

# iVIS-200 Series

Intel® Atom™ E3845 Processor Board for x86-based Smart Camera Framework



CE FC

## Key Features

- Intel® Atom™ E3845 quad-core 1.91 GHz
- Built-in GigE/ USB3.0/ USB2.0 camera interfaces
- Patented DTIO technology\* for accurate trigger/strobe control
- Built-in 500 mA constant current and 24 V constant voltage LED controller
- 802.3at PoE+ PD and auxiliary DC dual power input
- Water-proof M12 connectors

\*R.O.C Patent No. 1526834

## Introduction

iVIS-200 consist of an Atom™ E3845 processing unit as part of an innovative smart camera framework that allows you to build up your own x86-based smart camera by integrating an off-the-shelf camera.

iVIS-200 features an ultra-compact footprint and it has GigE/ USB3.0/ USB2.0 camera interfaces. It also incorporates Neosys' DTIO technology for precise trigger/ strobe control and built-in constant current/ voltage LED controller for driving the LED light. Moreover, iVIS-200 carries 802.3at PoE+ PD (Powered Device) capability, so you can simply access and power your smart camera with just one Ethernet cable.

Targeted at different vertical markets, iVIS-200 series are available in several barebone configurations. iVIS-210B-MVS and iVIS-211B-MVS are designed for machine vision applications and come with a slim enclosure to accommodate Basler Dart and Point Grey Chameleon3 board camera, respectively. While iVIS-220B-ITS and iVIS-227B-ITS are aimed at intelligent traffic systems. They are equipped with an IP50 and an IP67 enclosure to accommodate a 29mm x 29mm USB3.0/ GigE camera. They also feature a mini-PCIe slot with SIM support for installing a 3G/ 4G/ WIFI module.

You can utilize iVIS-200 to construct an innovative framework and further expand the possibilities of your smart camera. With iVIS-200, you can quickly build your own smart camera based on Windows/Linux open platform and maximize your vision software.

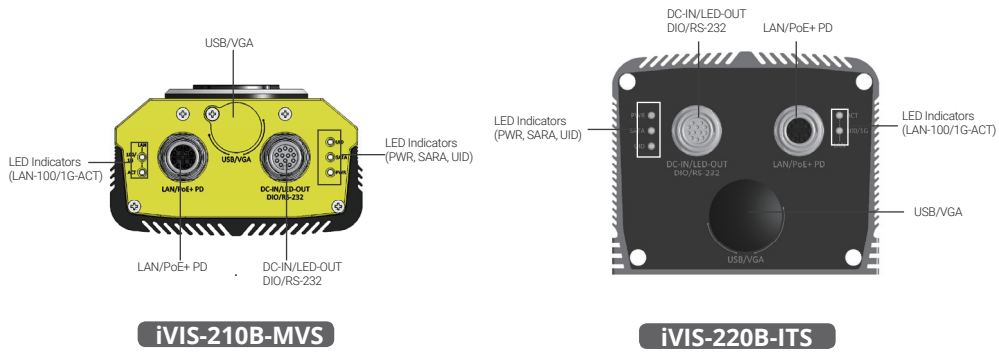
## Specifications

|   | iVIS-210B-MVS<br>iVIS-211B-MVS  | iVIS-220B-ITS<br>iVIS-227B-ITS |                                    | iVIS-210B-MVS<br>iVIS-211B-MVS  | iVIS-220B-ITS<br>iVIS-227B-ITS                 |
|---|---|--------------------------------|------------------------------------|---|--|
| <b>System Core</b>  |   |                                | <b>Storage/Expansion Interface</b> |   |  |
| Processor   | Intel® Atom™ Bay Trail-I E3845 quad-core processor  |                                | Mini-PCIe                          | -   | 1x full-size mini-PCIe socket with SIM support |
| Graphics  | Integrated Intel® HD graphics   |                                | <b>OS Support</b>                  |   |  |
| Memory  | Up to 8GB DDR3L-1333 (single SO-DIMM slot)  |                                | Windows                            | Windows 7 32/ 64-bit, WES7  |  |
| <b>On-board Camera Interface</b>                          |   |                                | Linux                              | Ubuntu 14.04, OpenSUSE 13.1, Fedora 20  |  |
| Ethernet  | 1x GigE interface by Intel® I210  |                                | <b>Power Supply</b>                |   |  |
| USB   | 1x USB3.0 interface   |                                | PoE+ PD                            | Support IEEE 802.3at PoE+ PD (powered via Ethernet cable)   |  |
| Trigger I/O   | 1-CH trigger-out (to camera) and 1-CH strobe-in (from camera)   |                                | Auxiliary DC-IN                    | Support 12/24V DC auxiliary power input when PoE+ PSE is not available                              |  |
| <b>Panel I/O Interface (M12 connectors)</b>               |   |                                | <b>Mechanical</b>                  |   |  |
| Ethernet  | 1x Gigabit Ethernet ports by Intel® I210  |                                | Dimension                          | 83mm (W) x 48mm (D) x 150mm (H)   | 88mm (W) x 151mm (D) x 74mm (H)                |
| Trigger Input   | 2-CH isolated trigger input (<2us L-to-H and H-to-L propagation delay)  |                                | Weight                             | 0.55 kg   | 0.95 kg  |
| Strobe Output   | 1-CH isolated strobe output (24 VDC / 0.5 A rated)  |                                | <b>Environmental</b>               |   |  |
| LED Illumination Controller                               | 1-CH LED illumination driving output, supporting 24V DC constant voltage mode or 500 mA max. adjustable constant current mode with 100 KHz, 250 steps PWM dimming control |                                | Operating Temperature              | -25°C ~ 60°C, 100% CPU loading */**   |  |
| COM   | 1x 3-wire RS-232  |                                | Storage Temperature                | -40°C ~ 85°C  |  |
| <b>Auxiliary I/O Interface (internal wafer connector)</b> |   |                                | Humidity                           | 10%~90% , non-condensing  |  |
| VGA   | 1x VGA port   |                                | Vibration                          | Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, w/ o add-on card, according to IEC60068-2-64)          |  |
| USB   | 1x USB 2.0 port   |                                | Shock                              | Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, w/ o add-on card, according to IEC60068-2-27) |  |
| <b>Storage/Expansion Interface</b>                        |   |                                | EMC                                | CE/FCC Class A, according to EN 55022 & EN 55024  |  |
| mSATA   | 1x half-size mSATA port   |                                |                                    |   |  |

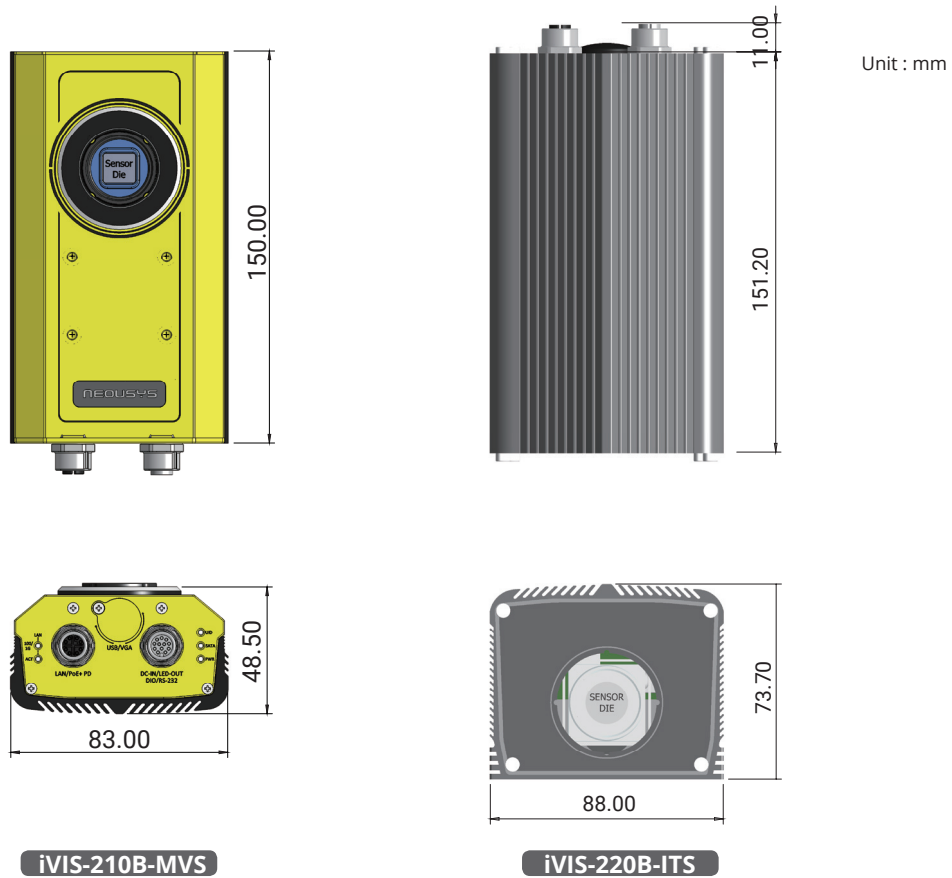
\* When using built-in LED illumination controller to drive LED light, 24 VDC input is required to meet the rated current of the M12 connector

\*\* The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. For detail testing criteria, please contact Neosys Technology

## Appearance



## Dimensions



## Ordering Information

| Model No.     | Product Description   |
|---------------|---|
| iVIS-210B-MVS | Intel® Atom™ E3845 smart camera framework for MV application, accommodating Basler Dart camera (CS-mount)                           |
| iVIS-211B-MVS | Intel® Atom™ E3845 smart camera framework for MV application, accommodating Point Grey chameleon3 camera (CS-mount)                 |
| iVIS-220B-ITS | Intel® Atom™ E3845 smart camera framework for ITS application, accommodating COTS 29mm x 29mm USB3/GigE camera, with IP50 enclosure |
| iVIS-227B-ITS | Intel® Atom™ E3845 smart camera framework for ITS application, accommodating COTS 29mm x 29mm USB3/GigE camera, with IP67 enclosure |

## Optional Accessories

- Cable kit for USB3.0 camera
- Cable kit for GigE camera