

Ethernet I/O Modules: ADAM-6000/6200/6300

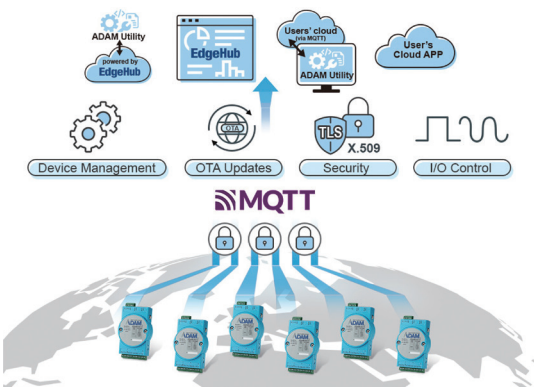
Introduction

Advantech's ADAM-6000/6200/6300 Ethernet I/O modules are easily integrated so they can remotely monitor and Cross-site Devices more flexibly.

Feature Highlights

Secure Cloud I/O

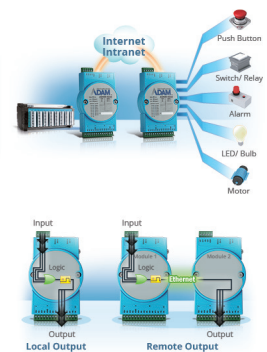
Innovative ADAM-6000/6200 Secure Cloud I/O offers device management, OTA updates, security and device monitoring functions in IoT era and help user easily manage widespread assets across diverse applications



- **Device Management:** UUID, networking setting, I/O channel configuration
- **OTA Updates:** firmware, certificate and configuration mass deployment
- **Security:** TLS, X.509 certificate, cipher suites, IP allowlisting, protocol disabled
- **I/O Control:** digital I/O on/off, analog I/O read/write, I/O value periodically updated, alarm notification

Simple and Intuitive Logic Control

ADAM-6000/6200 Peer-to-Peer (P2P) and Graphic Condition Logic (GCL) modules can perform as standalone products for measurement, control, and automation.



Peer-to-Peer (P2P) connection

- Easy channel mapping from different I/O modules without extra programming effort or additional controllers.
- Utilizes Peer-to-Peer modules, just configure settings through ADAM.NET utility.

Graphic condition logic (GCL)

- GCL function is built-in ADAM-6000 and ADAM-6200 modules for users to easily set up logic rules in any application.
- User defined logic rules through graphical configuration environment in ADAM.NET utility.
- No additional controllers or programming is needed.

Easy Deployment and Robust Communication

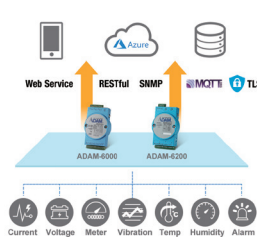


Flexible deployment with daisy chain networking and auto-bypass protection

ADAM-6200/6300 series supports daisy chain connectivity that offers flexible cabling and space saving capabilities. With Ethernet auto-bypass function supported to prevent accidental power failures if one of the modules unexpectedly shuts down.

Rich IoT Protocols

The ADAM-6000/6200 series supports multiple protocols for IoT applications: MQTT, SNMP, RESTful APIs, and Modbus, which are very flexible and can be easily integrated with Microsoft Azure, Database, Network and SCADA systems.



Cloud

- Support EdgeHub, Azure IoT Hub and any user's cloud.

MQTT

- Actively publish MQTT messages with user defined intervals.
- Shorten downtime with agile sequence of event ("ms" resolution) and alarm notification.

- Privacy assured with the TLS (Transport Layer Security).
- User defined topic and payload to integrate existing system.

SNMP

- Simple way to monitor I/O data on NMS (Network Management System).
- SNMP trap to notify alarm events.
- Reduces implementation cost with ADAM MIB (Management Information Base) file.

Industrial Grade with Isolation & Wide-operating

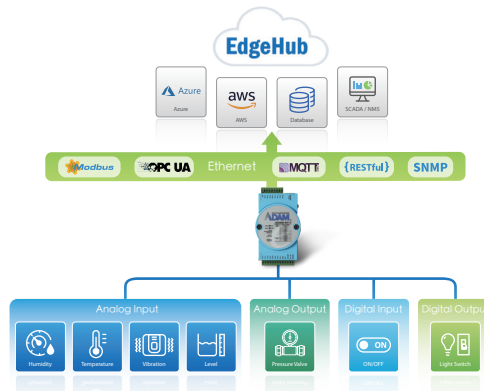
Temperature



ADAM-6000/6200/6300 series has a rugged design.

- Supports isolation protection to avoid system damage from high-energy noise.
- Supports operating temperatures of between -40 ~70°C and can perform in most harsh environments.

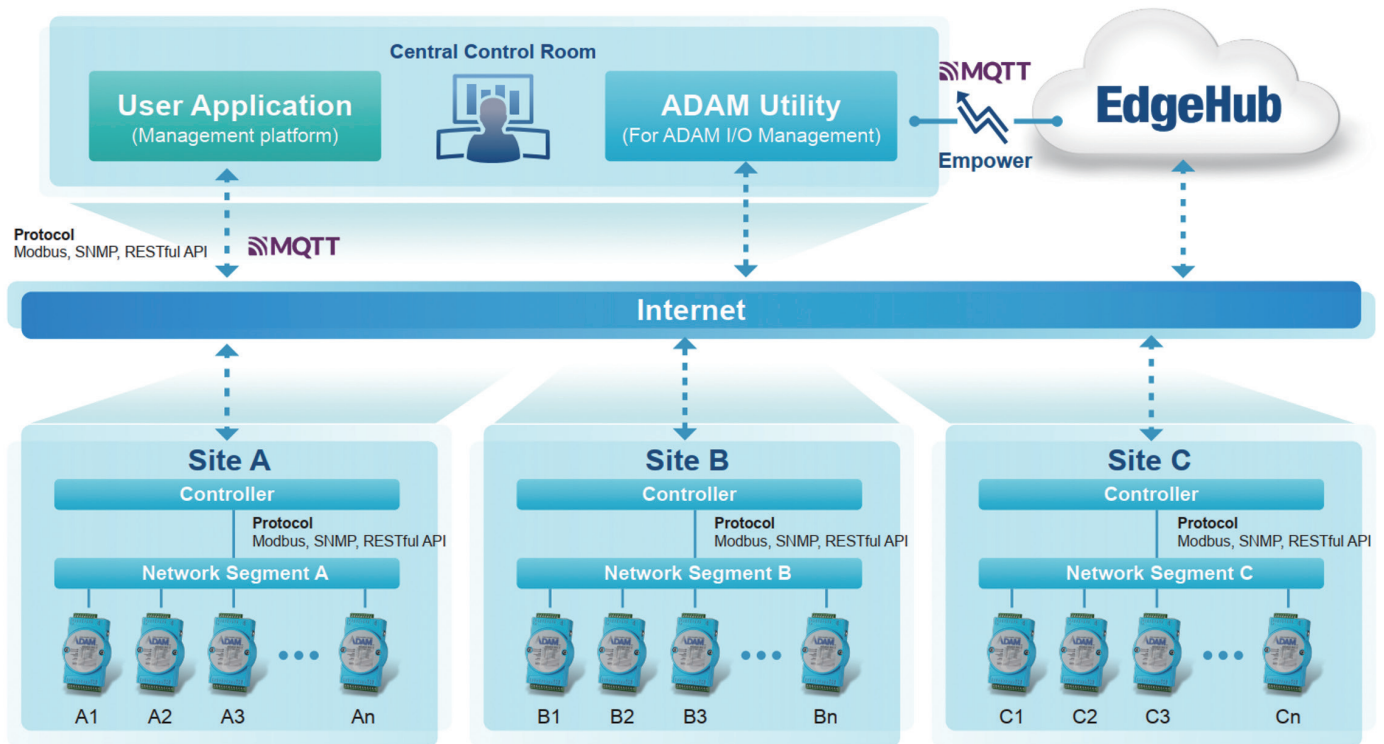
Application Structure



ADAM-6000/6200/6300 Series Comparison

Series Name	ADAM-6000 Series	ADAM-6200 Series	ADAM-6300 Series
Daisy-chain Connectivity	—	✓	✓
Protocol	MQTT	✓	(By request)
	SNMP	✓	(By request)
	Modbus	✓	✓
	RESTful	✓	(By request)
	OPC UA	—	✓
	Cloud I/O	✓	(By request)

More information on website



Direct I/O and Centralized Configuration

- EdgeHub enables device management with remote configuration, monitoring and maintenance capabilities for Advantech devices.
- Configure and maintain ADAM devices via ADAM Utility with built-in EdgeHub and web interface.
- Monitor and control I/O in real-time
- Manage user-defined configuration profiles and apply to devices
- Update device firmware remotely through secure OTA
- Manage multiple devices in groups with batch configuration and monitoring

Configurable Data Logging and Dashboard

- Flexible data logging and visualization with selectable tag configurations and customizable dashboard.
- Configure data logging by selecting I/O tags to store
- Customize web-based dashboard to view real-time and historical data

Multi-Tenant Architecture

- Support multiple organizations with isolated environments and resource management through tenant management.
- Tenant isolation – device, data storage, network traffic, API access
- Hierarchical tenant structures with parent-child relationships for enterprise deployments
- Tenant-specific user management and authentication
- Device connection quota management per tenant

Flexible Event Notification System

- User-defined event settings with real-time notification delivery through multiple communication channels.
- Define event rules based on device I/O tags
- Configure targeted notifications with customizable groups, users, and content
- Distribute alerts through email and other supported channels
- Track event history and acknowledgement status

Enterprise-Grade Access Control

- Secure access management with role-based control (RBAC) and user account
- Define role-based access control with customized permission sets
- Control user access right to devices configurations, monitoring and operations
- Manage user accounts with hierarchical roles and granular permissions

ADAM-6060

ADAM-6066

**6-ch Digital Input and 6-ch Relay
Modbus TCP Module**

**6-ch Digital Input and 6-ch Power Relay
Modbus TCP Module**



ADAM-6060

ADAM-6066



Specifications

General

- LAN 1-port 10/100Base-T(X)
- Power Consumption 2 W @ 24 V_{DC} (ADAM-6060)
2.5 W @ 24 V_{DC} (ADAM-6066)
- Connectors 1 x RJ-45 (LAN), Plug-in screw terminal block (I/O and power)
- Watchdog Timer System (1.6 second) and Communication (programmable)
- Power Input 10 ~ 30 V_{DC}
- Supports Peer-to-Peer
- Supports GCL
- Supports Modbus/TCP, TCP/IP, UDP, DHCP, SNMP, RESTful and MQTT Protocol

Digital Input

- Channels 6
- Dry Contact Logic level 0: Closed to GND
Logic level 1: Open
Logic level 0: 3 V_{DC}
- Wet Contact Logic level 1: 10 ~ 30 V_{DC} or floating
Support DO type: Sink (NPN) only
- Supports 3 kHz Counter Input (32-bit + 1-bit overflow)
- Keep/Discard Counter Value when Power-off
- Supports 3 kHz Frequency Input
- Supports Inverted DI Status

Relay Output (Form A)

- Channels 6
- Contact Rating (Resistive) ADAM-6060: 120 V_{AC} @ 0.5 A
30 V_{DC} @ 1 A
ADAM-6066: 250 V_{AC} @ 5 A
30 V_{DC} @ 3 A
- Breakdown Voltage 500 V_{AC} (50/60 Hz)
- Relay On Time 7 ms
- Relay Off Time 3 ms
- Total Switching Time 10 ms
- Insulation Resistance 1 GΩ min. at 500 V_{DC}
- Maximum Switching Rate (at rated load) 20 operations/minute
- Supports Pulse Output

Protection

- Isolation Voltage 2,000 V_{DC}
- Power Reversal Protection

Environment

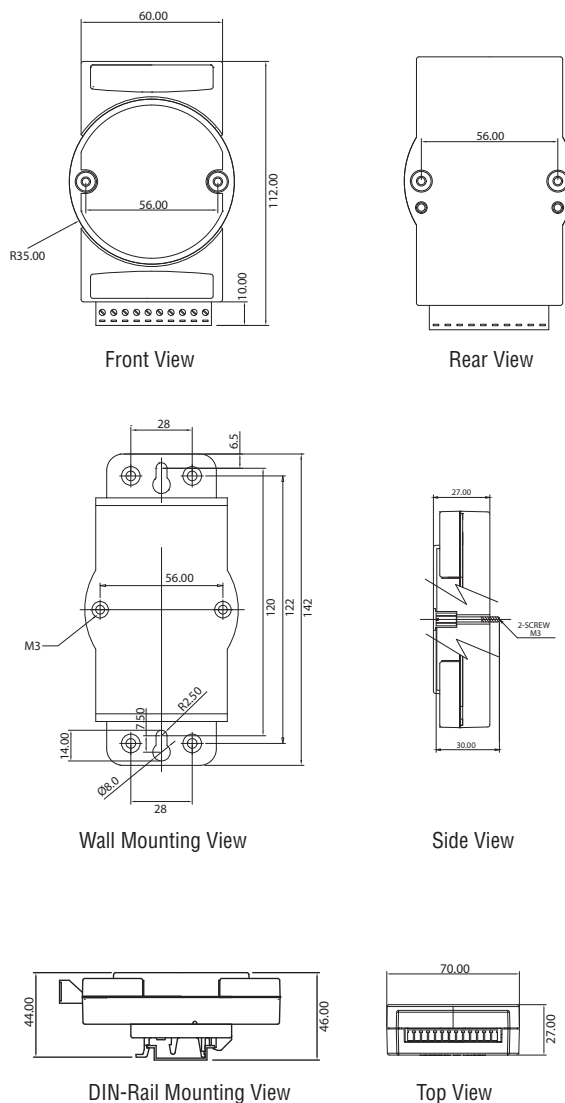
- Operating Temperature -40 ~ 70°C (-40~158°F)
- Storage Temperature -40 ~ 80°C (-40~176°F)
- Operating Humidity 20 ~ 95% RH (non-condensing)
- Storage Humidity 0 ~ 95% RH (non-condensing)

Ordering Information

- ADAM-6060-D1 6-ch DI and 6-ch Relay Modbus TCP Module
- ADAM-6066-D 6-ch DI and 6-ch Power Relay Modbus TCP Module

ADAM-6000 Series Dimensions

Unit: mm



ADAM-6000 Series Common Specifications

General

- Dimensions (W x H x D) 70 x 120 x 30 mm
- Enclosure ABS+PC
- Mounting DIN 35 rail, stack, wall