EN50155 C2
EN45545	EN 45545-2 (Fire protection on railway vehicles)

\*For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.

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## Appearance and dimensions (mm)



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## Ordering information

### Nuvo-2615RL series

MODEL NO.	
Nuvo-2610RL-H	EN50155 & EN45545 Intel® Elkhart Lake Atom® x6425E Railway Fanless Computer with 4x M12 PoE+ and 43V to 160V ultra-wide-range DC input
Nuvo-2615RL-H	EN50155 & EN45545 Intel® Elkhart Lake Atom® x6425E Railway Fanless Computer with 4x M12 PoE+ , 43V to 160V ultra-wide-range DC input, and built-in SuperCAP UPS