



Application for loT enabled DDC





# **Instant Alert Notification**

Monitor your critical equipment with a self-contained solution

Traditional DDC solution requires an elaborate engineering undertaking to design, construct, programming and integration. The DAXView mini is an integrated no-code DDC solution complete with 4G modem, serial data gateway and internal data storage in a compact no-code package. DAXView mini can be configured and commissioned by a facility engineer using the built-in web based configurator that is easy to use. This reduces the total cost of project implementation and shortens the turnaround time to complete a project delivery.

One of the most common applications for DDC project is remote equipment status and alarm monitoring. The requirement is to quickly notify the operation personnel that an alert event has occurred or when the system has resumed normal operation via instant messaging.

"Manage your building facility and remote location assets easily with a no-code DDC solution that can be commissioned quickly "

The DAXView mini takes Dry Contact input to detect changes in the equipment state. Typical applications are as follows:

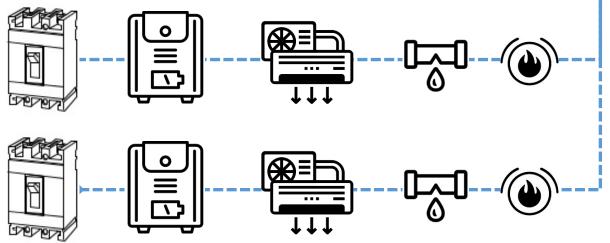
- MCB Circuit Breaker On/Off/Trip Status
- Protection Relay Trip Status
- Thermostat Limit Exceed Status
- UPS Alarm Status
- Aircon Duty Cycle Status
- Fire Alarm Status
- Door Access Magnetic Relay Status
- Water Leakage Detection Status



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Dry Contact Digital Input (60pts expanded with 4xDi modules)





MCB On/Off Trip, UPS Online Status, Aircon Status, Water Leakage Detection, Fire Alarm Status, Door Access

The DAXView mini comes with 30pts Digital Input contact as standard. It can be expanded to 60pts by attaching expansion Digital Input modules. The modules are plugand-play that will be ready to use immediately without further configuration.

Whenever the equipment Dry Contact Closes or Open, the Digital Input will register the event change and sends out an alert notification via SMS/ Email. The alert notification message can be user-configured for Closed Contact and Open Contact condition. Data export using Modbus-TCP, BACnet, MQTT are also supported.



### Meter Data Logging

Record device reading and dispatch report automatically

Traditional data logging is normally accomplished by implementing a few distinct IT equipment to perform device polling gateway, data log storage, report formatting and report dispatcher. DAXView mini simplifies that setup by consolidating all the functions into an integrated DDC product.

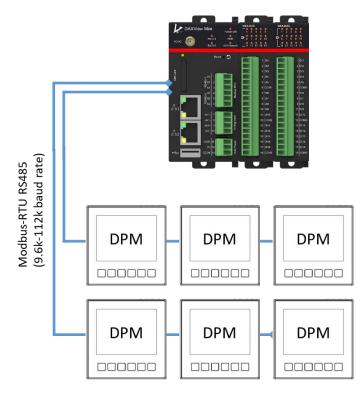
The DAXView mini can be configured to data log up to 60 numbers of Modbus-RTU slave meters. The connection is made via 2 loops of daisy-chain RS485 network, with each loop serving 30 number of meters. This allows 2 different configuration of Modbus communication to be connected to a single DAXView mini. E.g. Log interval time, Difference in baud rate, protocol parity, fix integer or floating point value, byte order. Each device Modbus address can be exported as Template for quick duplication to multiple DAXView mini using the same meter models. Making it a truly versatile Modbus gateway.

"Data logging for any type of Modbus slave devices. Support live stream of Modbus-TCP/ BACnet/ MQTT/ SNMP data export"

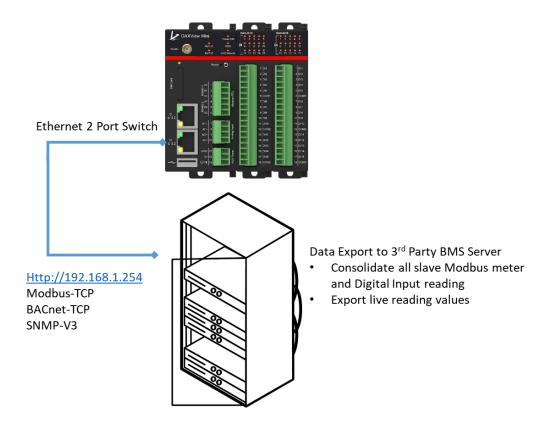
The DAXView mini then takes these data log and processes it with the following functions:

- Format data log values into CSV files for exporting to Email at user-defined intervals (hourly, daily, weekly):
- User can define Upper/Lower log value limit to register as Limit Exceed Event
- Consolidate the live data reading and export it as a stream of Modbus-TCP / BACnet / MQTT / SNMP
- Secured access with TLS encryption, Digital Certificate and User Password authentication for MQTT Public Network traffic





Digital Power Meter/ Digital Protection Relay (expandable to 60 devices with 2 loops)



DAXView mini operating as data logger and master data gateway export function.



# **IoT Cloud Function**

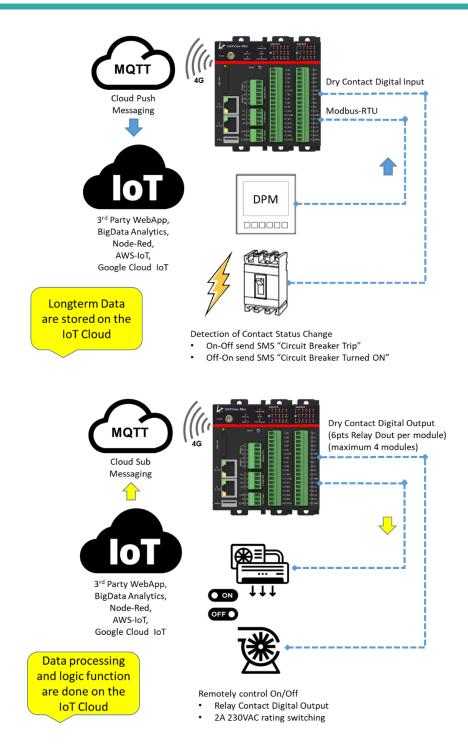
Securely process live data on Internet Cloud Application

IoT enabled devices allow large data set to be analysed and processed with advanced technique to reveal deeper patterns of operation. Automated actions can be taken to optimize machine's operation to save energy and prevent unplanned downtime incidents.

DAXView mini is equipped with the industry standard MQTT transmission protocol with TLS encryption and private key & digital certificate management. This allows the data from DAXView mini to be securely published to a MQTT Broker Server and also to subscribe to command messages sent from the Broker Server. Data from multiple units of the DAXView mini can be processed on a Cloud App Server, which alleviates the risk of data loss and remote node failure. The data log can be stored on the Cloud App and process logic can be executed reliably.

> "Securely store and process live data on the Cloud. Reveal deeper patterns within your machines data. Proactively optimize operation and prevent downtime."





The DAXView mini provides a decentralized data acquisition network and brings a powerful array of data processing and visualization capability at a fraction of the cost compared to traditional SCADA and PLC solutions. Some of the Cloud IoT platforms that can be used with MQTT protocol are Node-RED, AWS IoT, Google Cloud IoT Core, and Microsoft Azure IoT.



Cloud IoT application can be easily updated and deployed instantly without loading any code patch to the remote device node. Some examples of Cloud IoT applications are:

- Building Automation and Energy Management for buildings with large space coverage e.g. warehouse, airport, shipyard, University campus, hospital, datacenter
- Energy and Water consumption automated reporting for groups of residential/ commercial building
- Critical temperature monitoring for medical supplies and vaccine logistics
- Agricultural and farming water pumping and air ventilation management
- Flood detection and weather station steaming data feed

For more information on DAXView mini, please visit: http://www.munhean.com/products/power-quality/daxview-mini



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