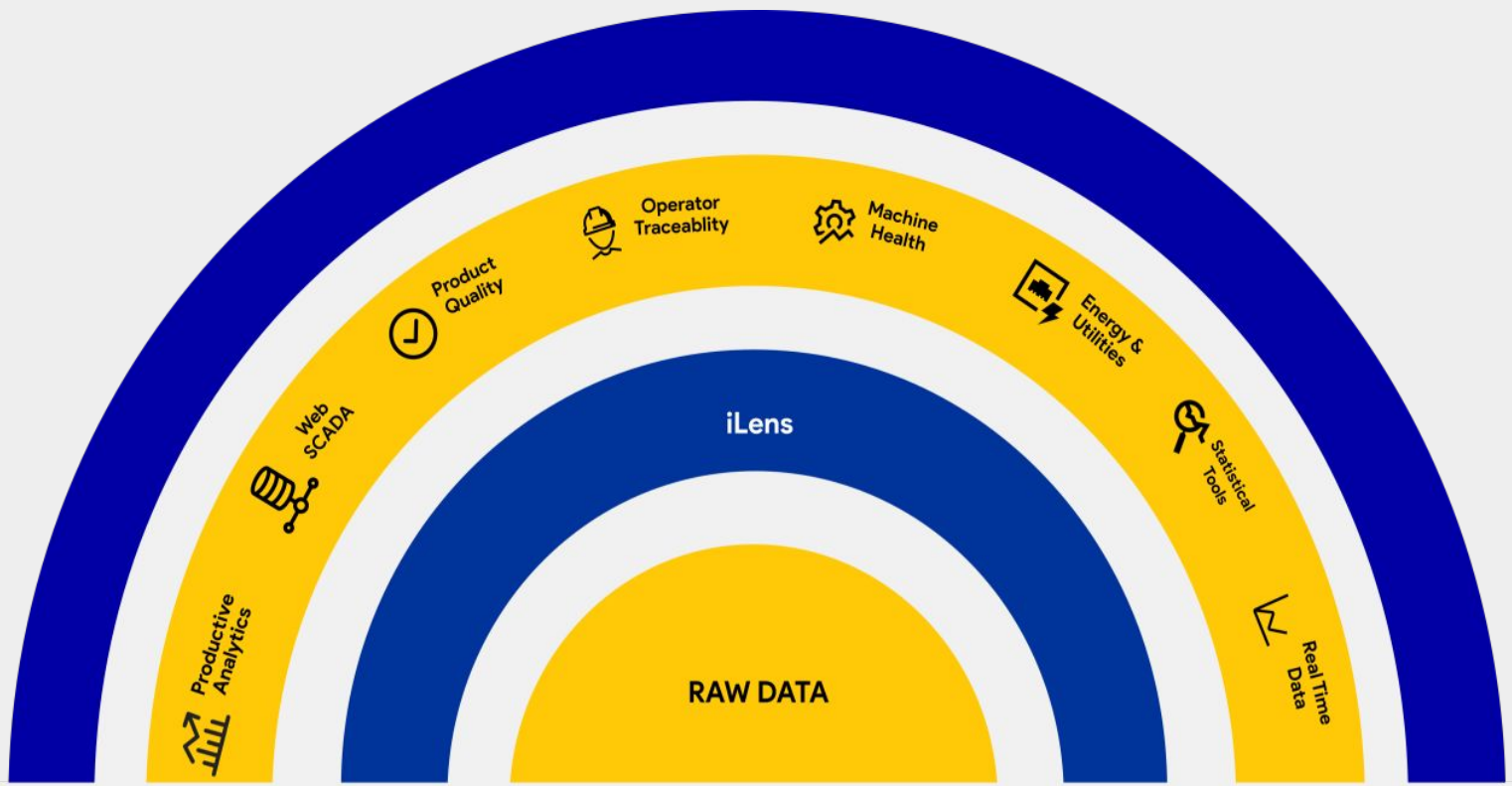


INDUSTRIAL IoT GATEWAYS & IO MODULES



OVERVIEW



Unified IoT Platform for Smarter Solutions



Smart Buildings & Utilities

Used For Home Automation, Fire Safety, Energy & Building Management



Security & Safety – Video Analytics & Surveillance

Used For Threat Detection, Attendance Management & Crowd Management.



Real Time Monitoring & Management

Used For Water Distribution, Environment Monitoring & Utility Consumption.



Smart City Infrastructure

Used For Traffic Management, Smart Parking, Smart Environment & Smart Displays/Messaging.



Intelligent Asset Tracking

Used For Asset Management, Smart Logistics, Asset Utilization & Optimization.



Predictive Maintenance

Used for Failure Prediction, Quality Improvements, Process Efficiency & Smart Manufacturing.

Contents

1. Micro-Controller

- iLens SCN101L	1
- iLens SCN101A-4G	2
- iLens SCN101R	3
- iLens SCN201	4

2. Mini-PC

- iLens MP100	5
- iLens MP201	6
- iLens MP201A	7
- iLens MP201-232	9
- iLens MP301	10
- Data-Diode D4	11
- Data-Diode D5	12
- <u>Data-Diode D6</u>	13
- iLens IN100	13
- iLens SM100	14

3. Camera

- iLens CAM101	15
- iLens CAM201	16
- iLens CAM301	17

4. IO Modules

- iLens IO100	18
- iLens IO201	19
- iLens IO301	20
- iLens IO401	21
- iLens IO501	22
- iLens SV100	23

SCN101L is a DataLogger from the iLens SCN Series which comes with a dedicated **Ethernet port** which make it convenient to connect it to existing ethernet networks.. It also has 4AI (4-20 mA, 16 Bit) , RS232 and RS485 port for digital communication with Analyzers and PLCs.



Specifications

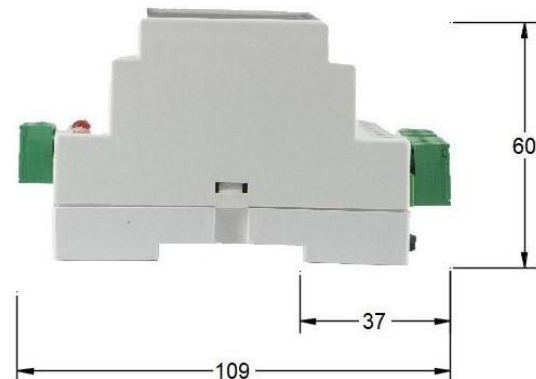
Processor	Xtensa Dual Core 32-bit LX6 Microprocessor
RAM	520 KB of on-chip SRAM for data and instructions
ROM	16MB SPI Flash
Memory	16 GB MicroSD Card
Input Power	85-264V AC/ 6-36V DC, 1000mA
Environment	Operating temperature, 0–85°C

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
LAN	10/100 Ethernet
RS232	1 x RS232
RS485	1 x RS485
Analog Input	4 x ADC(4-20mA) 16 bit

Others

Mounting	DIN Rail
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Note : All dimensions are in millimeters

SCN101A-4G is a DataLogger from the iLens SCN Series which comes with a **4G module** onboard, which makes it ideal for remote installations. It also has 4AI (4-20 mA, 16 Bit) , RS232 and RS485 port for digital communication with Analyzers and PLCs.



Specifications

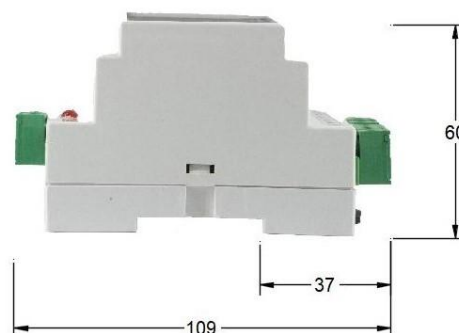
Processor	Xtensa Dual Core 32-bit LX6 Microprocessor
RAM	520 KB of on-chip SRAM for data and instructions
ROM	16MB SPI Flash
Memory	16 GB MicroSD Card
Input Power	85-264V AC/ 6-36V DC, 1000mA
Environment	Operating temperature, 0–85°C

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
RS232	1 x RS232
RS485	1 x RS485
Analog Input	4 x ADC(4-20mA) 16 bit
GSM	LTE Cat 4 / Cat 1 , 3G, 2G

Others

Mounting	DIN Rail
Antenna	4G Standard Antenna



Note : All dimensions are in millimeters

SCN101R is a DataLogger from the iLens SCN Series which comes with a pair of **Potential Free relays**, using external Actuators like Pump, Motors etc can be triggered.

It also has 4AI (4-20 mA, 16 Bit) , RS232 and RS485 port for digital communication with Analyzers and PLCs.



Specifications

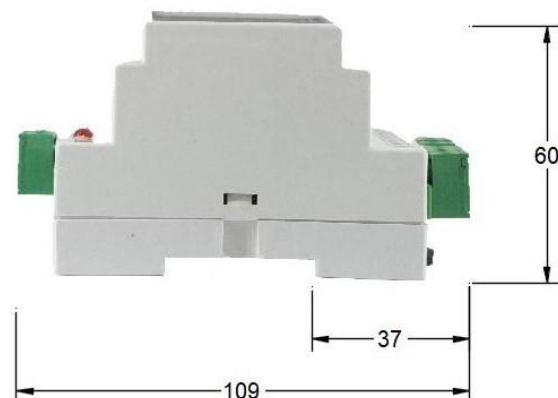
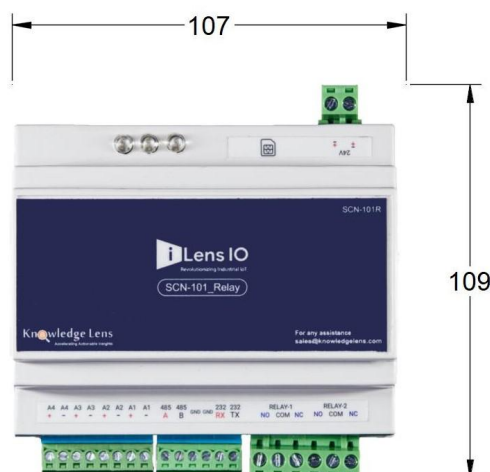
Processor	Xtensa Dual Core 32-bit LX6 Microprocessor
RAM	520 KB of on-chip SRAM for data and instructions
ROM	16MB SPI Flash
Memory	16 GB MicroSD Card
Input Power	6-36V DC, 1000mA
Environment	Operating temperature, 0–85°C

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
RS232	1 x RS232
RS485	1 x RS485
Analog Input	4 x ADC(4-20mA) 16 bit

Others

Mounting	DIN Rail
Antenna	Wifi Antenna (Optional)



Note : All dimensions are in millimeters

SCN201 is a Special DataLogger from the iLens SCN Series which comes with a lot of IOs specially for replacing a PLC.

It comes with 8 x AI, 8 x DI, 8 x DO.



Specifications

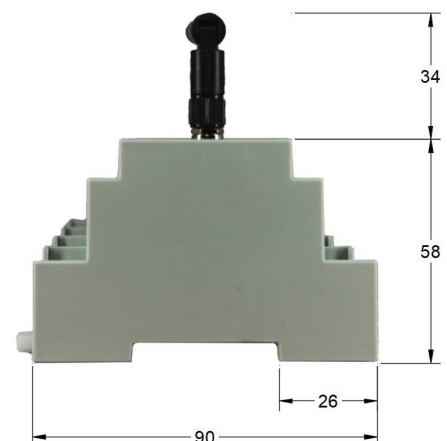
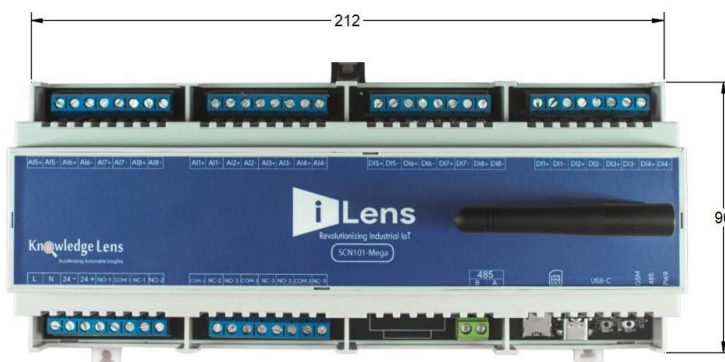
Processor	Xtensa Dual Core 32-bit LX6 Microprocessor
RAM	520 KB of on-chip SRAM for data and instructions
ROM	16MB SPI Flash
Memory	16 GB MicroSD Card
Input Power	6-36V DC, 1000mA
Environment	Operating temperature, 0–85°C

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
IO	8xDI, 8xAI (16 Bit) , 8xDO (Potential Free)
RS485	1 x RS485
GSM	LTE Cat 4 / Cat 1 , 3G, 2G

Others

Mounting	DIN Rail
Antenna	Wifi Antenna (Optional)



Note : All dimensions are in millimeters

MP100 is a powerful data logger with a full size computer on chip. It comes with 4-Core process and full fledged OS which helps in running multitasking and doing complex calculations on the edge.

It comes with 4 x USB2.0 and 1 LAN Port and Wifi.



Specifications

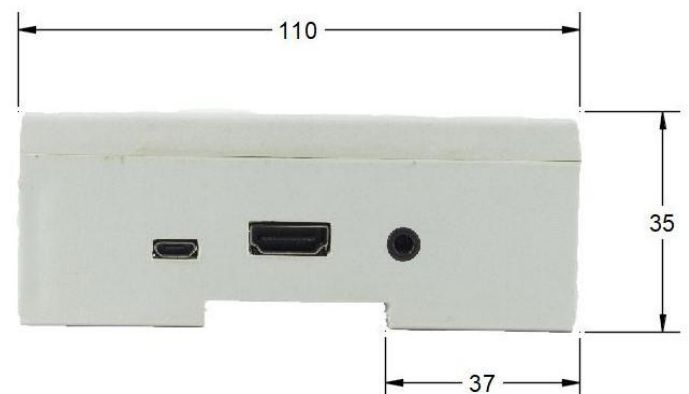
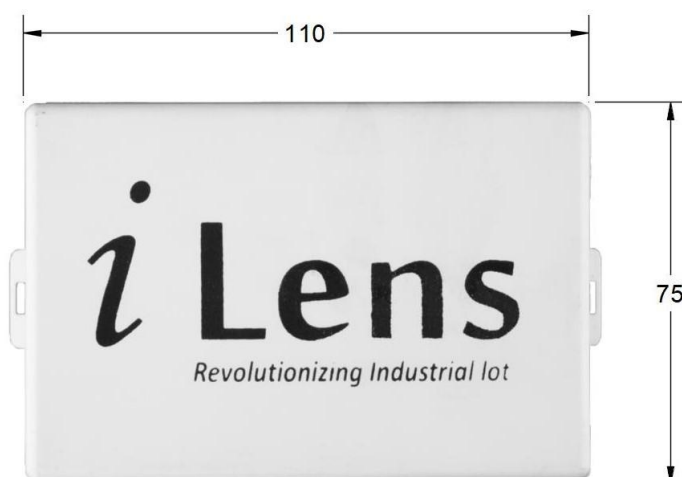
Processor	1.4 GHz quad-core BCM2837B0 ARMv8 64bit CPU
RAM	1GB LPDDR2 SDRAM
Memory	64 GB MicroSD Card
Input Power	5v DC, 2.5A
Environment	Operating temperature, 0–85°C
Supported OS	Debian 10 (Linux)

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
USB	4 x USB 2.0
LAN	1 x Gigabit Ethernet
HDMI	Full Size HDMI

Others

Mounting	DIN Rail
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Note : All dimensions are in millimeters

MP201 is a powerful data logger with a full size computer on chip. It comes with 4-Core process and full fledged OS which helps in running multitasking and doing complex calculations on the edge.

It comes with RS232, RS485, 4-20 Analog Input Pins and Potential Free Relays for triggers.



Specifications

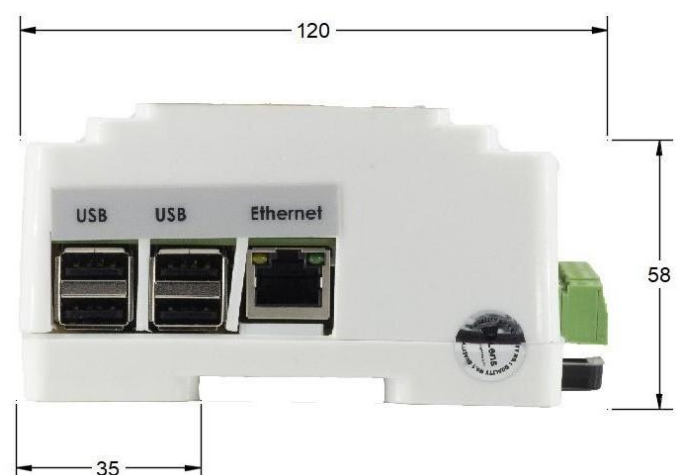
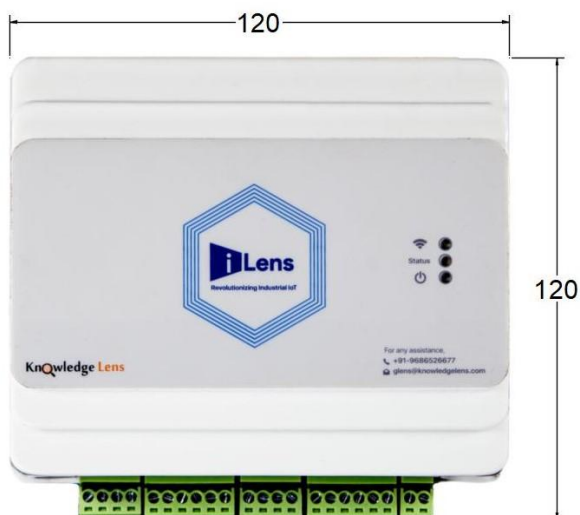
Processor	1.4 GHz quad-core BCM2837B0 ARMv8 64bit CPU
RAM	1GB LPDDR2 SDRAM
Memory	16 GB MicroSD Card
Input Power	5v DC, 2.5A
Environment	Operating temperature, 0–85°C
Supported OS	Debian 10 (Linux)

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
USB	4 x USB 2.0
LAN	1 x Gigabit Ethernet
HDMI	Full Size HDMI
Interfacing Option	2 x RS232, 2 x RS485, 2 x 4-20mA, 2 x Relay (NO, C, NC)

Others

Mounting DIN Rail



Note : All dimensions are in millimeters

MP201A is a powerful data logger with a full size computer on chip. It comes with 4-Core process and full fledged OS which helps in running multitasking and doing complex calculations on the edge.

It comes with RS232, RS485, 4-20 Analog Input Pins, Digital Input Pins and Potential Free Relays for triggers.



Specifications

Processor	1.4 GHz quad-core BCM2837B0 ARMv8 64bit CPU
RAM	1GB LPDDR2 SDRAM
Memory	64 GB MicroSD Card
Input Power	12v DC, 2.5A
Environment	Operating temperature, 0–85°C
Supported OS	Debian 10 (Linux)

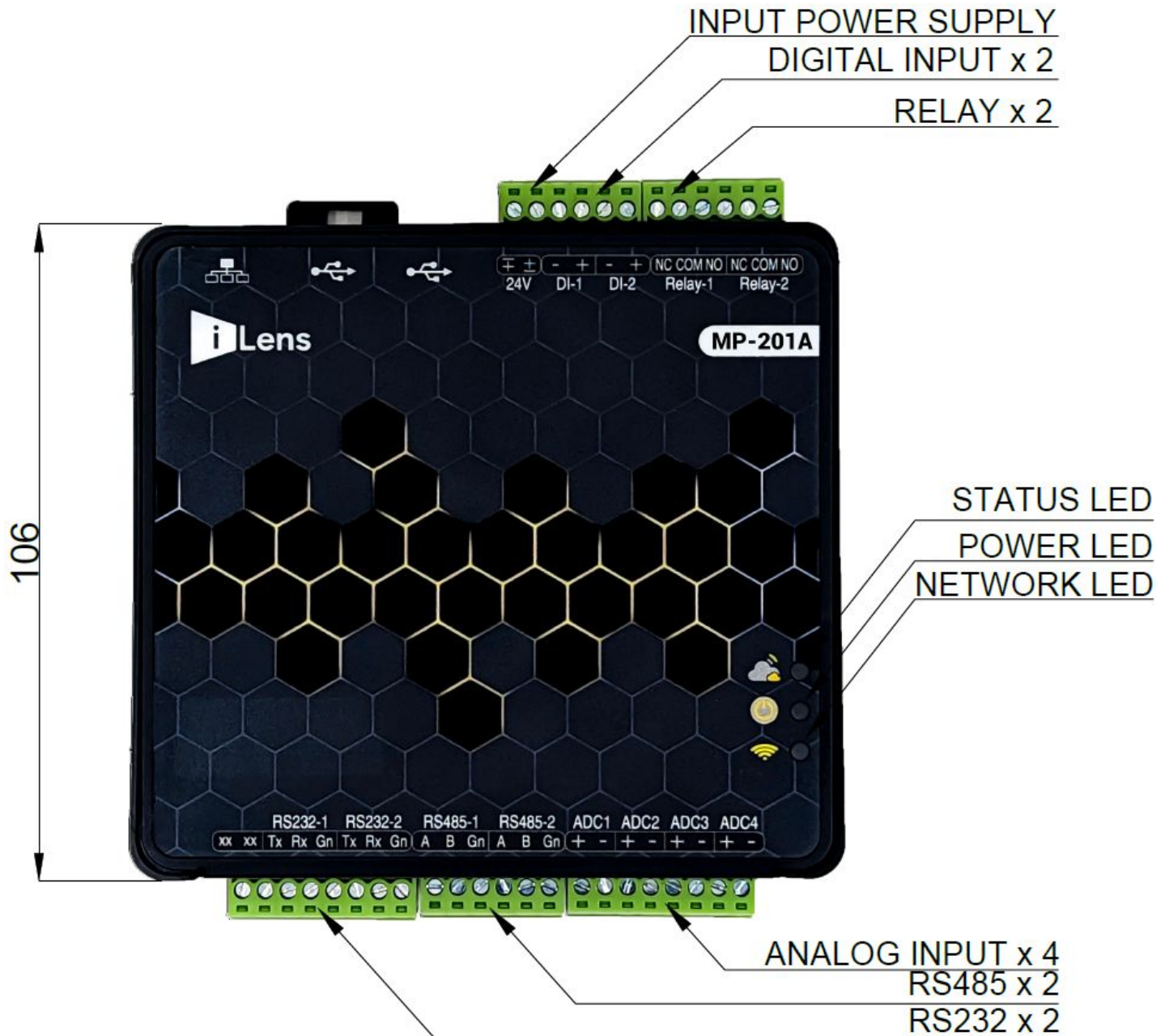
Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
USB	4 x USB 2.0
LAN	1 x Gigabit Ethernet
HDMI	Full Size HDMI
Interfacing Option	2 x RS232, 2 x RS485, 4 x 4-20mA, 2 x Relay (NO, NC) 2 x Digital Input

Others

Mounting	DIN Rail
Dimension	106 x 115 x 42

Note : All dimensions are in millimeters



Note : All dimensions are in millimeters

MP201-232 is a powerful data logger specially designed for connecting Ambient Monitoring Stations to the PCBs.

It comes with 8 channel RS232 and 2x 4-20 Analog Input Pins.



Specifications

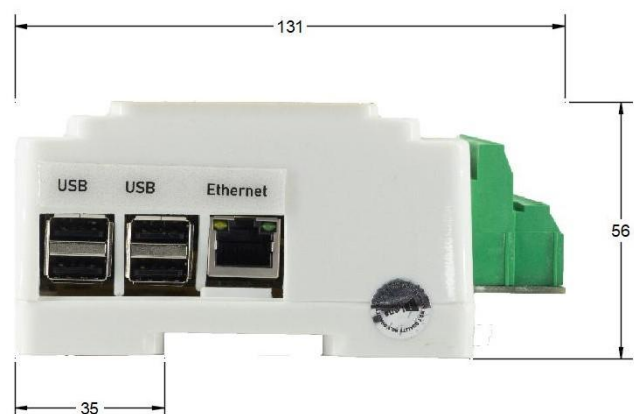
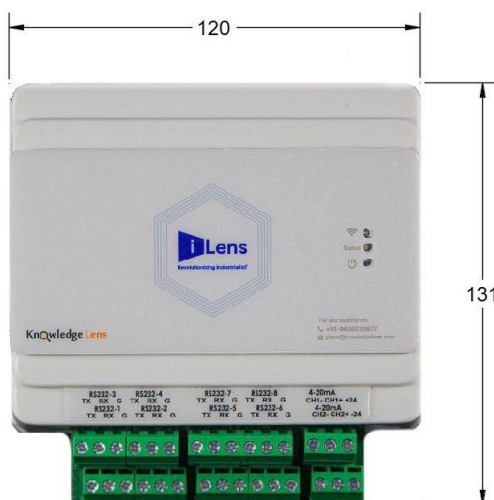
Processor	1.4 GHz quad-core BCM2837B0 ARMv8 64bit CPU
RAM	1GB LPDDR2 SDRAM
Memory	64 GB MicroSD Card
Input Power	12v DC, 2.5A
Environment	Operating temperature, 0–85°C
Supported OS	Debian 10 (Linux)

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
USB	4 x USB 2.0
LAN	1 x Gigabit Ethernet
HDMI	Full Size HDMI
Interfacing Option	8 x RS232, 2 x 4-20mA

Others

Mounting DIN Rail



Note : All dimensions are in millimeters

MP301 is a data logger with 2 LAN ports which helps to communicate with the PLCs and Analyzers with LAN port. This is also a Mini PC capable of running multi threading application and complex calculations on the edge.



Specifications

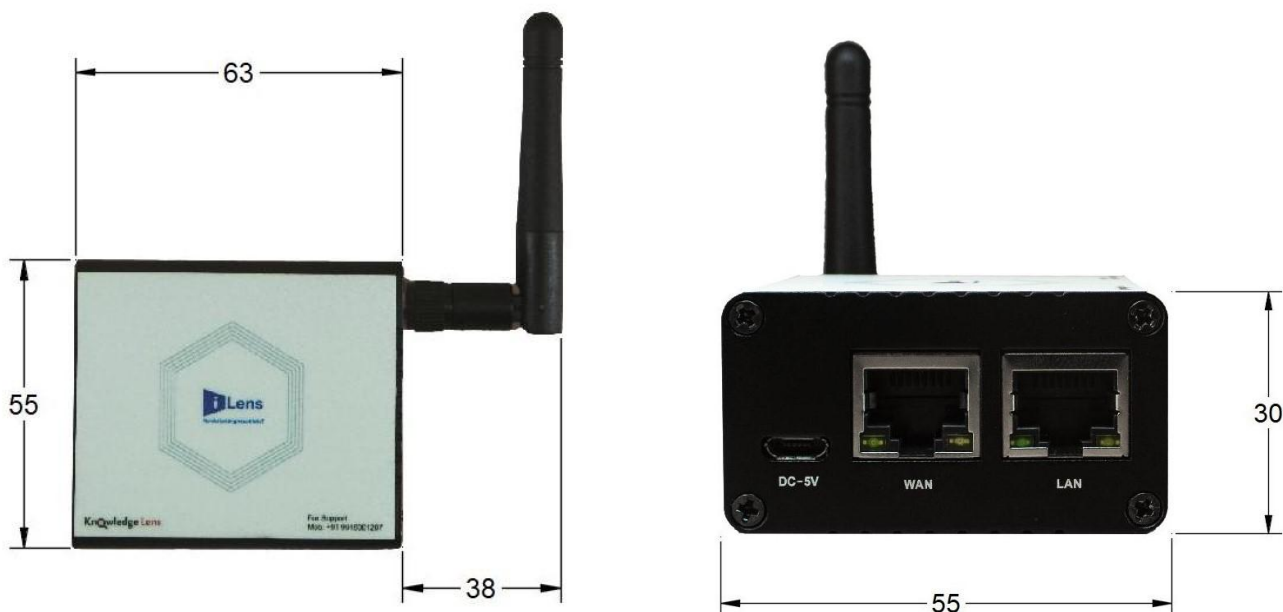
Processor	1.2 GHz Quad-core Cortex-A7 CPU
RAM	512 MB
Memory	16 GB MicroSD Card
Input Power	Micro USB DC 5V/2A
Environment	Operating temperature, 0–85°C
Supported OS	Debian 10 (Linux)

Connectivity Ports

Wi-Fi	2.4 GHz IEEE 802.11 b/g/n wireless LAN
USB	1 x USB 2.0
LAN	1 x 10/100M , 1 x 10/100/1000M

Others

Mounting DIN Rail



Note : All dimensions are in millimeters

iLens Data Diode D4 is an Industrial Diode which allows unidirectional data flow from OT to IT Network. This also comes with USB Ports where we can connect to Analyzers and PLCs and upload the data from OT to IT.



Specifications

Processor	1.4 GHz quad-core BCM2837B0 ARMv8 64bit CPU
RAM	1GB LPDDR2 SDRAM
Memory	16 GB MicroSD Card
Input Power	Micro USB DC 30W
Environment	Operating temperature, 0–85°C
Supported OS	Debian 10 (Linux)
Diode Transmission Speed	8 Sockets, 100 Mbps

Interfaces

1. OT Network Lan *
2. 4 x USB 2.0 **
3. IT Network Lan
4. 9-36 V DC Input



Note :-

* Also can be used for Data Acquisition from PLCs and Analyzers.

** Used for Data Acquisition from Serial Devices (RS232 / RS485 / RS422).

D5 is a Industrial Diode which allows unidirectional data flow from OT to IT Network. This also comes with USB Ports where we can connect to Analyzers and PLCs and upload the data from OT to IT.

Data Diode D5 comes in a 1U rack, and 240V input. Best fit for any networking rack.



Specifications

Processor	1.4 GHz quad-core BCM2837B0 ARMv8 64bit CPU
RAM	1GB LPDDR2 SDRAM
Memory	256GB SSD , 64 GB MicroSD Card
Input Power	230V AC 50W
Environment	Operating temperature, 0–85°C
Thickness	1U (Rack Mount)
Supported OS	Debian 10 (Linux)
Diode Transmission Speed	8 Sockets, 100 Mbps



D6 is a Industrial Diode which allows unidirectional data flow from OT to IT Network. This also comes with USB Ports where we can connect to Analyzers and PLCs and upload the data from OT to IT.

Data Diode D6 comes in a 1U rack, and 240V input. Best fit for any networking rack.



Specifications

Processor	1.4 GHz quad-core BCM2837B0 ARMv8 64bit CPU
RAM	1GB LPDDR2 SDRAM
Memory	256GB SSD
Input Power	230V AC 50W
Environment	Operating temperature, 0–85°C
Thickness	1U (Rack Mount)
Supported OS	Debian 10 (Linux)
Diode Transmission Speed	8 Sockets, 10/100/1000 Base -T
Ports	3 x Ethernet ports for Rx & Tx
Dimension	352 x 225 x 44.5 mm



IN100 is a full fledged PC comes with Windows/Linux OS. Based on Intel CPU.

Ideal for the scenarios where we need High computational power. Or to poll data from a DCS system.

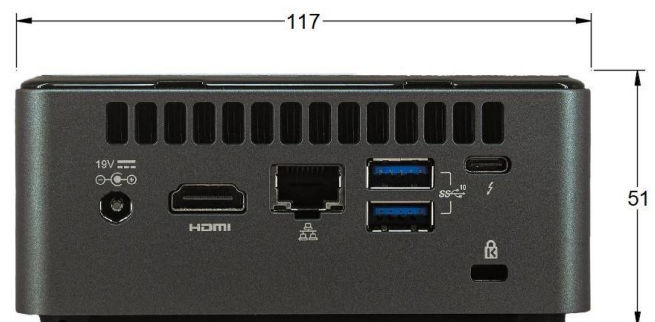
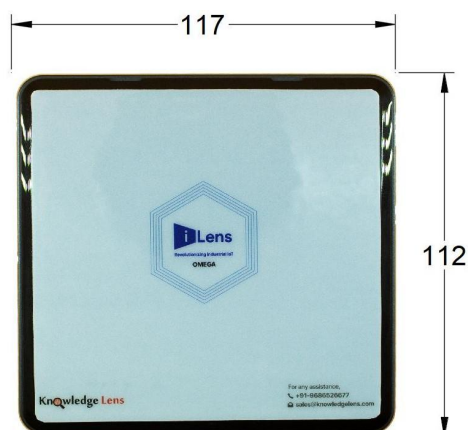


Specifications

Processor	Intel Core i3/i5/i7
RAM	8GB DDR4-2400 1.2V SO-DIMM
Memory	256 GB (SSD) (Expandable)
Input Power	12-19 VDC / 2A
Environment	Operating temperature, 0–85°C
Supported OS	Linux, Windows

Connectivity Port

USB	2 x front and 3 x rear USB 3.1 Gen2
LAN	1 x Intel Gigabit LAN
Wi-Fi	2.4Ghz and 5Ghz IEEE 802.11a, 802.11b, 802.11g wireless LAN
Video Output	1 x HDMI 2.0a, 1 x DisplayPort 1.2 through Thunderbolt 3
Thunderbolt	1 x Type C (USB 3.1 Gen 2)



Note : All dimensions are in millimeters

iLens EdgeAI E Series

Features:

- Support for all industrial protocols
- Support to run Containerized Apps
- High Compute Power & Data Retention
- Optimized for Edge Computing & Processing



Specifications

Processor	Intel Core i7/i5/i3 / Pentium / Celeron processor
RAM	Up to 32GB DDR4 (2 DIMM slots)
Memory	256 GB (Expandable)
Input Power	150W DC Power Adapter
Environment	Operating temperature, 0–85°C
Supported OS	Linux, Windows

Connectivity Port

USB	4 x USB 3.0 Ports (2 type A, 2 type C)
LAN	2 x Gigabit Ethernet
Wi-Fi	2.4Ghz and 5Ghz IEEE 80211.b/g/n/ac wireless LAN
Video Output	1 DVI - D port, 1 HDMI Port, 1 DB (Display Port) 1 eDP (Embedded Display Port)
Expansion Slot	PCI-E - 1 PCI-E 3.0 x16 M.2 M key: PCI-E 3.0 x4, NVMe support 2242/2280 M.2 E Key: PCI-E 3.0 x1, support 2230 length

Others

Dimensions	254 × 43 × 226 (in mm)
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Cameras for Visual Inspection

Features:

- Real Time Object detection
- Image Processing on the Edge



Specifications

Camera Sensor	Sony IMX477 sensor
Default Lens Type	6mm Wide Angle Lens
Resolution	12.3 Megapixel
Lens Mount Type	Lens Mount Type
Max Image Resolution	3280 × 2464
Max image transfer rate	1080p: 30fps (encode and decode) 720p: 60fps
Processor	Quad-core ARM A57 @ 1.43 GHz
RAM	1GB LPDDR2 SDRAM
Memory	32 GB (Expandable)
Input Power	24v 2A
Environment	Operating temperature, 0–85°C
Supported OS	Linux

Connectivity Port

USB	4 x USB 2.0
LAN	1 x Gigabit Ethernet
Wi-Fi	2.4Ghz and 5Ghz IEEE 80211.b/g/n/ac wireless LAN
Video Output	RTSP Via LAN

Others

Dimensions	254 × 43 × 226 (in mm)
Camera Mount Type	Mounting stand

Cameras with Rolling Shutter

Features:

- Real Time Object detection
- Image Processing on the Edge



Specifications

Camera Sensor	Sony IMX477 sensor
Default Lens Type	6mm Wide Angle Lens
Resolution	12.3 Megapixel
Lens Mount Type	Lens Mount Type
Max Image Resolution	3280 × 2464
Max image transfer rate	1080p: 30fps (encode and decode) 720p: 60fps
CPU	Quad-core ARM A57 @ 1.43 GHz
GPU	NVIDIA Maxwell architecture with 128 CUDA cores
RAM	4 GB 64-bit LPDDR4 25.6 GB/s
Memory	16 GB Internal Memory , 256GB External SSD
Input Power	85 ~ 264VAC , 0.95A/115VAC 0.56A/230VAC
Environment	Operating temperature, 0–85°C
Supported OS	Linux

Connectivity Port

LAN	1 x Gigabit Ethernet
Wi-Fi	Optional
Video Output	RTSP via LAN

Others

Dimensions	410 × 155 × 115 (in mm)
Housing	Metal Enclosure, IP66, Wiper
Camera Mount Type	Mounting stand

Cameras with Global Shutter

Features:

- Real Time Object detection
- Image Processing on the Edge



Specifications

Camera Sensor	AR0234CS from onsemi®
Default Lens Type	M12 Wide Angle
Resolution	2 Megapixel
Lens Mount Type	M12 Mount
Max Image Resolution	1920 × 1200
Max image transfer rate	1200: 60 fps (encode and decode) 720p: 120 fps
CPU	Quad-core ARM A57 @ 1.43 GHz
GPU	NVIDIA Maxwell architecture with 128 CUDA cores
RAM	4 GB 64-bit LPDDR4 25.6 GB/s
Memory	16 GB Internal Memory , 256GB External SSD
Input Power	85 ~ 264VAC , 0.95A/115VAC 0.56A/230VAC
Environment	Operating temperature, 0–85°C
Supported OS	Linux

Connectivity Port

LAN	1 x Gigabit Ethernet
Wi-Fi	Optional
Video Output	RTSP via LAN

Others

Dimensions	410 × 155 × 115 (in mm)
Housing	Metal Enclosure, IP66, Wiper
Camera Mount Type	Mounting stand

iLens IO100 Module

Features:

- 4 Channel Analog Input (4-20mA)
- 4 Channel Digital Input
- 4 Channel Relay
- 2 Channel Thermocouple interface



Specifications

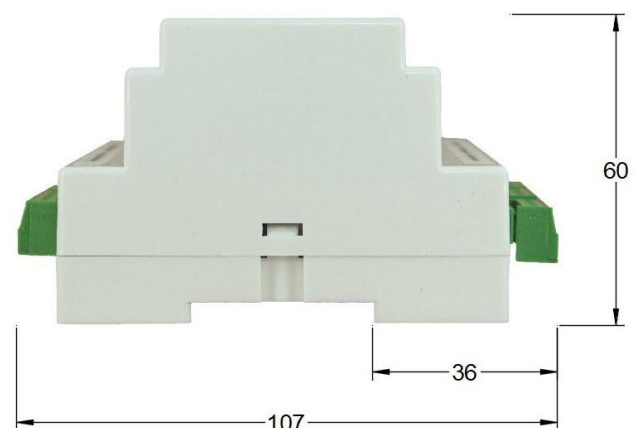
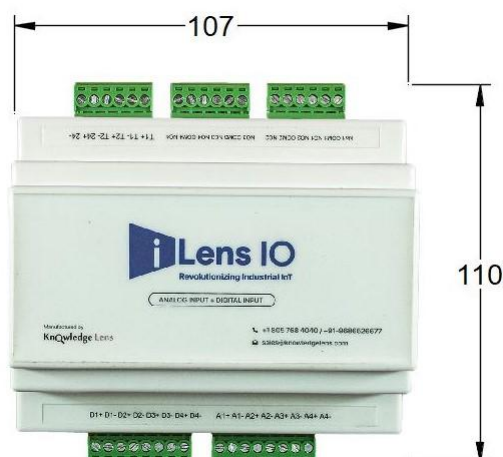
Operating Voltage	5-24V DC
Digital Input Voltage	3V - 24V
Communication Protocol	Modbus TCP, Modbus RTU
ADC Resolution	12 Bit
Max rated Relay input	240V 10A
Environment	Operating temperature, 0–85°C

Connectivity Port

RS485	1 x RS485
Wi-Fi	2.4GHz WiFi (a/n)

Others

Dimensions	107 × 91 × 60 (in mm)
Mounting	35mm DIN Rail



Note : All dimensions are in millimeters

iLens IO201 Module

Features:

- 8 Channel Analog Input (4-20mA)



Specifications

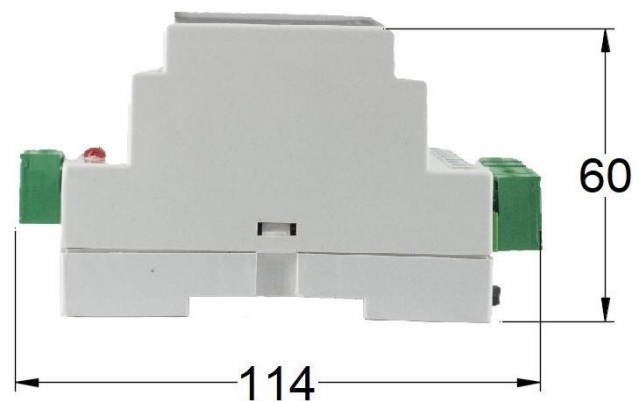
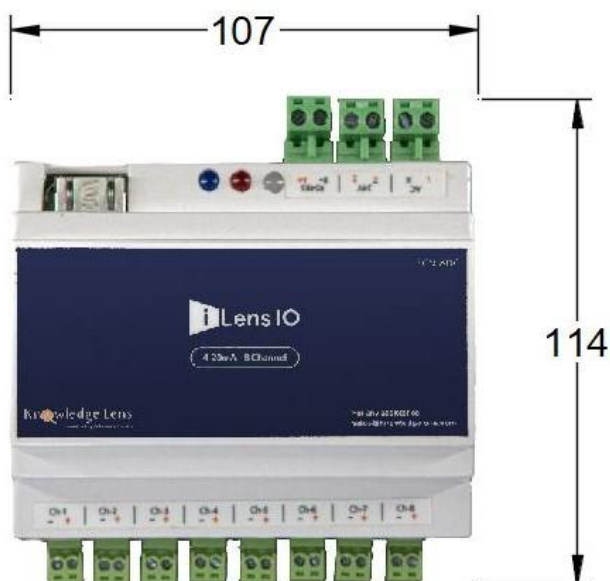
Operating Voltage	85 ~ 264VAC, 5-24VDC
Communication Protocol	Modbus TCP, Modbus RTU
ADC Resolution	16 Bit
Environment	Operating temperature, 0–85°C

Connectivity Port

RS485	1 x RS485
Wi-Fi	2.4GHz WiFi (a/n)

Others

Dimensions	107 × 91 × 60 (in mm)
Mounting	35mm DIN Rail



Note : All dimensions are in millimeters

iLens IO301 Module

Features:

- 8 Channel Digital Input



Specifications

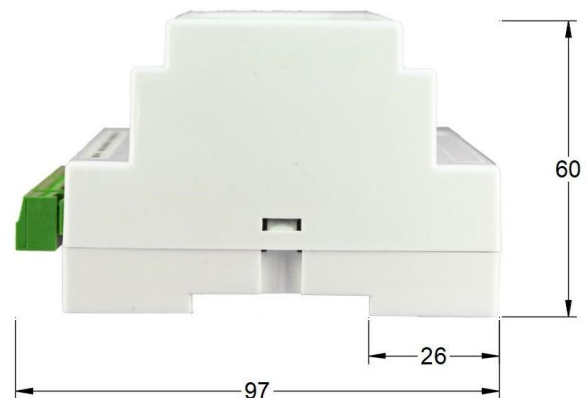
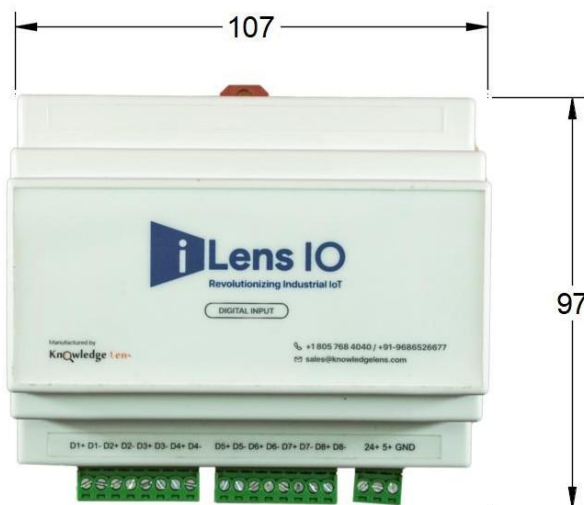
Operating Voltage	5-24V DC
Communication Protocol	Modbus TCP, Modbus RTU
Environment	Operating temperature, 0–85°C
Digital Input Voltage	3V - 24V

Connectivity Port

RS485	1 x RS485
Wi-Fi	2.4GHz WiFi (a/n)

Others

Dimensions	107 × 91 × 60 (in mm)
Mounting	35mm DIN Rail



Note : All dimensions are in millimeters

iLens IO401 Module

Features:

- 7 Channel 3 Pole Relay



Specifications

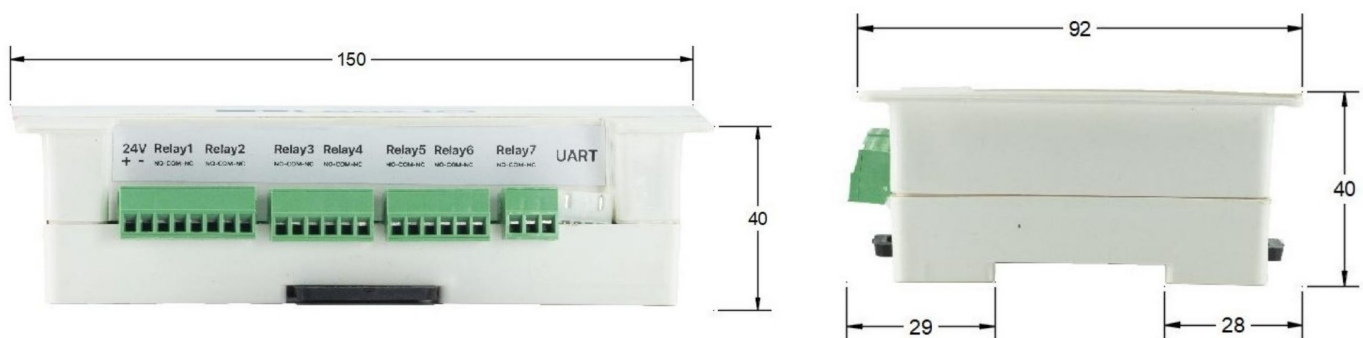
Operating Voltage	5-24V DC
Communication Protocol	Modbus TCP
Environment	Operating temperature, 0–85°C
Max rated Relay input	240V 10A

Connectivity Port

Wi-Fi	2.4GHz WiFi (a/n)
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Others

Dimensions	150 × 92 × 40 (in mm)
Mounting	35mm DIN Rail



Note : All dimensions are in millimeters

iLens Vibration Sensor

Features:

- Triple Axis Accelerometer and Gyro
- Tri-Axis accelerometer with a programmable full scale range of $\pm 2g$, $\pm 4g$, $\pm 8g$ and $\pm 16g$
- 10,000g shock tolerant



Specifications

Data Rate	330 dps
Accelerometer Range	$\pm 2g$, $\pm 4g$, $\pm 8g$ and $\pm 16g$
ADC Resolution	16-bit ADC
Additional Sensor	Temperature and Acoustic Sensor onboard

Connectivity Port

Wifi	2.4GHz WiFi (a/n)
RS485	1 x RS485

Others

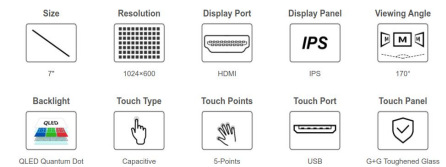
Dimensions	220 × 164 × 33 (in mm)
Mounting	Magnetic Mount



iLens SmartView

Features:

- Upgrade to IPS screen
- Wider viewing angle
- More clear display
- Backlight control to lower power consumption



Specifications

Resolution	1024×600 high resolution
Interface	Capacitive touch control HDMI interface for displaying USB interface for touch control
Display Size	7-15.6 inches
Viewing Angle	170 degree

Others

Dimensions	220 × 164 × 33 (in mm)
Mounting	35mm DIN Rail



About Us

Knowledge Lens is an Industry 5.0 Digital Transformation company providing software product and services that focuses on developing innovative solutions in niche technology areas such as Artificial Intelligence, Data Science, Industrial IoT, Blockchain and Cloud.

For more info please visit: www.knowledgelens.com

Email: sales@knowledgelens.com

Our Latest Product



UnifyTwin™

UnifyTwin integrates machine and human intelligence to create predictable business outcomes.

For more info please visit: unifytwin.com



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