

Free Webinar

Thrive with IoT-enabled Smart EV Charging Solutions



Speakers



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Ever-Evolving EV Charging Solutions

IoT-Powered Smart EV Charging

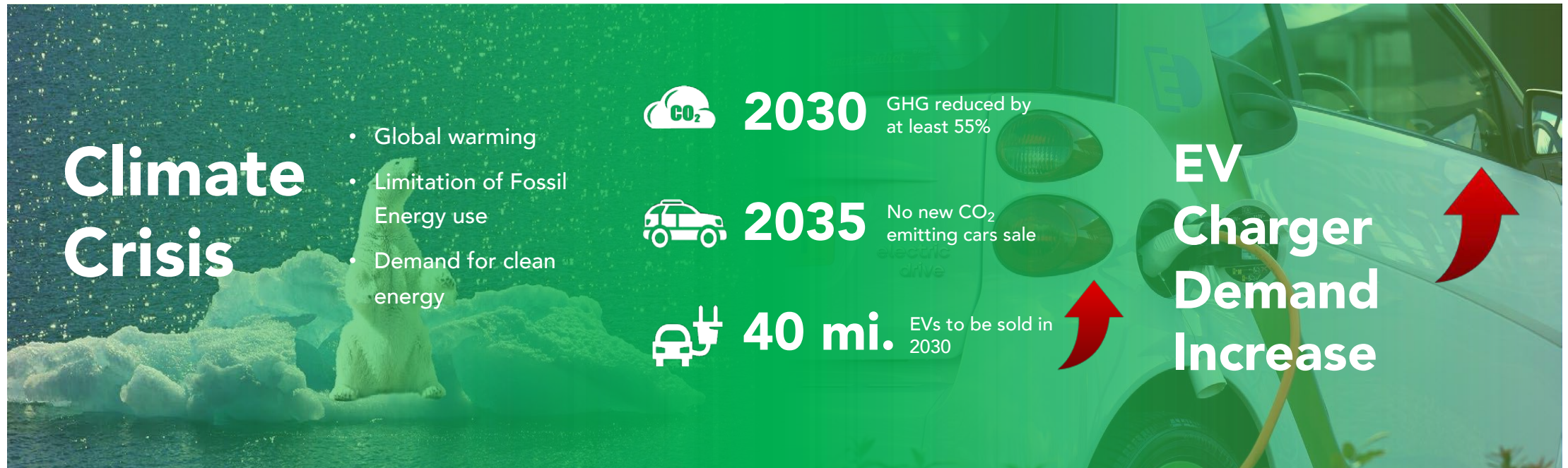
Success Stories

Who Are We?

Q&A

Ever-Evolving EV Charging Solutions

EV Charging Market Growth



Climate Crisis

- Global warming
- Limitation of Fossil Energy use
- Demand for clean energy

2030 GHG reduced by at least 55%

2035 No new CO₂ emitting cars sale

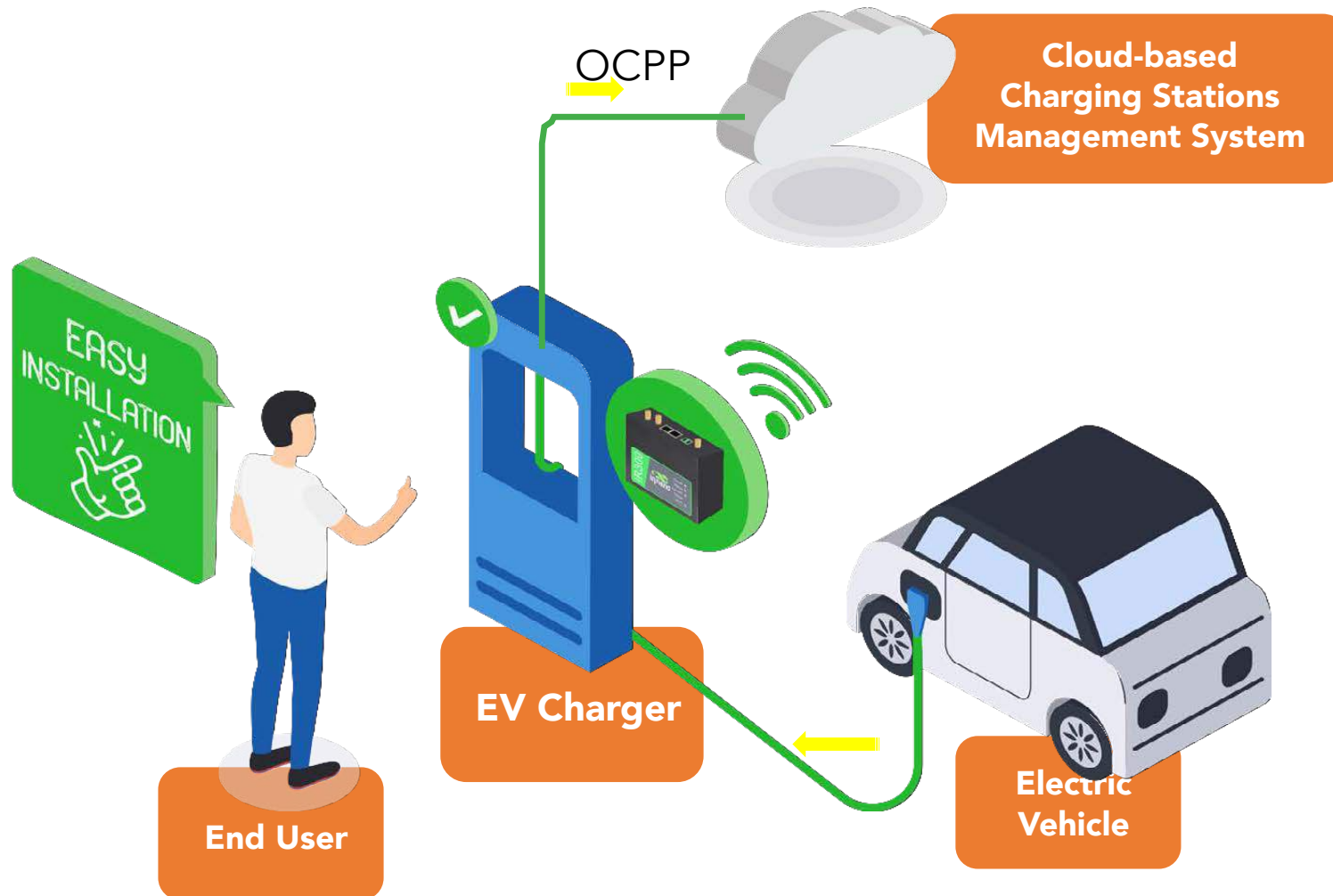
40 mi. EVs to be sold in 2030

EV Charger Demand Increase

Challenges in EV Charging Management



Smart EV Charging Solution



Smart EV charging

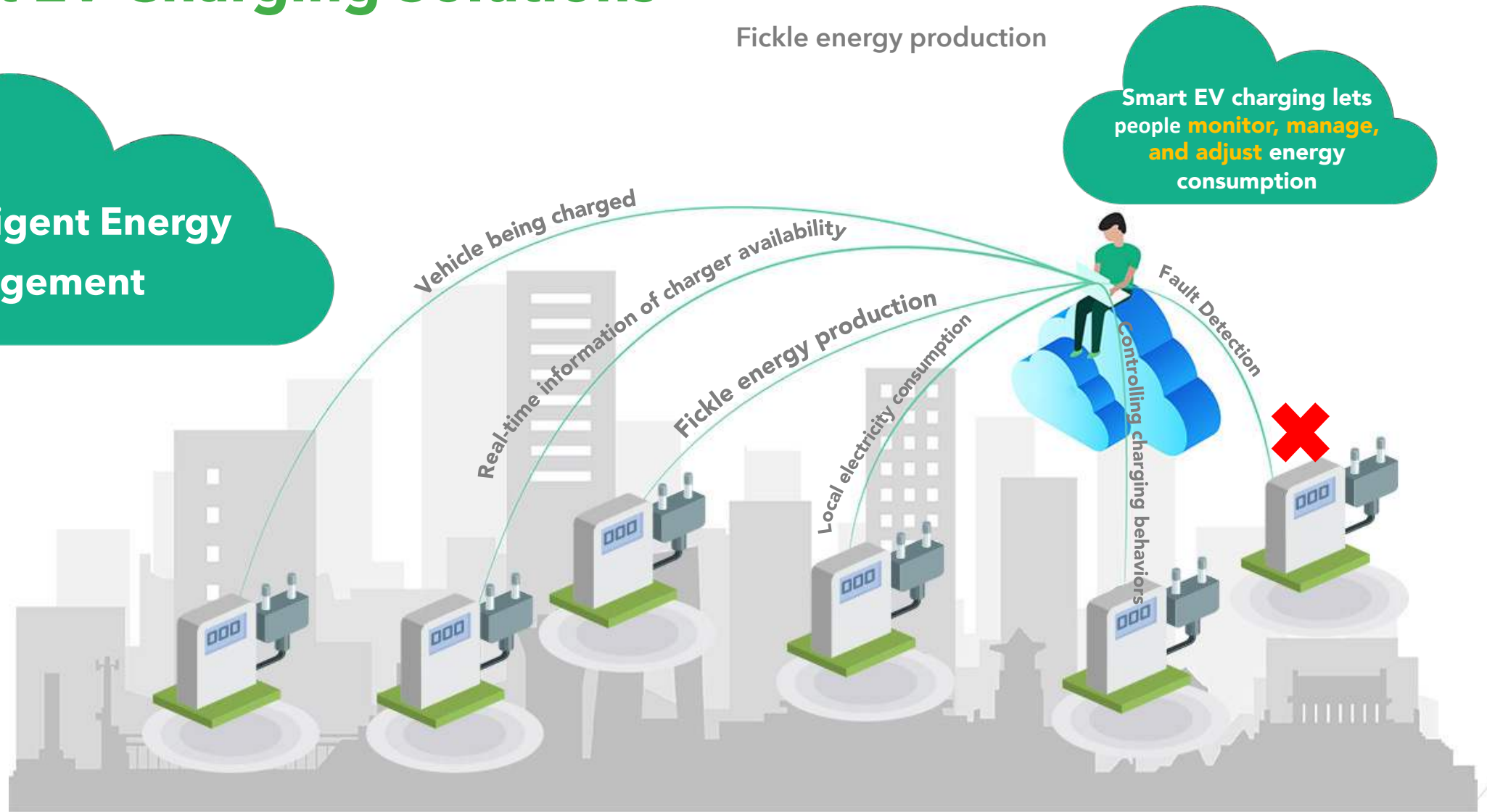
is a system where an electric vehicle and a charging device share a **data connection**, and the charging device shares a data connection with a charging operator.

Smart EV Charging Solutions

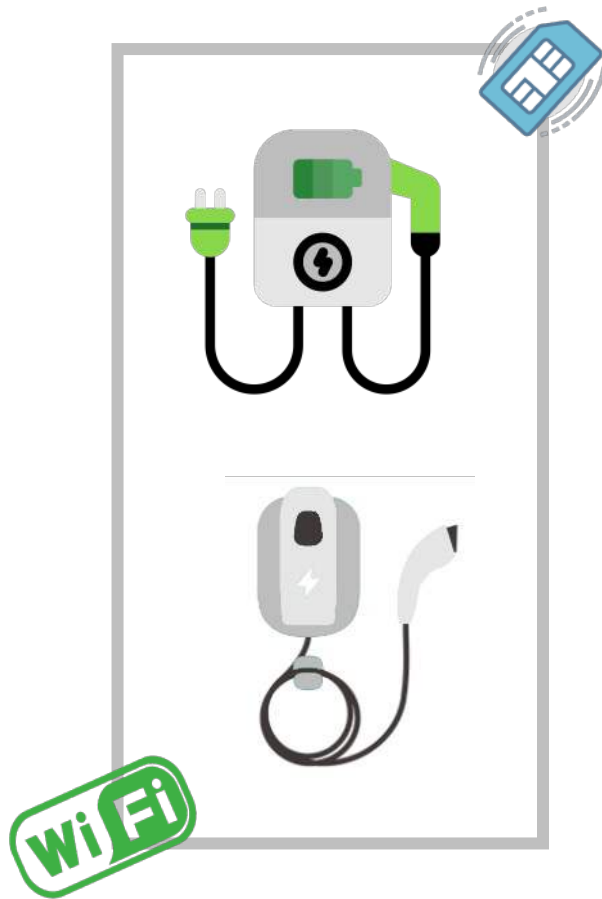
Intelligent Energy Management

Fickle energy production

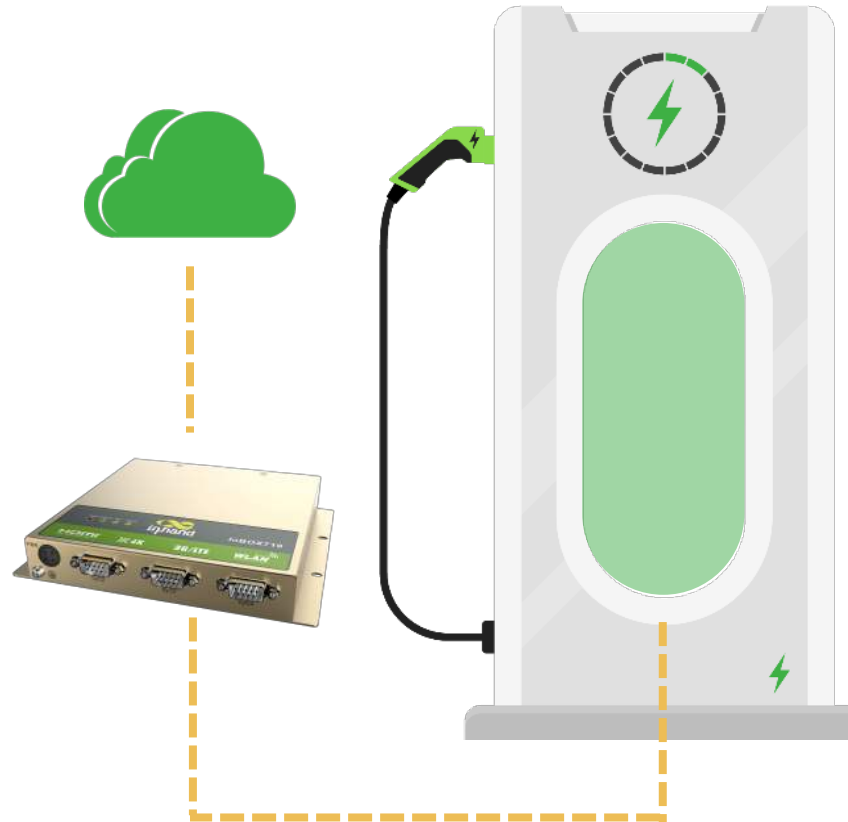
Smart EV charging lets people **monitor, manage, and adjust** energy consumption



Smart EV Charging with IoT Solutions



AC EV Charger

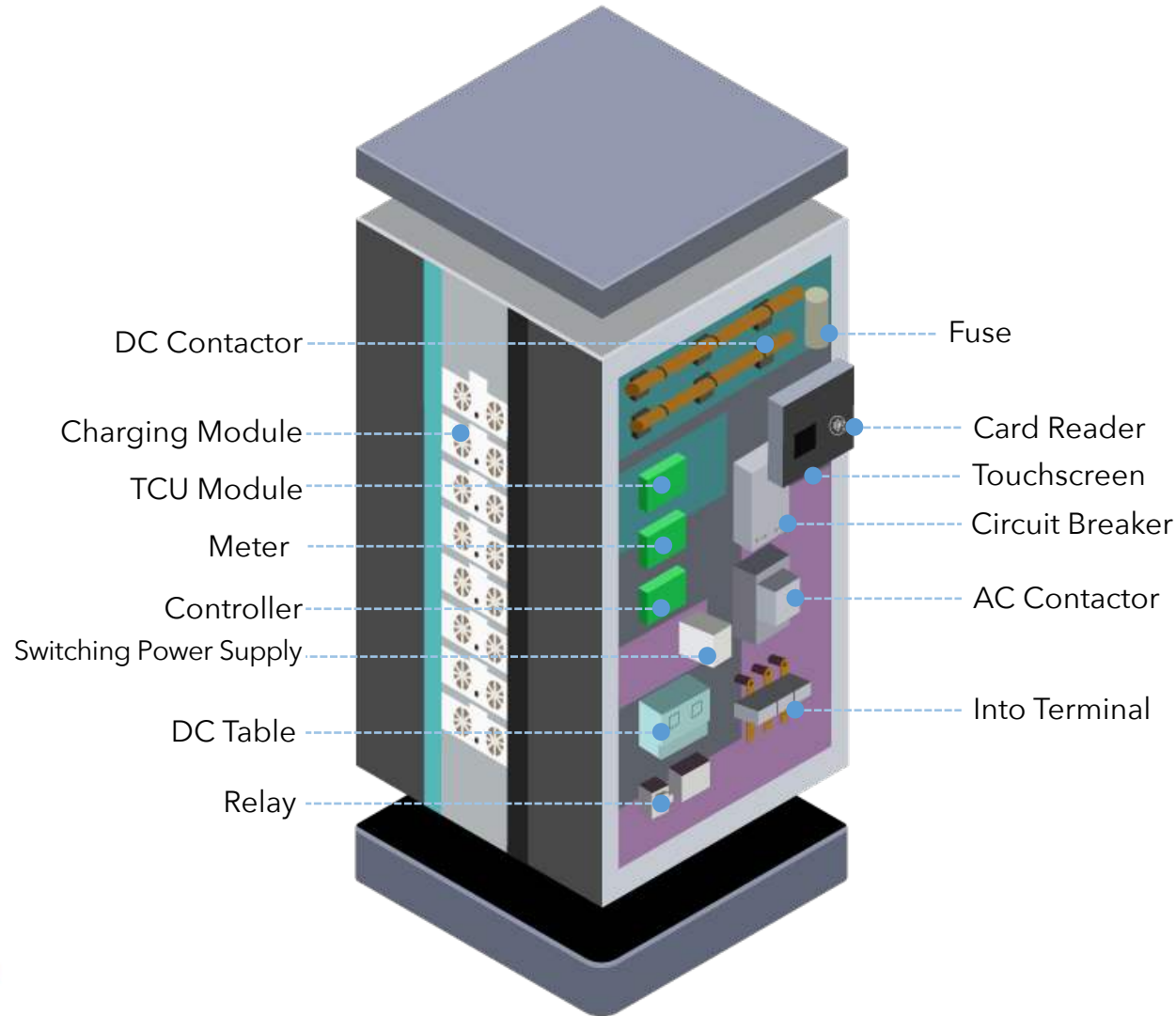


DC EV Charger

DC EV Chargers have higher requirements for data transmission & handling

- Real-time Data Transmission
- Reliable & Secure Networking
- Managable from the Cloud
- Large quantity data handling - Edge computing
-

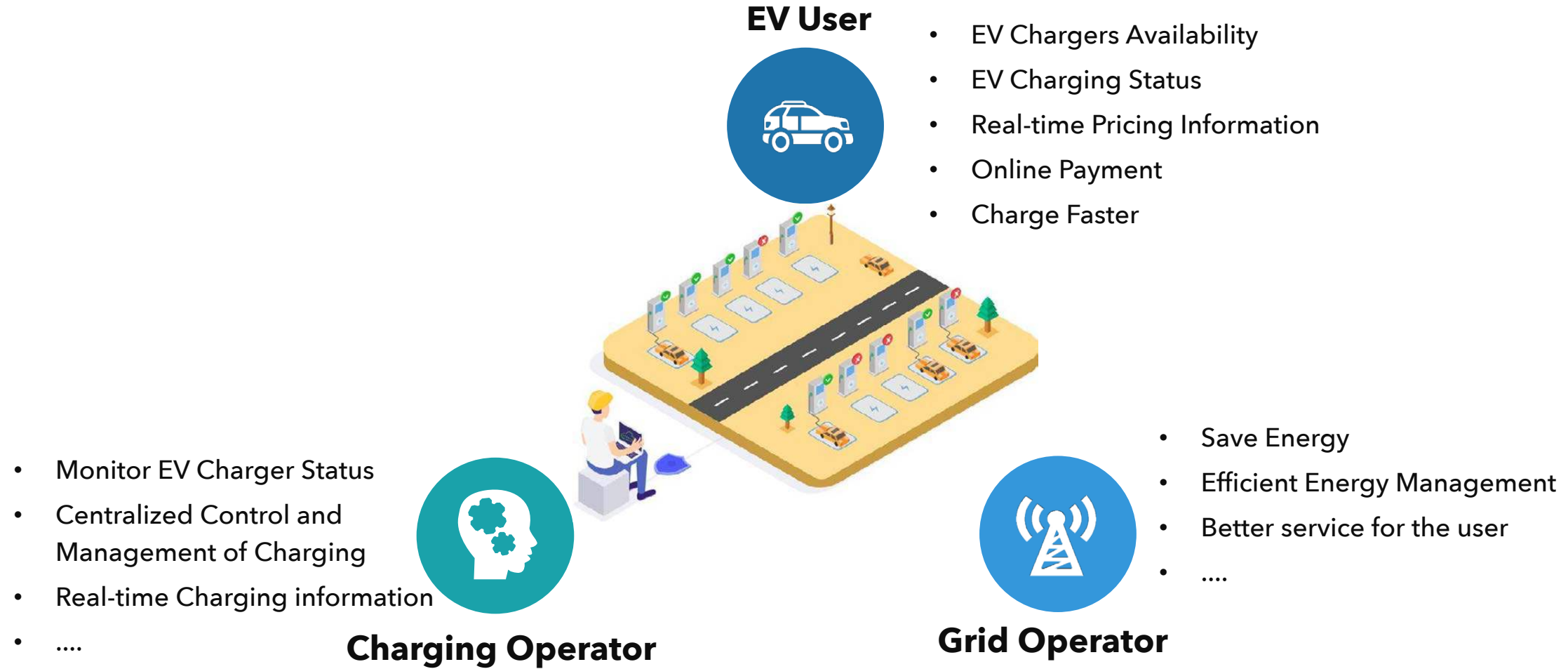
Smart EV Charging with IoT Solutions



Abundant Terminals Connection

- PLC
- Sensors
- Card reader
- Cameras
- Touch-screen
- Controller
- Speaker
- ...

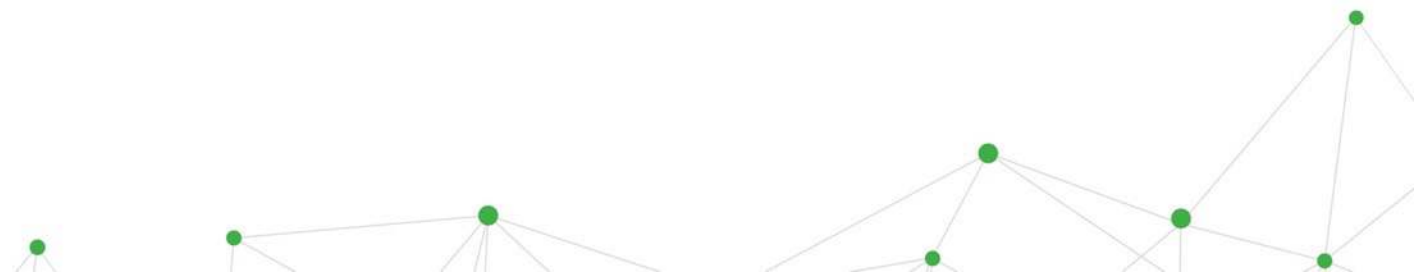
Smart EV Charging Benefits



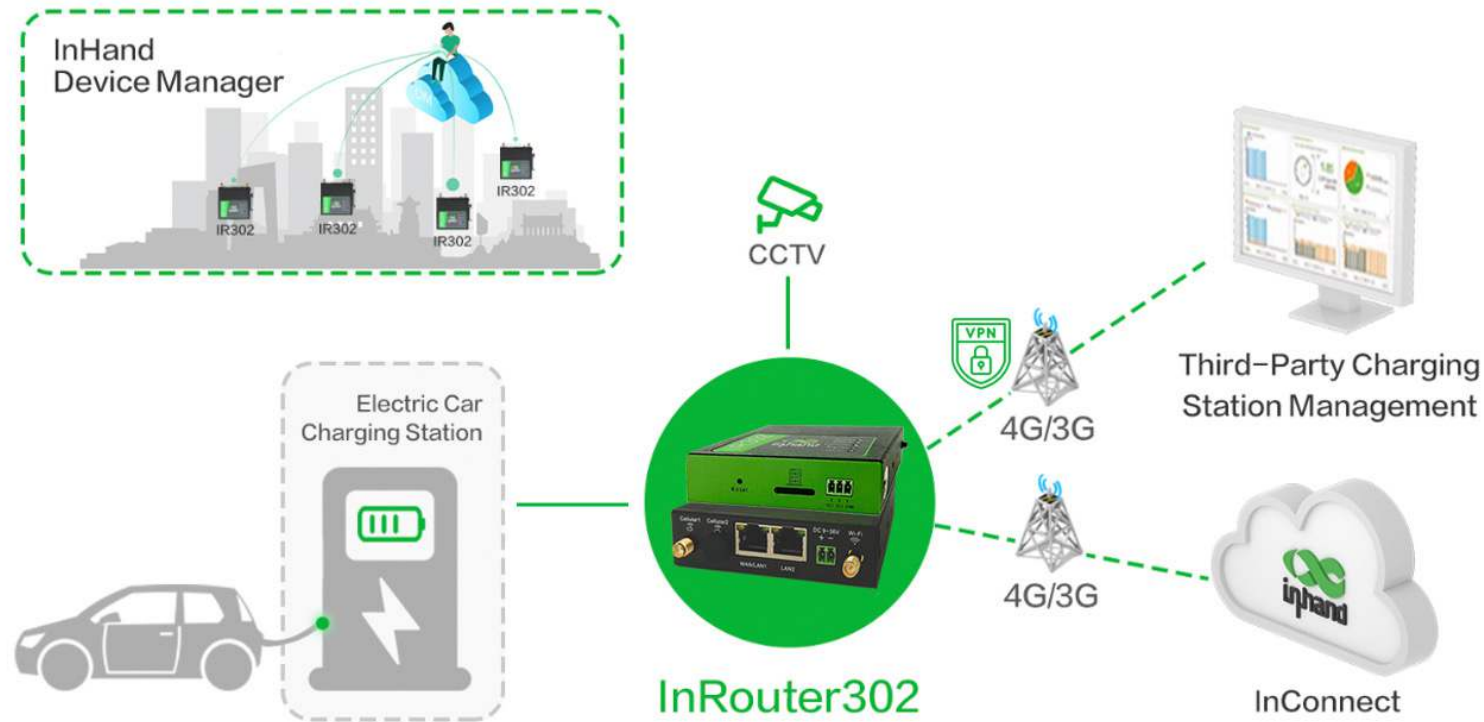
IoT-Powered Smart EV Charging

Connectivity

- Uninterrupted and reliable connectivity between the EV charging station and the remote management system
- Comprehensive security mechanisms to protect transaction security
- Easy deployment without much IT expertise
- Real-time monitoring of charger status and remote maintenance












Secure & Reliable Connectivity of EV Charging Stations



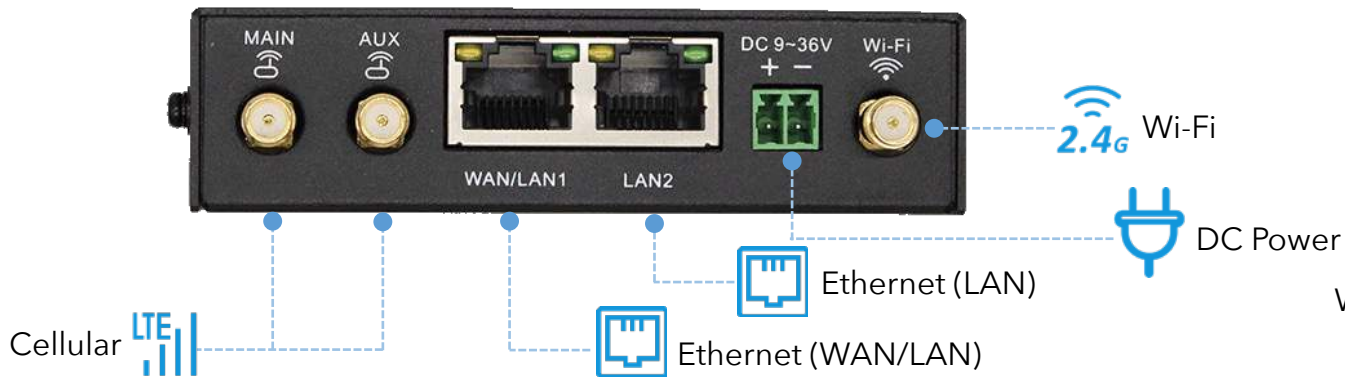
- “Always online” connectivity
- Security escort of your network
- Easy to install
- Centralized and free cloud management

Featured Product - IR300 Industrial LTE Router

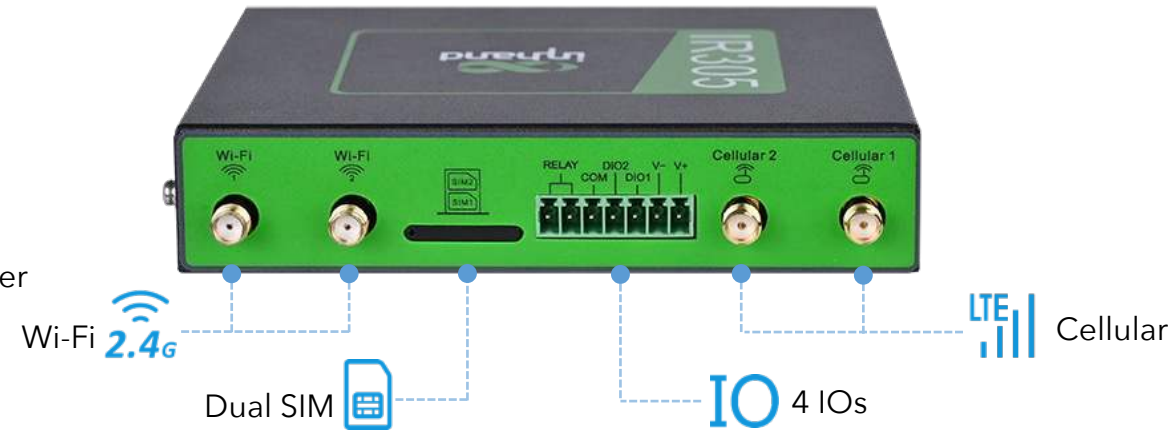
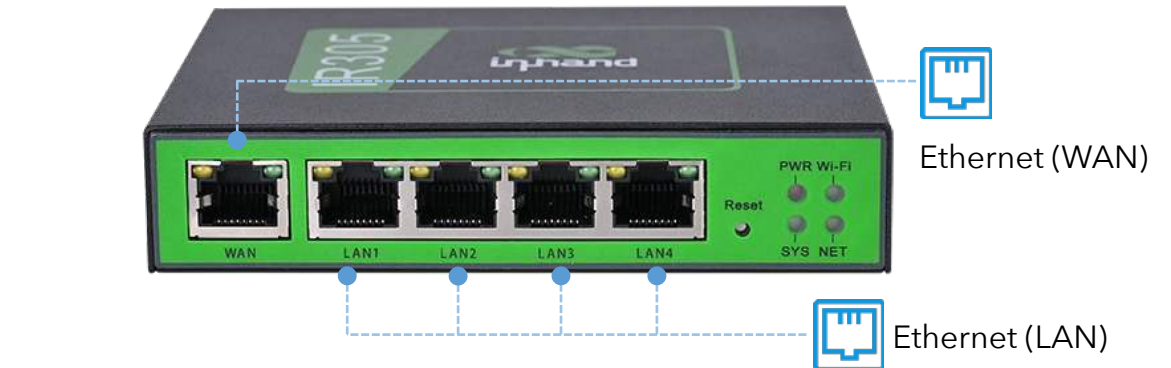


 <p>4G LTE CAT4/CAT1/CAT M1</p>	 <p>2.4G 2.4G Wi-Fi</p>	 <p>Up to 5*10/100 Mbps ETH Port</p>
 <p>Reliability: Multiple link backups, Dual SIM, VRRP</p>	 <p>Interfaces: RS232, RS485, IO</p>	 <p>Security: IPsec VPN, PPTP, OPEN VPN</p>
 <p>Compact, easy for installation</p>	 <p>Industrial design, -20°C ~ +70°C</p>	 <p>DM Centralized Management</p>

Featured Product - IR300 Industrial LTE Router



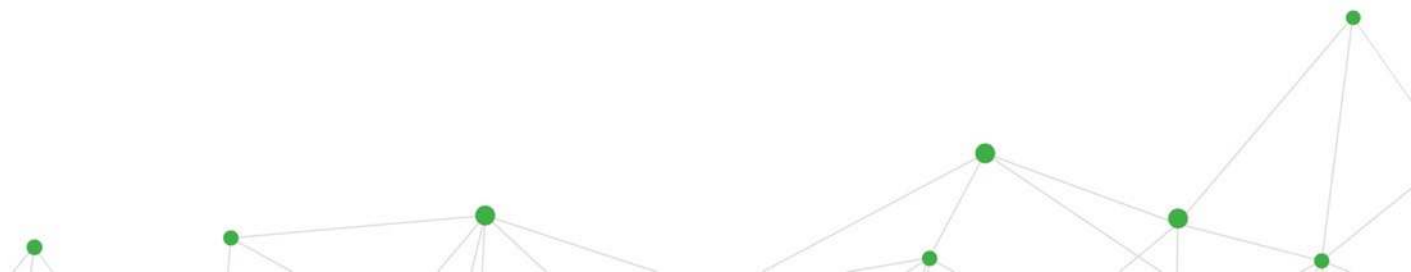
IR302



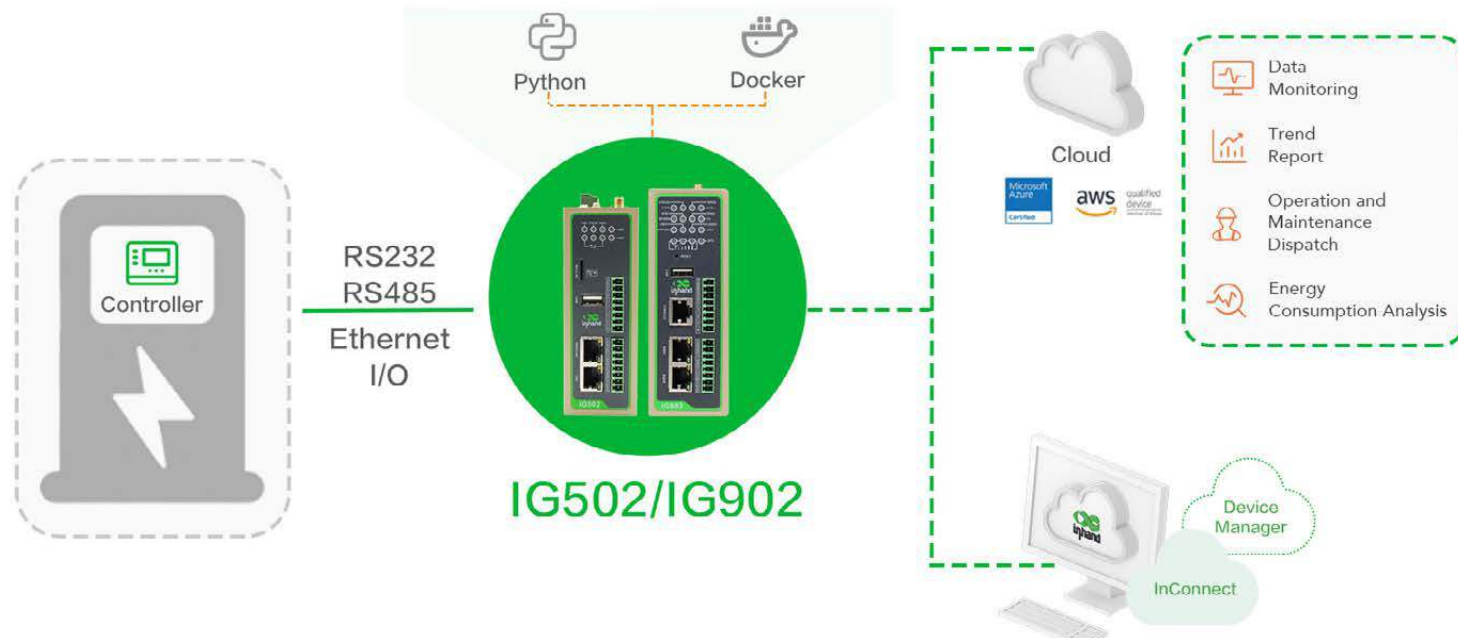
IR305

Energy Management

- Real-time acquisition of energy data, powerful edge computing for data pre-processing
- Easy integration to the cloud for data analytics
- Intelligent control of EV chargers and adjustment of power supply/consumption












Data Driven Energy Management



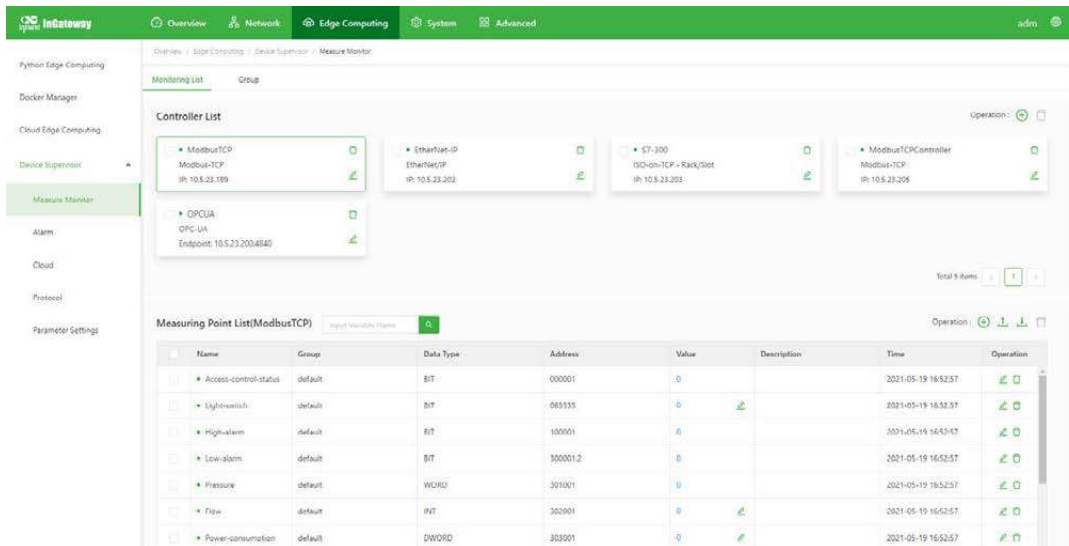
- Uninterrupted and Reliable Communications
- Easy Configuration for Data Acquisition
- Powerful Edge Computing Capabilities
- Extensive Interfaces

Featured Product - IG IoT Edge Gateway



 <p>LTE CAT4/CAT1</p>	 <p>Multiple Industrial Protocols</p>	 <p>AWS, Azure</p>
 <p>Interfaces: RS232, RS485, I/O, ETH, Wi-Fi</p>	 <p>Powerful Edge Computing</p>	 <p>Python/Docker</p>
 <p>Industrial design, -25°C ~ +70°C</p>	 <p>Device Manager, InConnect</p>	 <p>Dual SIM</p>

InGateway: 3-step Configuration



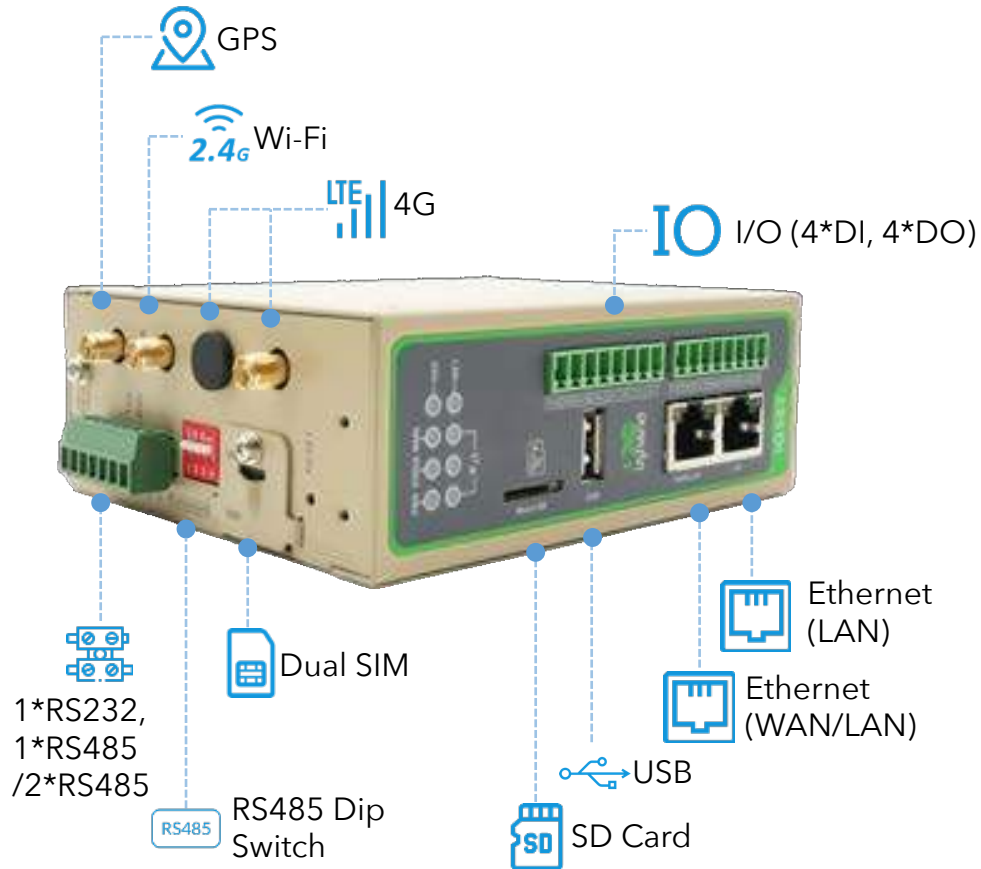
The screenshot shows the InGateway web interface. The left sidebar contains navigation options: Python Edge Computing, Docker Manager, Cloud Edge Computing, Device Supervisor, Measure Monitor (selected), Alarm, Cloud, Protocol, and Parameter Settings. The main content area is titled 'Measure Monitor' and contains two sections:

- Controller List:** A list of five configured devices, each with a protocol and IP address:
 - ModbusTCP (IP: 10.5.23.189)
 - EtherNet-IP EtherNet/IP (IP: 10.5.23.202)
 - OP-300 (IP: 10.5.23.203)
 - ModbusTCPController Modbus-TCP (IP: 10.5.23.205)
 - OPCUA OPC UA (Endpoint: 10.5.23.200.4840)
- Measuring Point List (ModbusTCP):** A table with columns: Name, Group, Data Type, Address, Value, Description, Time, and Operation. The table contains 10 rows of data points.

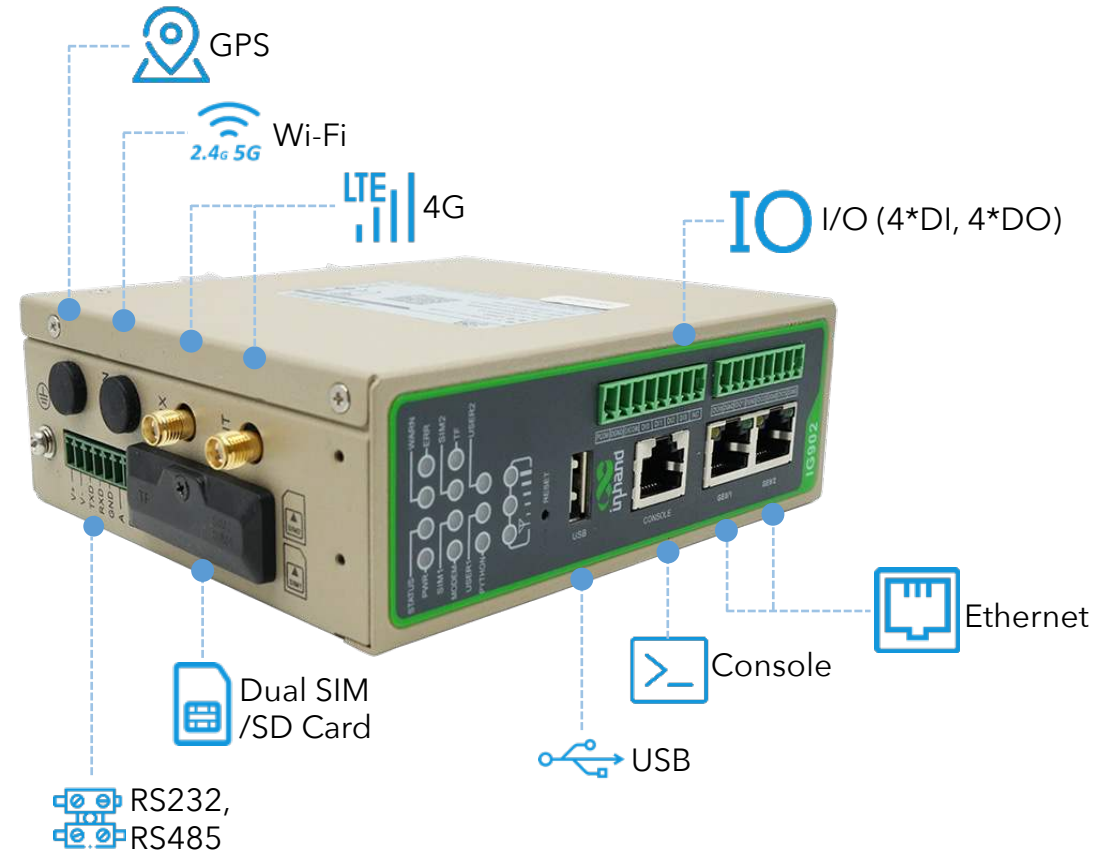
Name	Group	Data Type	Address	Value	Description	Time	Operation
Access-control-status	default	BIT	000001	0		2021-05-19 16:52:57	
Light-switch	default	BIT	065555	0		2021-05-19 16:52:57	
High-alarm	default	BIT	100001	0		2021-05-19 16:52:57	
Low-alarm	default	BIT	100001.2	0		2021-05-19 16:52:57	
Pressure	default	WORD	301001	0		2021-05-19 16:52:57	
Flow	default	BIT	302001	0		2021-05-19 16:52:57	
Power-consumption	default	DWORD	303001	0		2021-05-19 16:52:57	

1. Add your devices and choose protocols;
2. Configure variables and alarms;
3. Connect to a 3rd party cloud (AWS, Azure, ThingsBoard, etc.)

Featured Products - IG502/IG902 IoT Edge Gateway



IG502



IG902

Versatile Smart EV Charging Kiosk



5G Connectivity



Multiple Payments

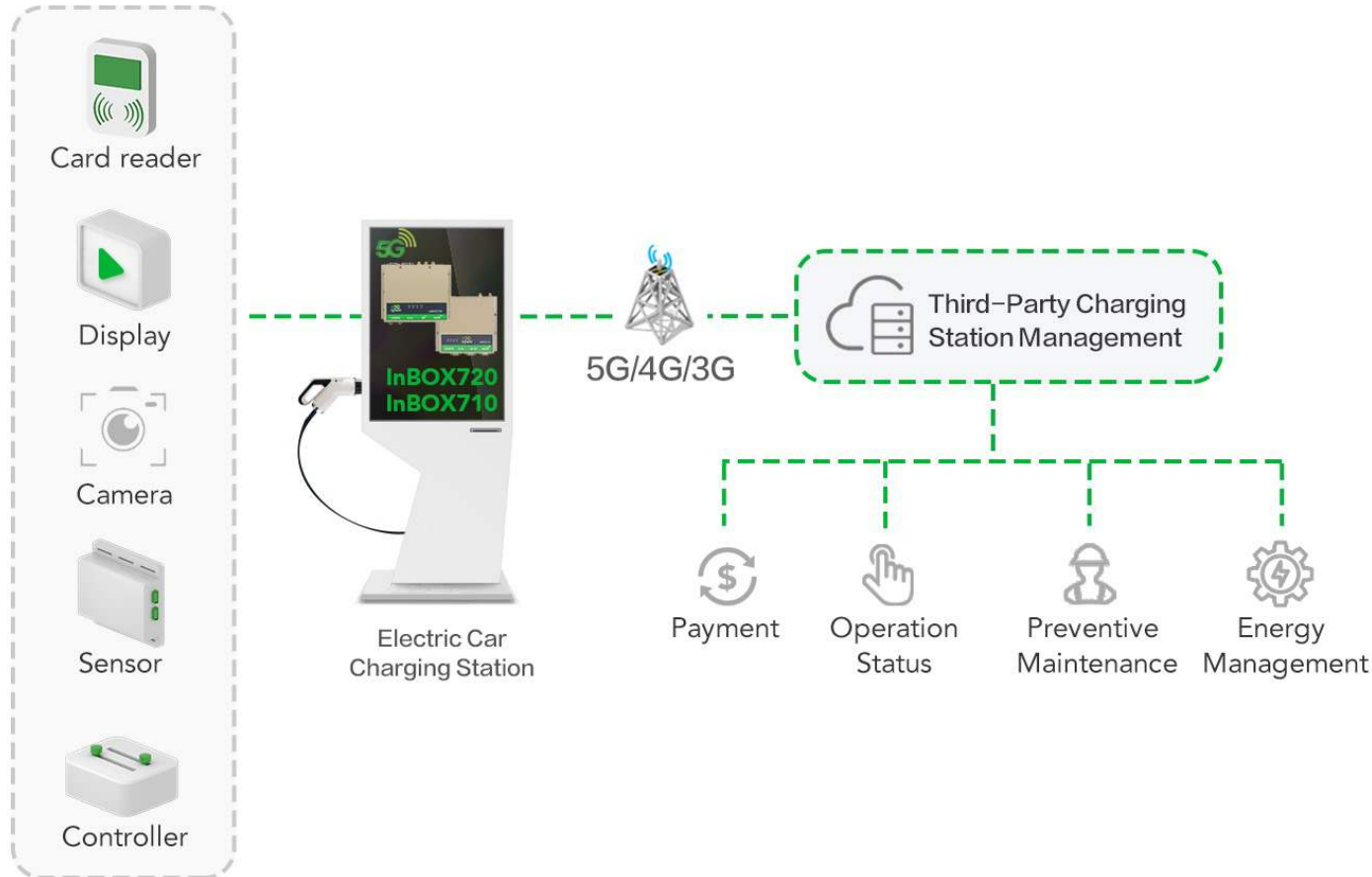


Interactive UI



Custom Applications

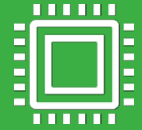








Versatile Smart EV Charging Kiosk



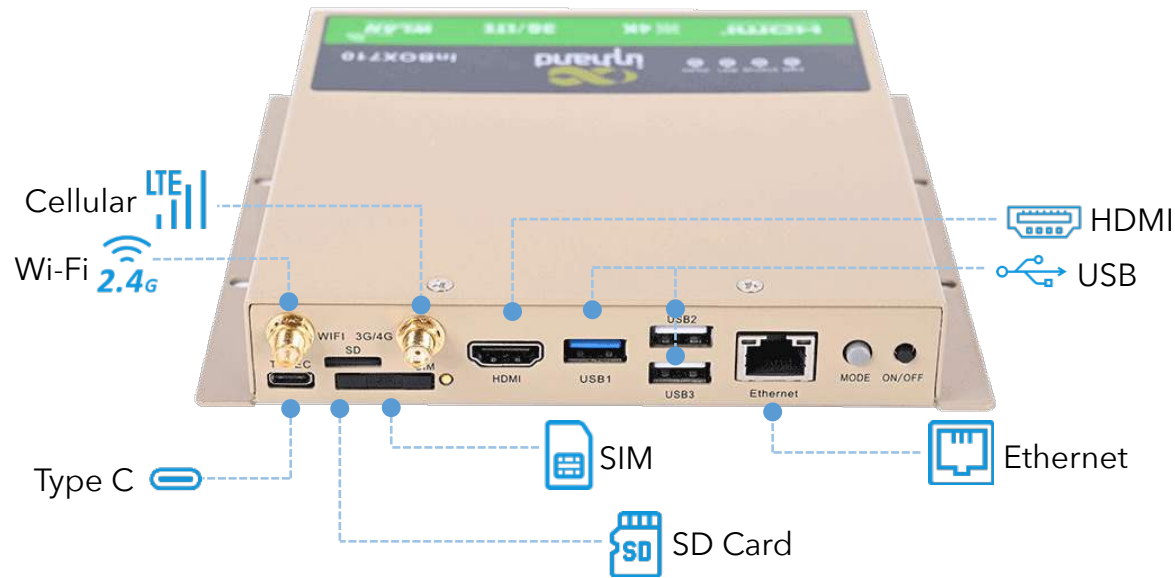
- Ultra Fast 5G Connectivity
- Rich Interfaces for Peripherals
- Industrial Design
- Powerful Computing Capabilities + Open System

Featured Product - InBOX700 5G/4G Industrial Computer

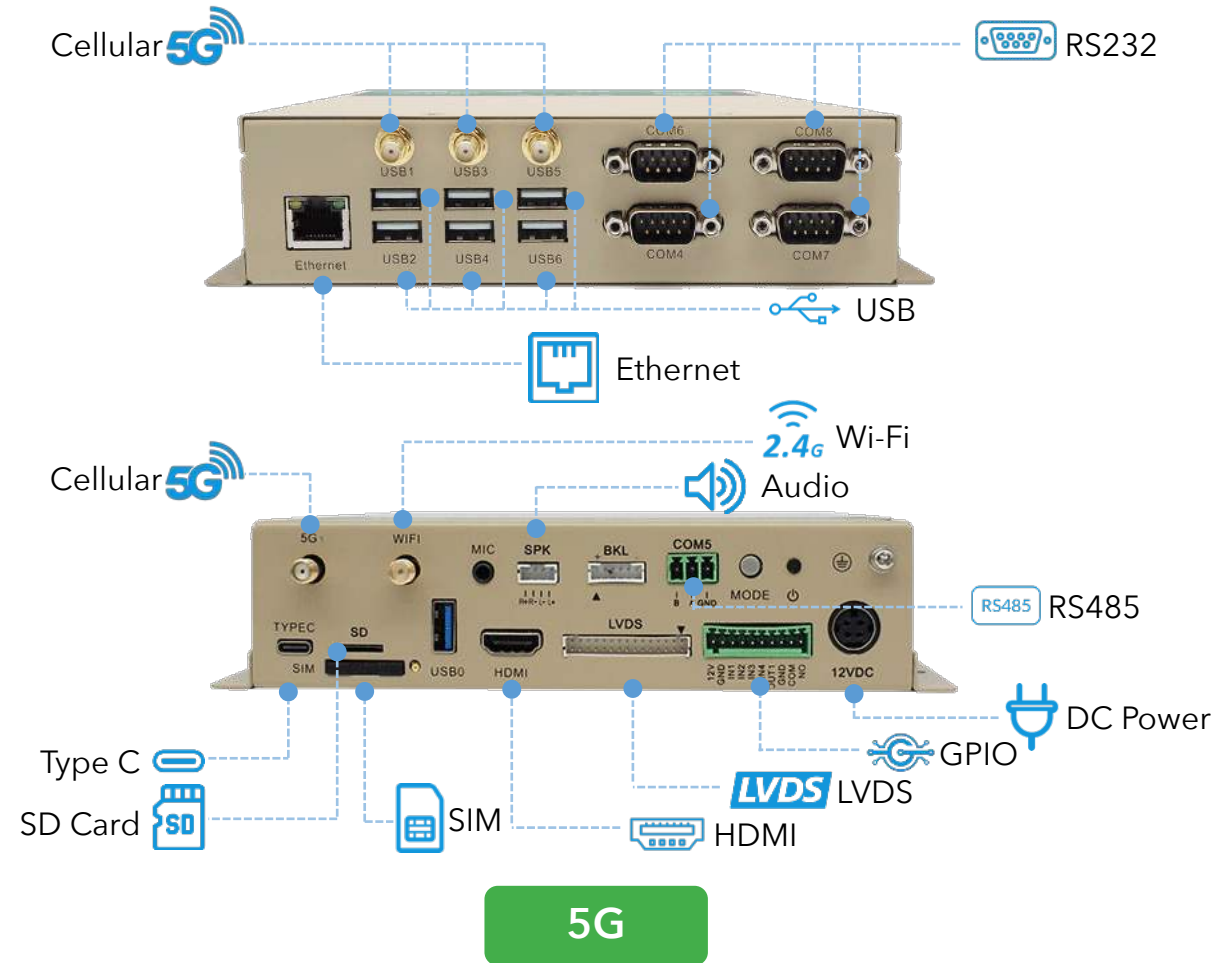
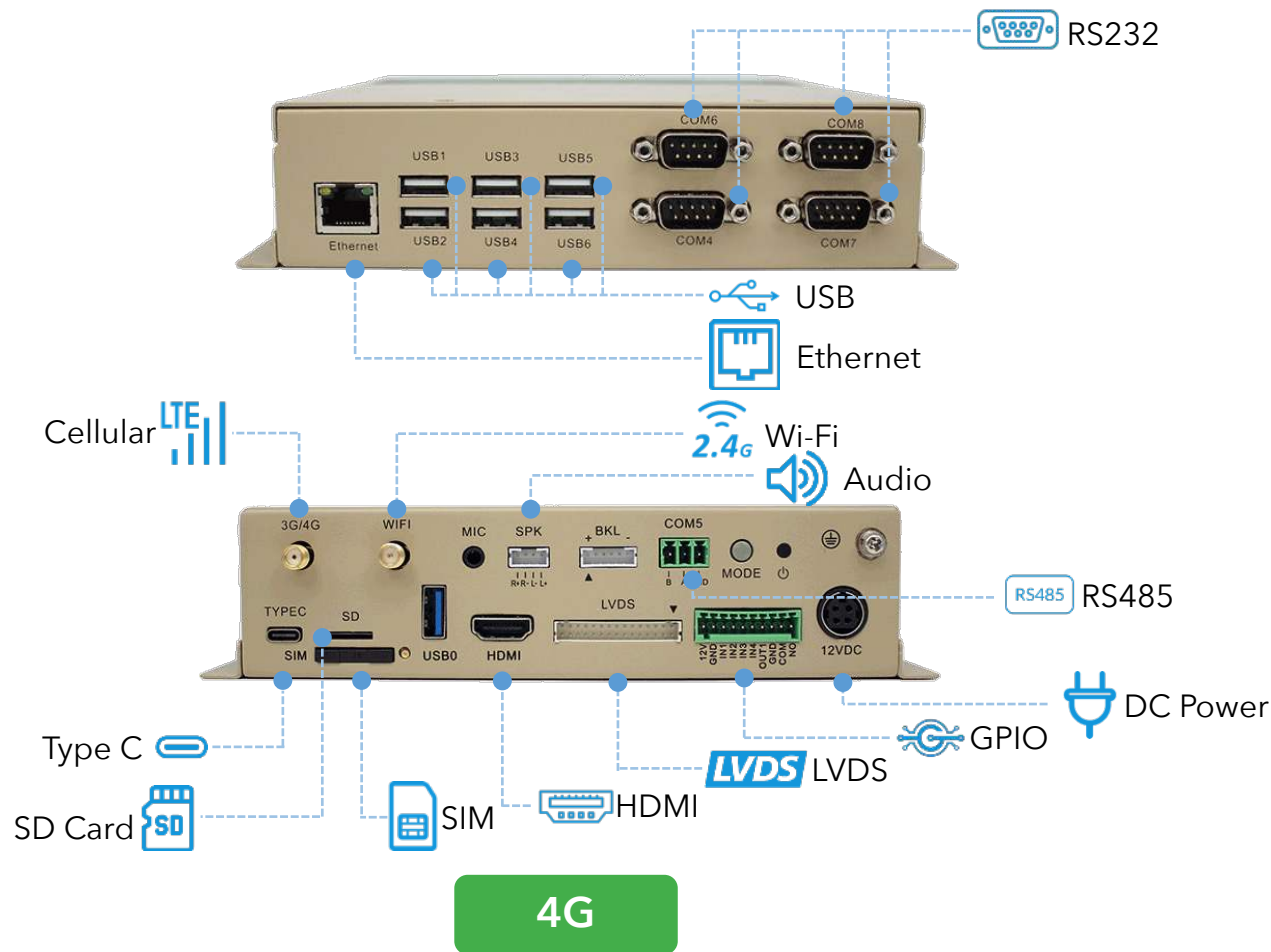


 <p>ARM hexa-core processor</p>	 <p>5G/4G, Ethernet, Wi-Fi, Bluetooth</p>	 <p>Dual HDMI, supports up to 4K</p>
 <p>Multiple Interfaces: RS-232/485, Type C</p>	 <p>Up to 6*USB2.0, 1*USB3.0</p>	 <p>Android/ Linux</p>
 <p>Custom UI</p>	 <p>Edge Computing</p>	 <p>IP40, -20~70°C, EMC up to Level 4</p>

Featured Product - InBOX710 4G Industrial Computer



Featured Product - InBOX720 5G Industrial Computer



Selection Guide



Specifications	IR302	IR305	IG502	IG902	InBOX710	InBOX720
Memory	128MB DDR2, 32MB Flash	128MB DDR2, 32MB Flash	512MB RAM, 8GB eMMC FLASH	512MB/1GB RAM, 8GB eMMC FLASH	2GB DDR3, 16GB eMMC	2GB DDR3, 16GB eMMC
Cellular	LTE CAT4	LTE CAT4	LTE CAT4, LTE CAT1	LTE CAT4	LTE CAT4	5G/LTE CAT4
SIM	2	2	2	2	1	1
Wi-Fi	2.4GHz (IEEE 802.11b/g/n)	2.4GHz (IEEE 802.11b/g/n)	2.4GHz (IEEE 802.11b/g/n)	2.4GHz /5GHz (IEEE 802.11ac/b/g/n)	2.4G (802.11 b/g/n)	Wi-Fi 2.4G (802.11 b/g/n)
Ethernet Ports	2*10/100Mbps Ethernet port	5*10/100Mbps Ethernet port	2*10/100Mbps Ethernet port	2*10/100/1000Mbps Ethernet port	1*10/100Mbps	1*10/100Mbps
VLAN	/	√			/	/
USB	/	/	USB 2.0*1	USB 2.0*1	USB2.0*2, USB3.0*1	USB2.0*6, USB3.0*1
Serial Ports	1*RS232	1*RS232, 1*RS485	RS232 *1, RS485*1 or RS485 *2	RS232 *1, RS485*1	RS232*3 or RS232*2+RS485*1	RS232*4, RS485*1
I/O Ports	2*IO	4*DI or DO	4*DI, 4*DO	4*DI, 4*DO	/	1*10 PIN GPIO
HDMI	/	/	/	/	HDMI 2.0 x 1 or 2	HDMI 2.0 x 1
Management Platform	Device Manager, InConnect	Device Manager, InConnect	Device Manager, InConnect	Device Manager, InConnect		
Protection	IP30	IP30	IP30	IP30	IP40	IP40
Operating Temperature	-20°C ~ +70°C	-20°C ~ +70°C	-20°C ~ +70°C	-25°C ~ +70°C	-25°C ~ 70°C	-20°C ~ 70°C
Dimensions	90 x 90 x 25 mm	120 x 99 x 25mm	127 x 108.2 x 35mm	133 x 114 x 45mm	170 x 150 x 260mm	194 x 150 x 436mm
Compliance	CE, FCC, PTCRB, IC, Verizon, AT&T, E-Mark	CE, FCC, CB, E-Mark, PTCRB, IC, VZW, RCM, AT&T...	CE, FCC, PTCRB, UL, C1D2 (Class 1 Division 2), VZW, AT&T, IC, RCM, NBTC, UKCA, ANATEL	CE, FCC, PTCRB, RoHS, RCM, IC, IMDA, AT&T, MIC&JATE, MSIP	CCC, CE, FCC, IC	CE

Success Stories



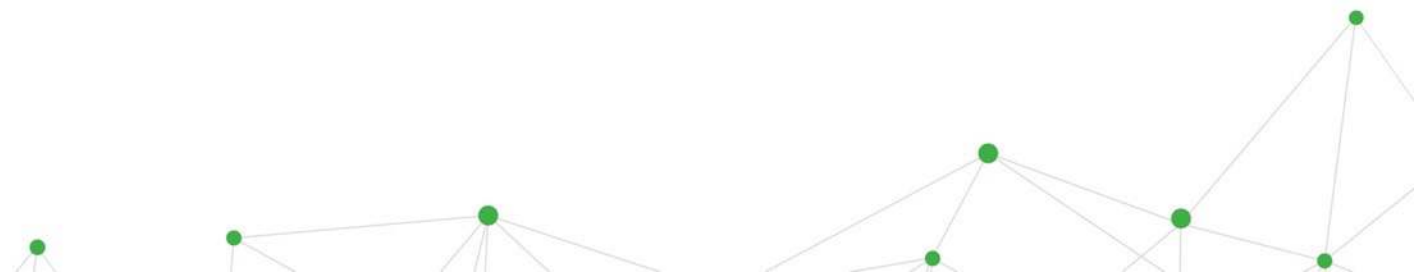
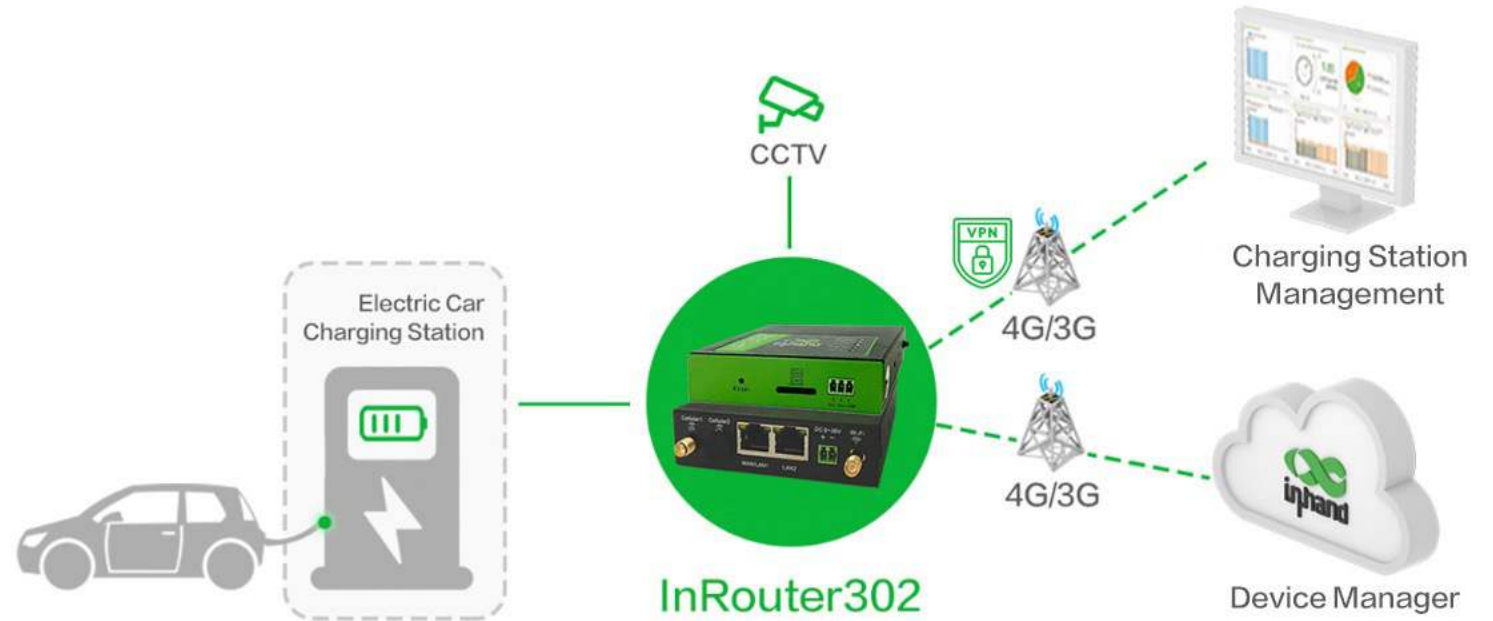
InHand Networks

SUCCESS STORY

RELIABLE CONNECTIVITY OF EV CHARGING STATIONS

CUSTOMER REQUIREMENTS

- Centralized management of distributed EV charging stations
- Easy for installation
- Timely troubleshooting & preventive maintenance
- Secure transactions





InHand Networks

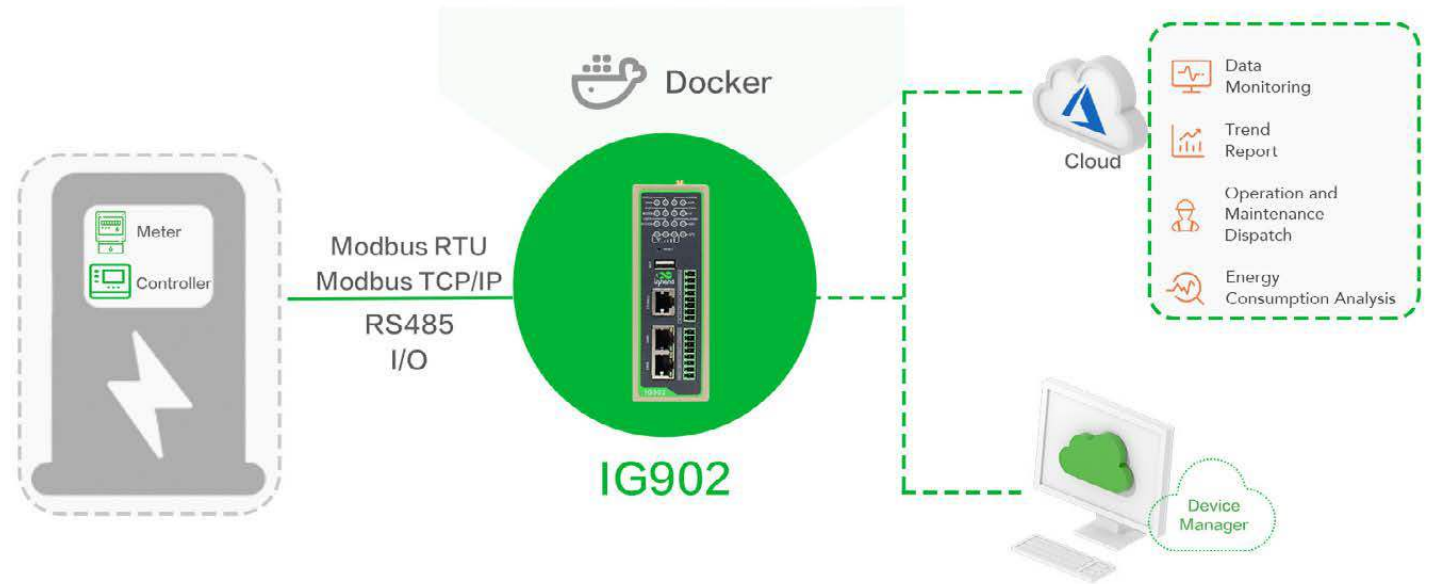
SUCCESS STORY

SMART ENERGY MANAGEMENT

Based on Real-time Electricity Data Acquisition and Big Data Analytics

CUSTOMER REQUIREMENTS

- Real-time acquisition of energy usage data from EV charging poles
- Response to real-time price fluctuation and adjustment of power supply
- Connection to energy management platform for power allocation
- Ruggedized enough to withstand harsh environments





InHand Networks

SUCCESS STORY

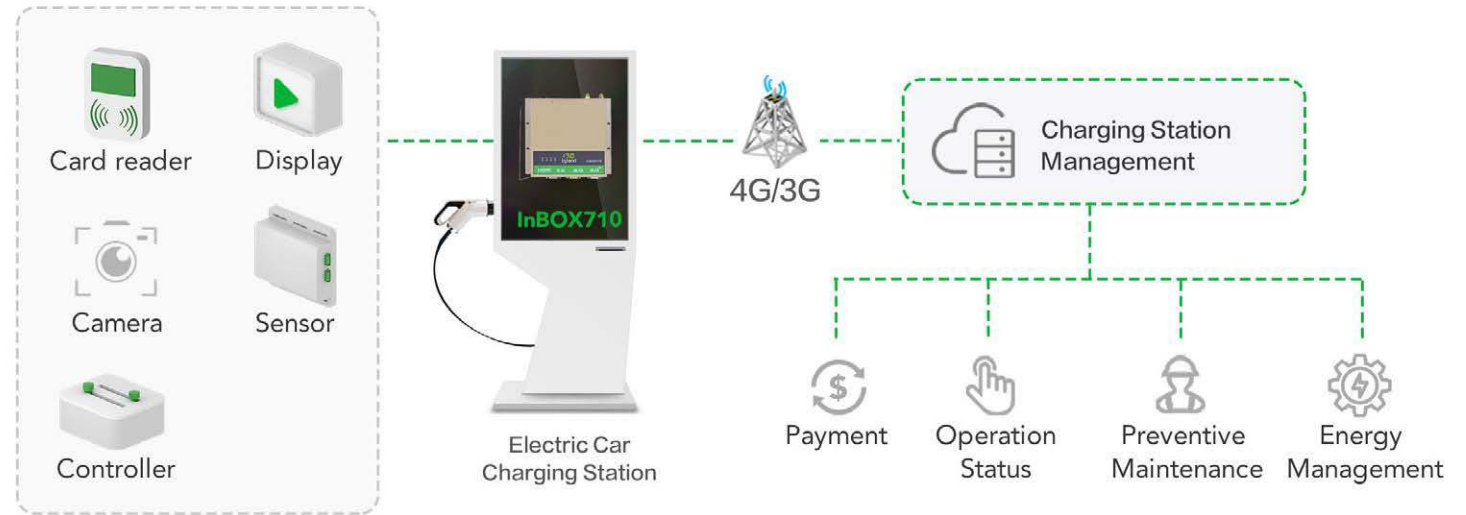
SMART EV CHARGING KIOSK

Remote Management, Dynamic Interaction
& Custom Applications



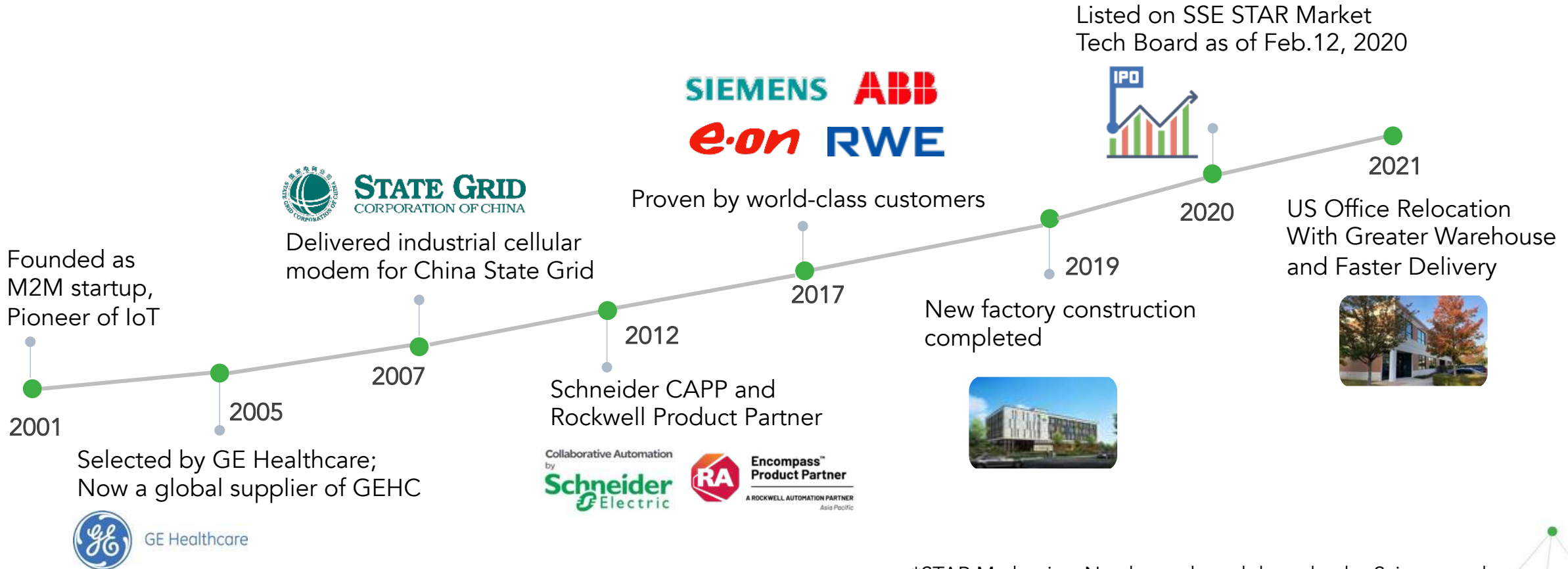
CUSTOMER REQUIREMENTS

- Monitoring of all EV charging kiosks.
- Interaction, multiple payment methods
- High EMC level, wider temperature range
- Ruggedized enough to withstand harsh environments



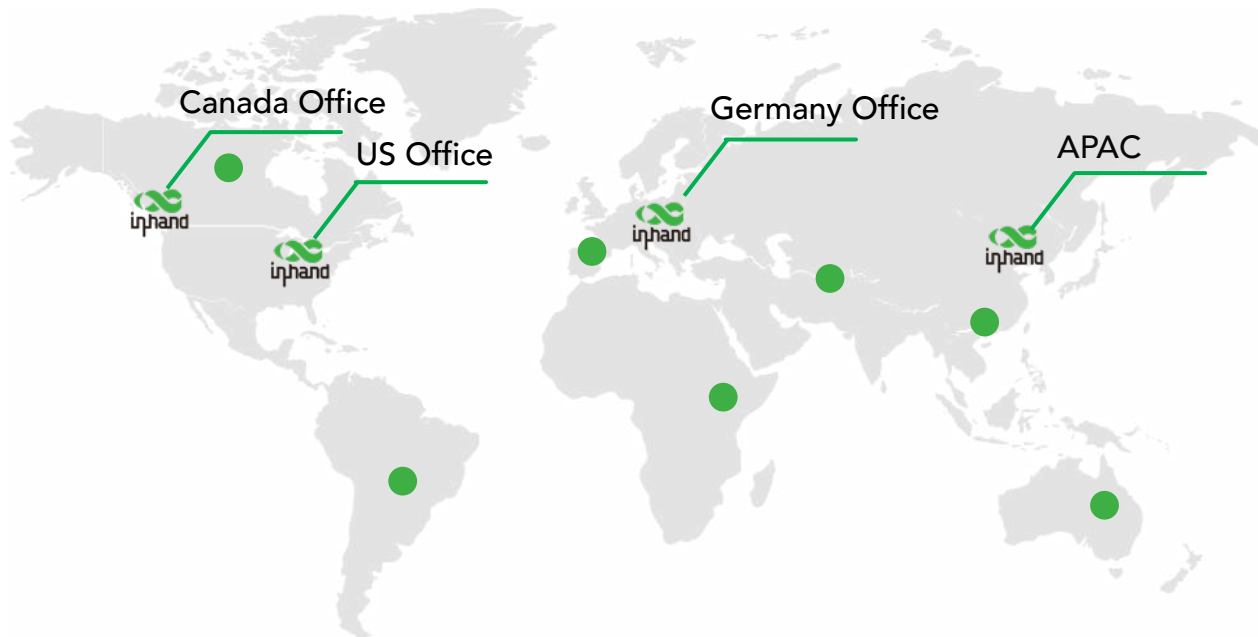
Who Are We?

Pioneering IoT for 21 Years



*STAR Market is a Nasdaq-style tech board – the Science and Technology Innovation Board at Shanghai Stock Exchange.

Global Coverage



Employees 400+
R&D Team 140+

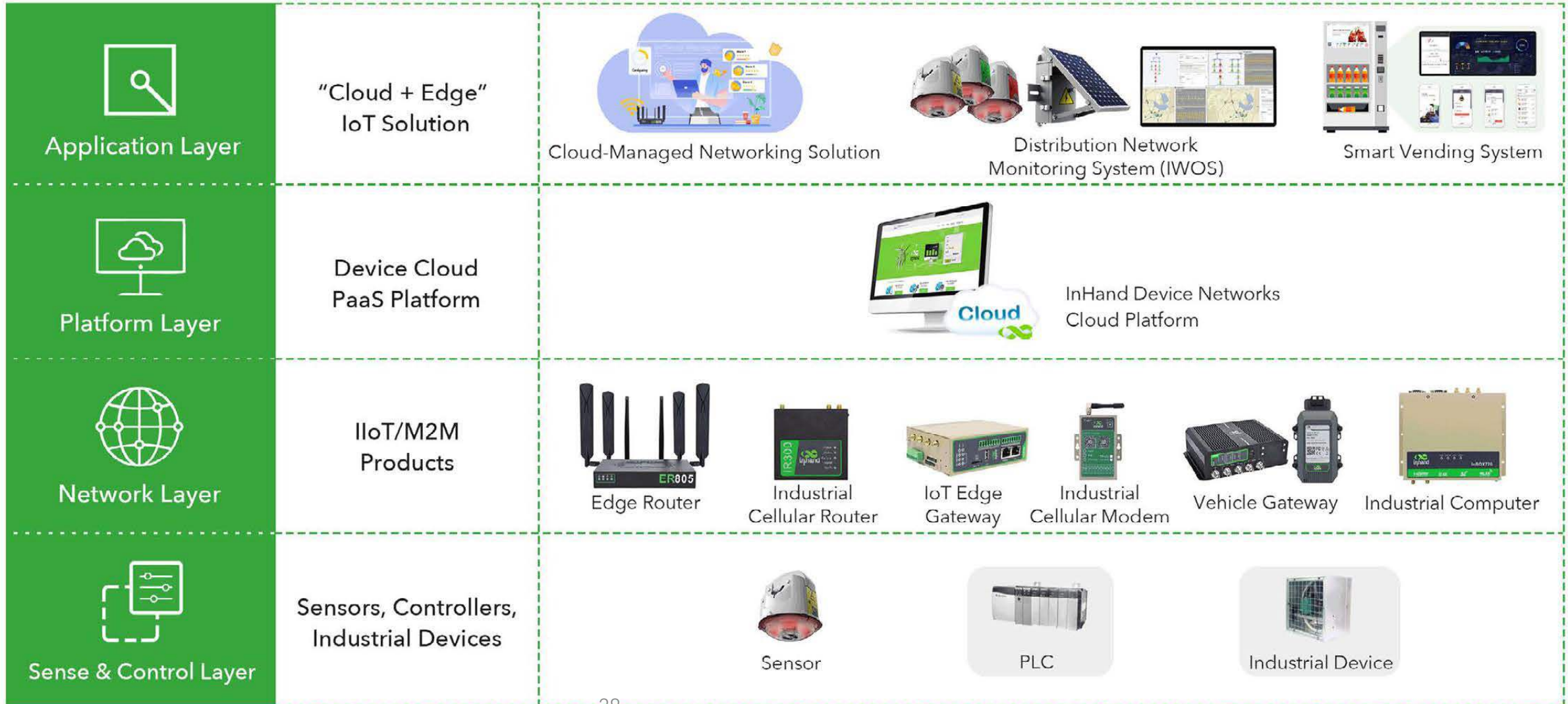


2021 Total Sales \$70 Million+
550K+ IoT products shipped
worldwide



New factory plant in Jiaxing,
China, open since July 2020

IoT/M2M Products & Solutions



Quality Commitment & Support



**High Quality with
ISO 9001: 2015, RoHS
and CE certifications**



**3-year
Warranty**



**Free Technical Support
16 Hrs per Day
5 Days per Week**

Q & A

Contact

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InHand Networks

A Global Leader in Industrial IoT

The image features a large industrial facility, possibly a refinery or chemical plant, with several tall distillation columns and a large storage tank. The scene is set against a sunset sky with a bright sun on the right. Overlaid on the image is a network diagram consisting of green wireless signal icons (three concentric arcs) connected by thin green lines, representing an industrial IoT network. The text 'InHand Networks' is in a large, bold, green font, and 'A Global Leader in Industrial IoT' is in a smaller, black font below it.

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