Modules List

The Communication Platform for Industrial IoT
From the Edge to the Cloud

SECURE, RELIABLE AND SCALABLE.

Modules List

A comprehensive list of available vNode modules, organized by category.

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Data Acquisition

Modules	Description
ABB VIP Client	Provides straight connectivity to ABB PLCs over VIP protocol, supported devices: AC400, AC450, AC500 & AC800.
Aurora Client	Client driver for PowerOne, ABB and Fimer solar PV inverters supporting Aurora protocol.
BACnet Client	Enables seamless connectivity to BACnet-compatible devices, providing real-time data monitoring and control capabilities
CAISO ADS Client	Enables the integration with the Automated Dispatch System (ADS) of the California Independent System Operator (CAISO).
Custom Client	User-configurable client driver for building any communication protocol.
Data Importer	Enables data imports from CSV files.
DLMS Client	Enable fast and seamless integration with any meter that supports the IEC 62056 protocol.
DNP Client	Client driver for DNP3 TCP/serial compatible slaves.
Domino Client	TCP/serial driver for Domino industrial printers supporting Codenet protocol.
Ethernet/IP Client	Reliable and efficient CIP protocol handling for real-time communication with Rockwell/Allen-Bradley devices through EtherNet/IP.
IEC 102 Client	Client driver for electrical meters using IEC 60870-5-102 (REE) protocol.
IEC 104 Client	Secure and efficient communication with IEDs, RTUs, controllers, and gateways using the IEC 60870-5-104 protocol.
Mettler Toledo Client	Client driver for Mettler Toledo scales using SICS and Gareco protocols.
Modbus Client	Modbus TCP/RTU client driver.
MQTT Client	Acts as a subscriber to enable data to be received from any MQTT broker.
OPC DA Client	Driver for connecting to any OPC DA compliant server.
OPC UA Client	Driver for connecting to any OPC UA compliant server.
OPC XML-DA Client	Driver for connecting to any OPC XML DA compliant server.

Data Acquisition

Modules	Description
Rest API Client	Communicates to REST API Servers and extracts all data from the response. Supports JSON and XML formats.
Siemens S7 Client	Connects to PLCs via TCP/IP using the S7 protocol.
SMA Client	Communicates to SMA solar inverters using the legacy SMA Sunny Net.
SNMP Client	Communicate with devices that supports the SNMP protocol such as routers, switches, etc.
SolarMax Client	Enables direct communication with SolarMax PV inverters, weather stations, and electrical meters.
Sparkplug Host App	Application that publishes STATE, process commands, and consumes MQTT Sparkplug payloads for IIoT interoperability.
SQL Client	Compatible with SQL Server, Oracle, MySQL, MariaDB, PostgreSQL and other databases. Also acts as a data delivery module.
VDMA XML Client	Enables seamless integration with any VDMA XML-compliant server.
Xantrex Client	Enables direct communication with Xantrex GT Solar Inverters equipped with CCU2 boards.

Data Delivery

Modules	Description
Data Diode	Provides a cybersecure unidirectional data transfer between networks over physical data diodes, allowing to have one-way data transfer.
Data Exporter	Generates XML and CSV files containing raw or aggregated data, with automated upload capabilities to SFTP and FTP servers or local storage for streamlined data distribution.
DNP3 Server	Share input data to any master DNP3 behaving as a salve DNP3 outstation. Supports TCP communications.
IEC 104 Server	Serves IEC 60870-5-104 telecontrol data and commands to SCADA and control centers over TCP/IP.
MCP Server	Exposes your contextualized data model to AI agents via the Model Context Protocol (MCP), providing governed access to tools, resources, and prompts for secure and structured interaction.

Data Delivery

Modules	Description
Modbus Server	Perform connectivity to any master application over Modbus protocol.
MQTT Client	MQTT publisher/subscriber compatible with AWS, Azure, or any standard MQTT broker. Also acts as a Data Acquisition module.
Notifier	Enables vNode to send alarm and tag value notifications to user groups via Email and SMS, ensuring timely and reliable event delivery.
OPC UA Server	Exposes data collected from any other acquisition module within vNode to third-party systems via the OPC UA protocol, ensuring secure and standardized interoperability.
REST API Server	Delivers robust REST-based integration, supporting GET, POST, and other HTTP methods for data exchange and system control.
Sparkplug Client	Publishes tags and their properties via MQTT, converting them into Sparkplug-compliant topic and payload formats for standardized IIoT communication.
UFL PI Explorer	Exports tag events to CSV files ready to be consumed by Osisoft PI® UFL.

Edge Computing and Visualization

Modules	Description
Audit Trail	Reports all operations executed in vNode. Developed in compliance with Good Manufacturing Practice (GMP) regulatory standards.
Derived Tags	Configurable derived and aggregated data generator using expressions and data aggregation.
Historian	Provides high-performance time-series data storage using MongoDB or TimescaleDB databases.
Linked Tags	Allows users to link the values of two different tags within vNode, including tags collected from remote nodes.
Modbus Gateway	Enables multiple concurrent Modbus connections to devices that support only a single connection. Available for free with Modbus Client.
Redundancy Agent	Provides redundant TCP connections for field devices (Modbus, DNP3, Siemens, etc.), OPC UA Servers, and other supported endpoints.

Edge Computing and Visualization

Modules	Description
Scripting	Enables custom logic execution within the current node based on triggers such as timers, tag changes, and conditions. It uses a native JavaScript engine (Node.js) with access to Node.js libraries, NPM packages, and the full vNode API for interacting with tags, alarms, and system status.
Web UI	Free vNode module that provides a web interface for configuring and monitoring the status of the current node.
WebVision	Module integrated into the platform that provides a pure web-based HMI/SCADA interface for industrial applications, built entirely on HTML5 technology.

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