Streamlining IIoT Management

The Agent MaaS Suite (AMS) is a set of highly integrated intelligent device management software which was developed as a web service targeting IIoT applications and is supported by most Axiomtek hardware platform models.

AMS offers a management platform featuring data visualization and cloud-connectivity functionalities, allowing users to easily manage and handle tasks from end-point machines all the way up to remote control centers, whether it is protocol communication, data collection and processing, message transmission, or information presentation.

How AMS Benefits IIoT Operation

Simplified IIoT Integration and Deployment
A management platform's ability to ensure a future-proofing IIoT ecosystem is crucial, particularly when the IIoT is evolving at an unprecedented rate with plenty more devices anticipated to join.

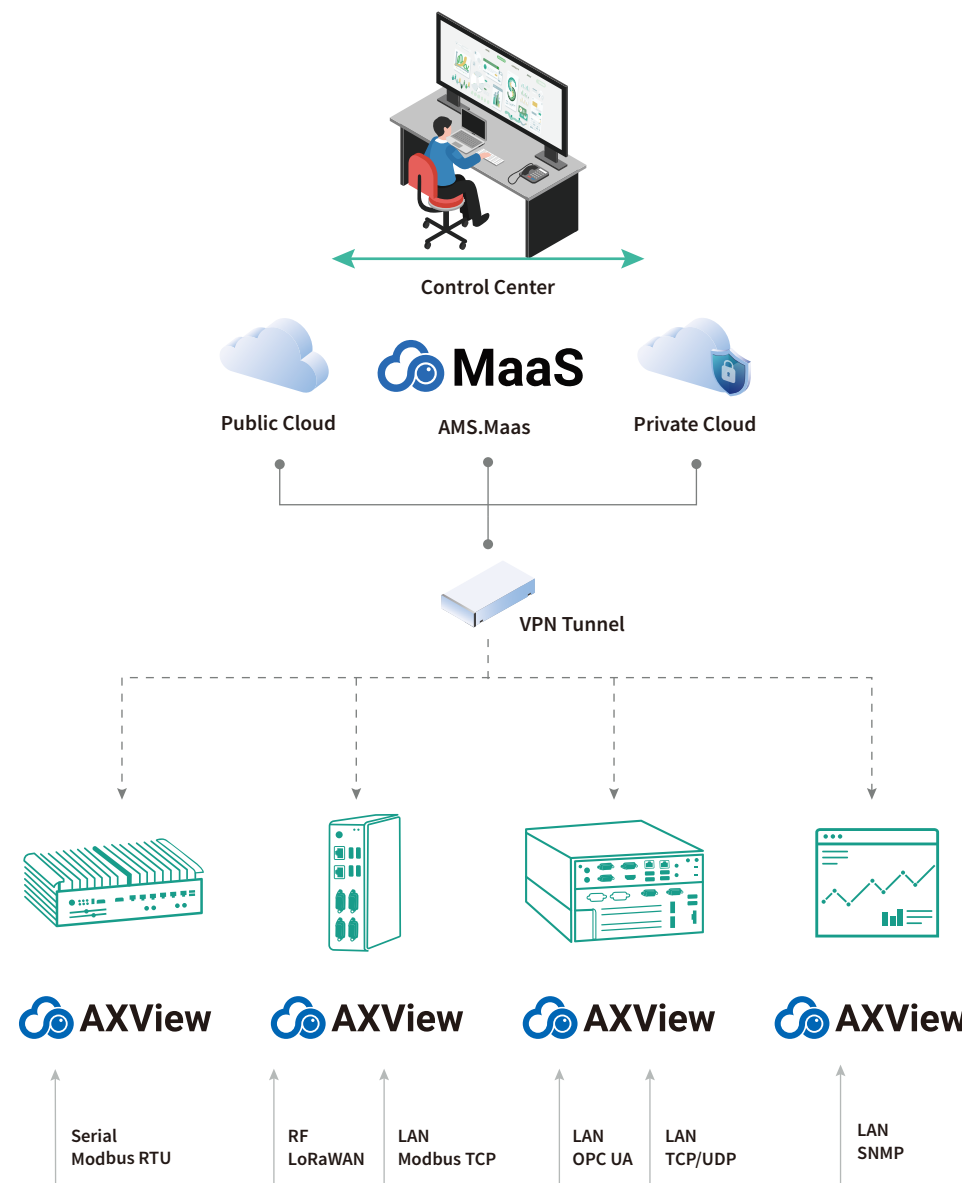### High Degree Flexibility in Personalizing IIoT Applications
AMS.AXView includes Node-RED that gives developers tremendous freedom to design data processing flows using its graphical nodes, allowing them to tailor their IIoT systems to unique scenarios with minimum programming effort.

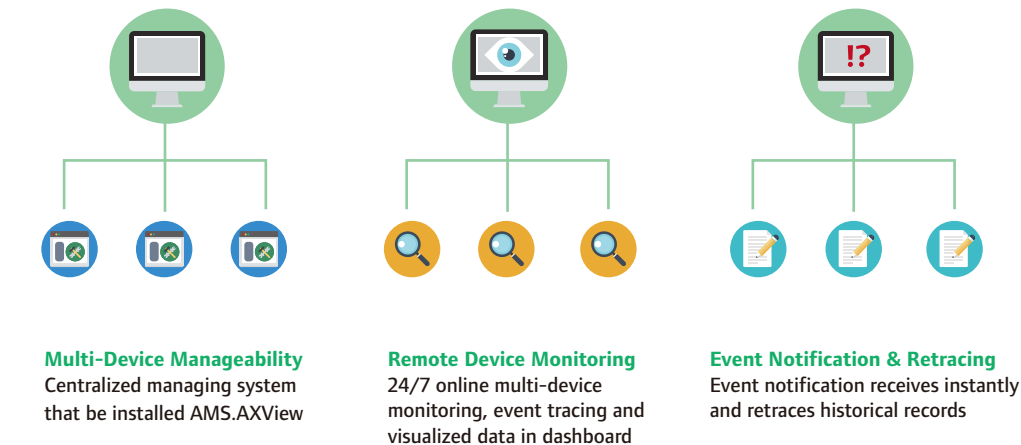### Remote Online Management with Real-Time Data
With AMS's web-based services providing a real-time management platform that breaks geographical limitations, remote equipment management has never been easier.

Making Sense of Data

The Industrial Internet of Things (IIoT) creates its core value when it delivers meaningful, data-driven insights, which can be used to help companies identify emerging issues and formulate actionable plans to eliminate problems or improve processes, whether it is optimizing business operations, adding productivity, or reducing risk and costs. The rapid increase of connected devices, coupled with their increasingly diverse networks, makes effective management of these scattered devices a challenge, resulting in a pressing need for enterprises to come up with better strategies and approaches that will allow them to efficiently control and consolidate their fragmented IIoT assets in order to produce optimal synergy
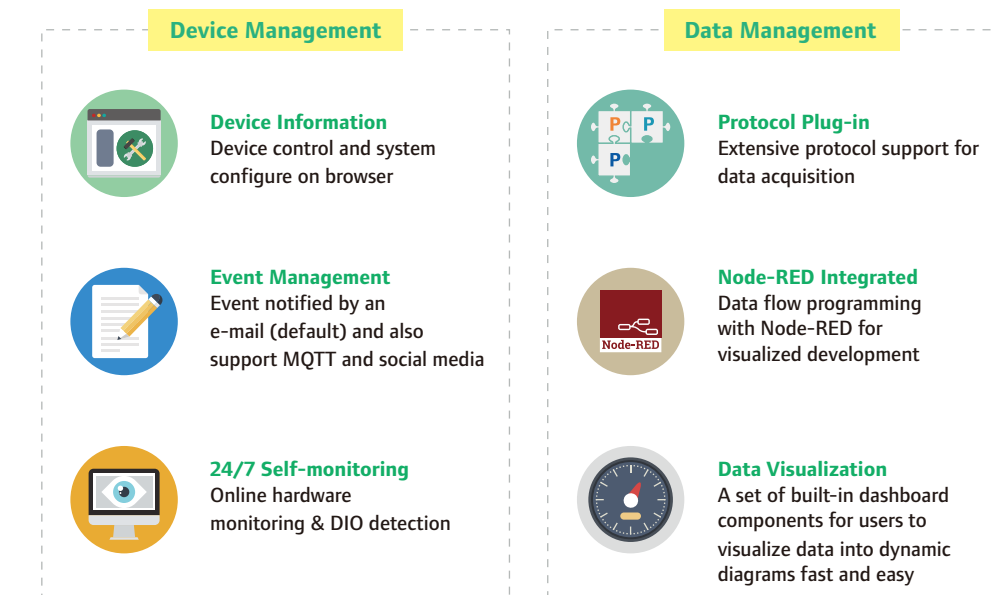
AMS Framework
Based on a master-slave architecture, the AMS comprises two packages according to their functional roles: AMS.AXView as a slave for device management, and AMS.MaaS (Management as a Service) as a master for remote management.

Control Center

MaaS

Public Cloud   AMS.Maas   Private Cloud

VPN Tunnel

AXView — Serial Modbus RTU
AXView — RF LoRaWAN / LAN Modbus TCP
AXView — LAN OPC UA / LAN TCP/UDP
AXView — LAN SNMP

MaaS

Multi-Device Manageability
Centralized managing system that be installed AMS.AXView

Remote Device Monitoring
24/7 online multi-device monitoring, event tracing and visualized data in dashboard

Event Notification & Retracing
Event notification receives instantly and retraces historical records

AXView

Device Management

Device Information
Device control and system configure on browser

Event Management
Event notified by an e-mail (default) and also support MQTT and social media

24/7 Self-monitoring
Online hardware monitoring & DIO detection

Data Management

Protocol Plug-in
Extensive protocol support for data acquisition

Node-RED Integrated
Data flow programming with Node-RED for visualized development

Data Visualization
A set of built-in dashboard components for users to visualize data into dynamic diagrams fast and easy

Environmental Signal Monitoring

The AMS starter kit for IoT Modbus gateway solution is a plug-and-play solution with integrating hardware platform and software service for IoT application. The hardware platform, ICO100-839, is based on Intel® Celeron® Processor N3350 and runs with Linux OS, Yocto. The AMS.AXView is a web-based management suite with plug-in Modbus (RTU and TCP) protocol for helping users configure their settings and communication with Modbus device quickly and conveniently. There are sensors and a Modbus-supported analog-to-digital connector in the starter kit, and a simple hands-on lab is designed for the user to familiar with IoT Gateway Solution quickly.
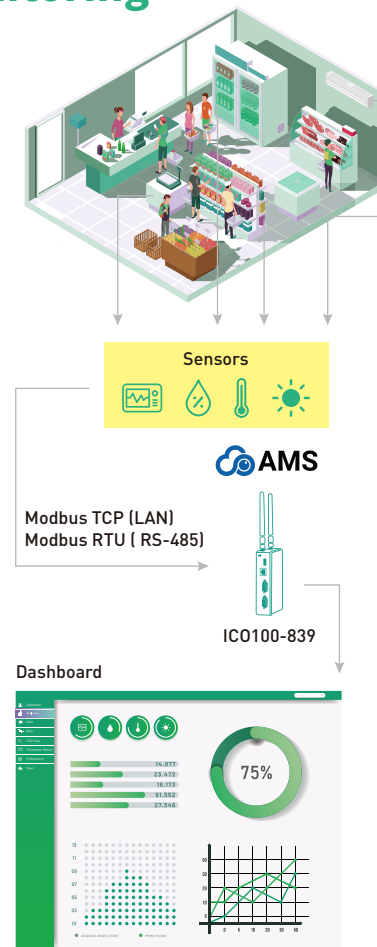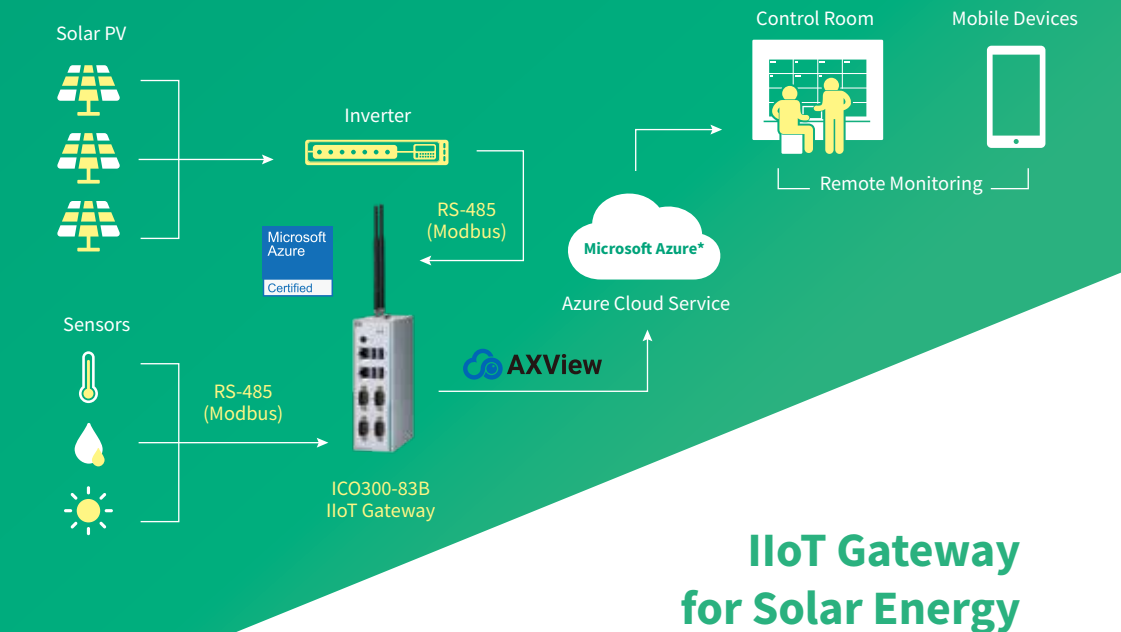
The Benefits and Advantages of AMS Starter Kit

• Easy-to-do device management
• Rich software interfaces reserve for system integration
• Graphic interface for programming
• Rugged design with high compatibility

ICO100-839
DIN-rail Fanless Embedded System with AMS Starter Kit and Modbus Protocol

Features
• Cost-effective with fanless and cableless design
• Intel® Celeron® N3350
• 2 COM, 2 USB and GbE LAN
• 8-bit programmable DIO for IIoT gateway
• Wide operating temperature range from -20°C to +70°C
• 12 to 24 VDC wide range power input
• OVP, UVP, OCP, RPP power protection design
• AMS.AXView device management software for IIoT

Sensors

AMS

Modbus TCP (LAN)
Modbus RTU (RS-485)

ICO100-839

Dashboard

75%

Solar PV

Inverter

RS-485 (Modbus)

Microsoft Azure Certified

Control Room | Mobile Devices

Remote Monitoring

Microsoft Azure*

Azure Cloud Service

AXView

Sensors

RS-485 (Modbus)

ICO300-83B IIoT Gateway

IIoT Gateway for Solar Energy

Axiomtek has worked with Intel®, our technology partner, to create our newest Intel® RFP Ready Kit (RRK) with focus on solar energy gateway. Our solar solution RRK supports the use of sensors, leveraging digital controls for effective monitoring and management of energy operations. It allows for better analytics, reduces labor costs and shortens response time in emergency situations. Our solutions include our gateway platform, Windows®OS, Cloud connectivity with Microsoft® Azure and a remote management software. For smart energy and renewable energy applications, these products can serve as intelligent gateways with flexible designs and large data storages to allow for edge computing.

ICO300-83B
Robust DIN-rail Fanless Embedded System with Intel® Celeron® Processor N3350/Pentium® Processor N4200, Isolated COM, LAN and DIO Option

Features
• Cost-effective with fanless and cableless design
• Intel® Celeron® N3350/Pentium® 4200
• 2 or 4 isolated COM, 4 USB, 2 GbE LAN
• 8-bit programmable DIO for IIoT gateway (optional)
• Wide operating temperature range from -40°C to +70°C
• 12 to 24 VDC wide range power input
• OVP, UVP, OCP, RPP power protection design
• AMS.AXView intelligent remote monitoring software for IIoT

AXIOMTEK

Empowering Smart IIoT Management

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