iVIS-200 Series

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

Key Features

- **Intel® Atom™ E3845 quad-core 1.91 GHz processing power**
- **Built-in GigE/USB3/USB2 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**
- **M12 connectors for water-proof design**

R.O.C Patent No. I526834

Introduction

iVIS-200 is a Atom™ E3845 processing unit as part of an innovative smart camera framework, where you can build up your own x86-based smart camera by integrating an off-the-shelf camera.

iVIS-200 integrates leading-edge technologies its ultra-compact footprint. In addition to internal GigE/USB3/USB2 camera interfaces, it incorporates Neousys' DTIO technology for precise trigger/strobe control and built-in constant current/constant voltage LED controller for directly driving 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.

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

iVIS-200 and the innovative framework expand the possibility of smart camera. With iVIS-200, you can quickly develop a smart camera based on Windows/Linux open platform and maximize your effort on vision software.

Specifications

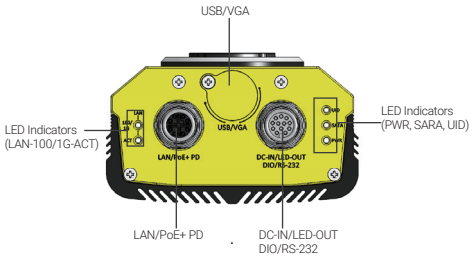
	iVIS-210B-MVS iVIS-211B-MVS	iVIS-220B-ITS iVIS-227B-ITS
System Core		
Processor	Intel® Atom™ Bay Trail-I E3845 Quad-core processor	
Graphics	Integrated Intel® HD Graphics	
Memory	1x SODIMM socket for DDR3L-1333, up to 8GB	
On-board Camera Interface		
Ethernet	1x GigE interface by Intel® I210	
USB	1x USB 3.0 interface	
Trigger I/O	1-CH trigger-Out (to camera) and 1-CH strobe-in (from camera)	
Panel I/O Interface (M12 connectors)		
Ethernet	1x Gigabit Ethernet ports by Intel® I210	
Trigger Input	2-CH isolated trigger input (<2us L-to-H and H-to-L propagation delay)	
Strobe Output	1-CH isolated strobe output (24 VDC / 0.5 A rated)	
LED Illumination Controller	1-CH LED Illumination driving output, supporting 24 VDC constant voltage mode or 500 mA max. adjustable constant current mode with 100 KHz, 250 steps PWM dimming control	
COM	1x 3-wire RS-232	
Auxiliary I/O Interface (internal wafer connector)		
VGA	1x VGA port	
USB	1x USB 2.0 port	
Storage/Expansion Interface		
mSATA	1x half-size mSATA port	

	iVIS-210B-MVS iVIS-211B-MVS	iVIS-220B-ITS iVIS-227B-ITS
Storage/Expansion Interface		
Mini-PCIe	-	1x full-size mini-PCIe socket with SIM support
OS Support		
Windows	Windows 7 32/64-bit, WES7	
Linux	Ubuntu 14.04, OpenSuSE 13.1, Fedora 20	
Power Supply		
PoE+ PD	Support IEEE 802.3at PoE+ PD (powered via Ethernet cable)	
Auxiliary DC-IN	Support 12/24 VDC auxiliary power input when PoE+ PSE is not available	
Mechanical		
Dimension	83mm (W) x 48mm (D) x 150mm (H)	88mm (W) x 151mm (D) x 74mm (H)
Weight	0.55 kg	0.95 kg
Environmental		
Operating Temperature	-25°C ~ 60°C, 100% CPU loading */**	
Storage Temperature	-40°C ~ 85°C	
Humidity	10%~90% , non-condensing	
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, w/o add-on card, according to IEC60068-2-64)	
Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, w/o add-on card, according to IEC60068-2-27)	
EMC	CE/FCC Class A, according to EN 55022 & EN 55024	

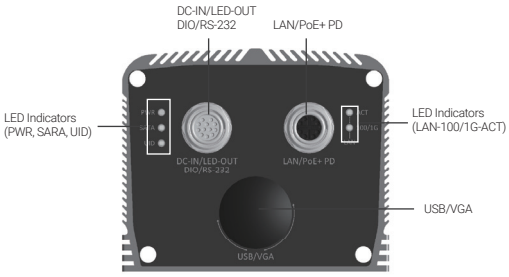
** When using built-in LED illumination controller to drive LED light, 24 VDC input is required to meet the rated current of the M12 connector*

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

Appearance



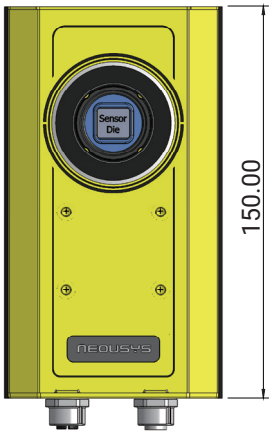
iVIS-210B-MVS

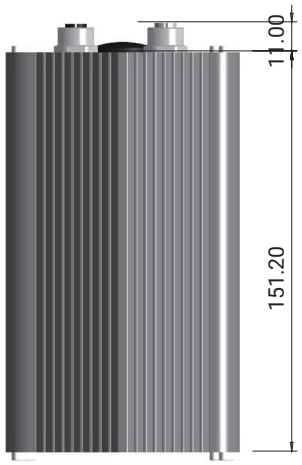


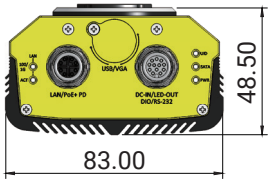
iVIS-220B-ITS

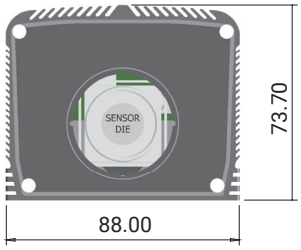
Dimensions

Unit : mm









iVIS-210B-MVS

iVIS-220B-ITS

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 framwork for ITS application, accommodating COTS 29mm x 29mm USB3/GigE camera, with IP50 enclosure
iVIS-227B-ITS	Intel® Atom™ E3845 Smart Camera framwork for ITS application, accommodating COTS 29mm x 29mm USB3/GigE camera, with IP67 enclosure

Optional Accessories

Cable kit for USB 3.0 camera
Cable kit for GigE camera