ZumIQ
IIOT INDUSTRIAL APPLICATION ENVIRONMENT

FREEWAVE

CAPABILITIES

Develop – A robust development environment enables both skilled and novice IIoT developers to quickly create solutions. It includes an open source Debian "sandbox" that allows for mirrored development and testing of app solutions prior to deployment.

Analyze/Compute – ZumIQ automates complex analytical processes for IIoT data such as real-time exception reporting, predictive analytics at the edge, remote monitoring and command and control.

Act – Local execution at the Edge with automated control of remote sensors and devices.

Connect – Securely connect and communicate globally with any device at any site.

OVERVIEW

FreeWave's ZumIQ is an application environment that enables innovators to rapidly develop and deploy smart, connected solutions for the Industrial Internet of Things (IIoT). ZumIQ is an integrated set of software engineering and administration tools for designing, developing, deploying and operating industrial applications in real-time at the edge of IIoT networks.

ZumIQ is currently available with the Z9-P, Z9-PE, and Z9-PC 900MHz industrial radios as well as the ZumIQ App Server.

With ZumIQ, you can drive growth from the data generated by your remote sensors and devices. Use the power of ZumIQ to extract, analyze, and take action and transport information in ways that maximize your business capacity and capability.

BENEFITS

Edge Intelligence
ZumIQ at the edge provides real-time processing when and where it is needed. This enables rapid decisions at the point of action, dramatically reduces response time, and makes better use of network resources. ZumIQ allows mission-critical decisions and actions to be made without the expense and delay involved in processing data at a central network location.

Development Environment
At the heart of the ZumIQ platform is a secure Debian developer's environment. It offers a standard Linux developers solution that includes a package management system. Developers can program with any language that is compatible with a Linux kernel including Javascript (Node.js), NodeRED, and Python.

ZumIQ – Development and Deployment on Connected Devices

With a license key, you can use open-source programming languages to develop apps that automate processes and control data flows within the network. Utilizing the included ZumIQ Software Development Kit, you will have access to a suite of Software Development tools to design, create, and test radio-managed applications, including:

- Access to FreeWave GitHub repository.

- How to create, install, or run an application.

- Application examples.

- Scripts to get started with Javascript (Node.js), NodeRED, and Python.

- Access to www.openplcproject.com/, a consortium of industrial App developers that share ideas and best practices on process control and SCADA.

Access to Serial or Ethernet Communications

ZumIQ integrates seamlessly with the device's serial and Ethernet interfaces, allowing you to essentially create a monitoring system or notification solution with minimal CAPEX or OPEX. Application possibilities include:

- Modbus TCP to Modbus RTU conversion and vice versa.

- Collection and storage of Modbus data and SCADA poll without a PLC.

- Modbus to MQTT conversion.

- Cloud publication of data.

ZumIQ is continually evolving to support platform independence and new methods of data access. These capabilities are essential to enabling improved operational efficiency through applications like preventative maintenance, energy monitoring, product lifecycle insights, and global production tracking.

SERVICES AND SUPPORT

FreeWave offers basic technical support services covering problem resolution, customer success and adoption, and designated support management. Basic support entitles customers to support for break/fix issues by phone, web, or email. It includes access to the GitHub knowledge base, as well as software updates and upgrades.

TECHNICAL SPECIFICATIONS

Supported FreeWave Hardware:	ZumLink Z9-P, Z9-PE, Z9-PC Rugged Industrial Radios (900 MHz) and ZumIQ App Server
Compatible Languages:	Python, Javascript (Node.js), Node-RED as well as any Linux-compatible language
CPU:	ARM Cortex-A8 1 GHz
User Storage:	1 GB
RAM:	512 MB
Operating System:	Debian (Linux Kernal 3.14.1)

SOLUTIONS

DRONES & ROBOTICS   EARTH MONITORING   GOV & DEFENSE   IRRIGATION & PRECISION AGRICULTURE   ASSET TRACKING   OIL & GAS   WATER & WASTEWATER   SMART CITIES   UTILITIES

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