



eACM

High Performance, Flexible
Communication, Hyper Connectivity

eACM by AUTOSOL turns virtually any field device such as field computers, radios, and switches into lightweight, MQTT-enabled edge gateways.

MQTT-Enabled Edge Gateways for Faster Data with Reduced Bandwidth

eACM can translate native RTU and PLC protocols into the highly-efficient MQTT protocol and send report-by-exception data to any MQTT broker. eACM also supports the MQTT Sparkplug B specification, which allows for data to be back-filled for higher resolution or to restore data after a comms outage. Lastly, eACM provides a platform for functional applications to run on the edge of your network to make the most out of your infrastructure.

eACM Real-Time Polling

eACM provides an extremely convenient and efficient way to transmit more data, more frequently, and with less overhead. When deployed in the field, eACM acts as a local polling engine, handling the poll-response between itself and the device as fast as every 50 milliseconds.

eACM handles each register it polls with a deadband and allows users to configure how often new values publish. This gives users control over how often new data is transmitted over the network, saving money. It also has alarm settings for each tag that ensures operations never misses an alarm. Capable of handling thousands of tags at once, eACM delivers more data to your systems with less bandwidth.

Key Features

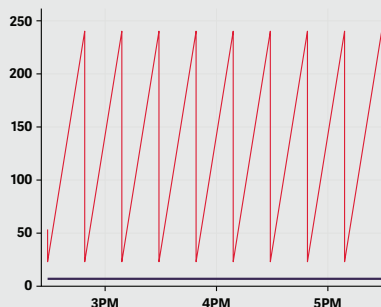
- Supports **communication with multiple protocols** simultaneously.
- Supports **communication with multiple end-devices** simultaneously.
- **Locally stores data when connection is interrupted.** Stored data is sent when connection is re-established.
- **Backfills data to your system** after losing connection.
- MQTT **uses up to 90% less bandwidth** than traditional poll-response.
- **Allows edge applications to run** using RTU or PLC data.
- Can **prioritize data flows** between multiple masters for serial networks.
- eACM is portable and light enough to **fit onto most edge computing devices.**

Lost Connection Buffering

If eACM loses connection to the broker, it will continue polling and store the data locally on the device it is installed on. Once the connection is re-established, eACM then sends the stored data up. To the left, the outcome of this process can be seen. The left graph is a communications outage with eACM in the field. The right graph is a communications outage without eACM.

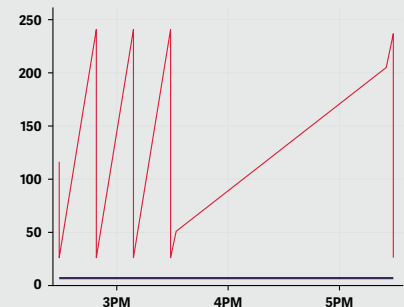
Data Collected Locally Via eACM and Published Via MQTT

08/01 (14:29:09) - 08/01 (17:29:09)



Data Collected Remotely Via Traditional Polling

08/01 (14:29:09) - 08/01 (17:29:09)



Compatibility

Real-Time Protocols

- ABB Totalflow
- Allen Bradley ControlLogix
- Allen Bradley CIP
- Emerson (Fisher) FloBoss
- Emerson (Fisher) ROC

Tested Hardware*

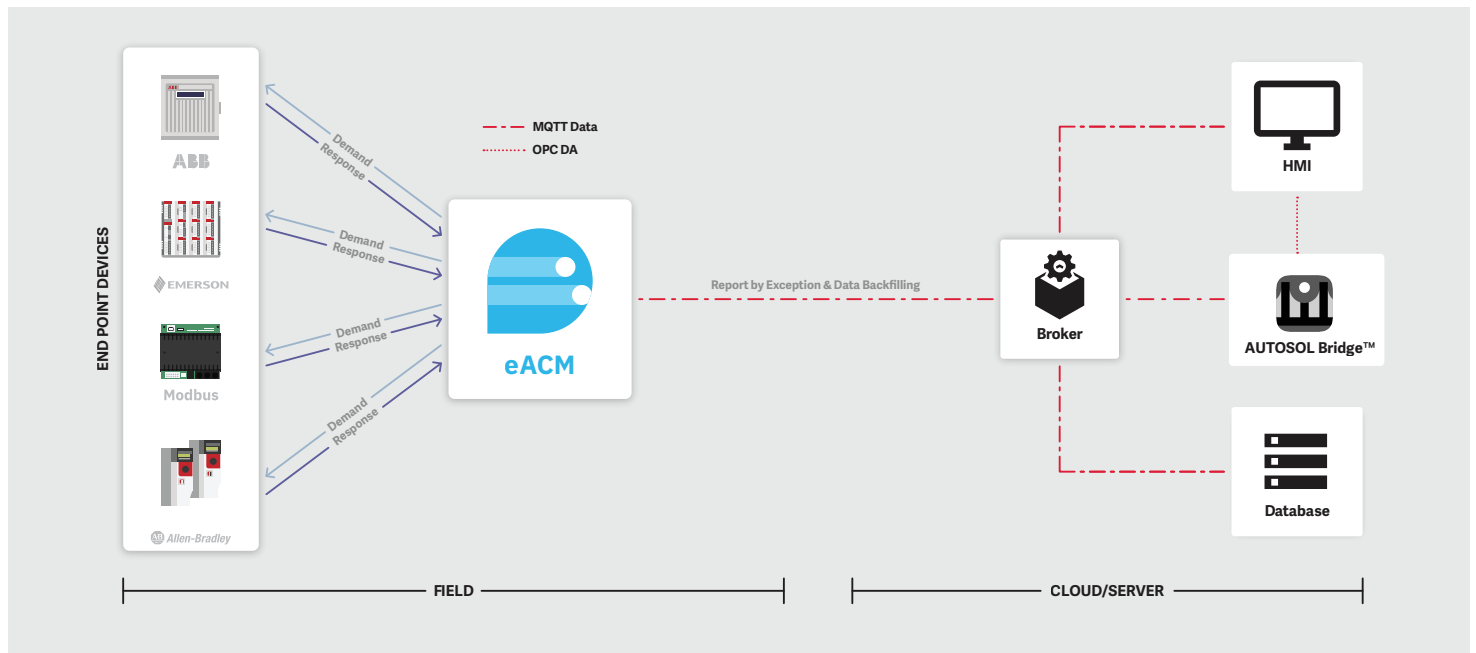
- FreeWave ZumLink™ 900
- FreeWave ZumIQ™
- Raspberry Pi
- MOXA UC8100
- MOXA 3100
- MOXA V2201
- RAD SecFlow-1
- FitPC fitlet2
- XetaWave XetaEdge
- XetaWave XetaEdge9

*Other hardware can be tested

Real-Time Modbus Protocols

eACM functionality can be expanded by developing additional interfaces with any Modbus device. Specific protocols currently provided with the eACM software are:

- Modbus RTU/ASCII/TCP
- Daniels
- Enron
- Flow Automation
- AutoPilot
- Omni



Easy to configure, easy to deploy, easy to manage.

It can be difficult to track, configure and license hundreds of eACM installations once they are deployed in the field. That's why multiple eACM devices can be managed from one server-side mass-management application called Edge Mass Manager.

Edge Mass Manager allows users to change configuration settings across their system. It also tracks, displays and lets users control the status of deployed applications as "Running" or "Stopped." As new eACM boxes are deployed, they can be synced with the manager app and licensed remotely.

Specifications are subject to change without notice.

Legacy compatible across systems.

Although eACM utilizes the full potential of MQTT, not every SCADA system is compatible with the technology. For those HMIs and services that want MQTT data, but rely on OPC-DA connections, AUTOSOL Bridge™ is the solution.

Residing on a server or in the cloud, AUTOSOL Bridge converts the MQTT data into real-time OPC-DA data that any OPC client can use. AUTOSOL Bridge can also backfill MQTT Sparkplug B data into a historian or HMI.



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The innovative technological capabilities of AUTOSOL® products are protected by US Patents 6,628,992; 6,950,851; 6,961,753; 7,073,182; 7,225,248; 7,587,481; 7,646,298; 7,673,337; 7,673,8; 7,747,710; 8,316,232; 8,364,950; 8,694,770; 8,898,481; 8,935,523; 8,966,117; 9,100,318; 9,306,946 and patents pending.

As of 07/13/21

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