

OVERVIEW

{rx-platform} is a universal Real-Time Database Management System (RTDBMS) with an extensible protocol framework and integrated programming and scripting tools. Designed as the central integration point for heterogeneous software systems and industrial communication protocols, enabling distributed real-time applications.

Central integration hub for data collection, normalization, and real-time distribution across BMS, VMS, UPS, and DEA systems.

PLATFORM CAPABILITIES

- PKI Security Infrastructure Ready**
 Supports Root CA, server certificates, client certificates and TLS communication
- Real-Time Database Core (RTDB)**
 Stores tag values with timestamps and quality indicators, with real-time subscriptions
- Modular Plugin-Based Architecture**
 Supports C# components and native C/C++ drivers for protocol and system integration
- Integrated Engineering Tools**
 Tag models, metadata, project structure, protocol configuration and runtime setup

SUPPORTED PROTOCOLS

Built-in support for industry-standard protocols with extensible driver framework:

- OPC UA
- MQTT
- HTTP/REST
- Modbus TCP/RTU
- BACnet
- WebSocket
- Custom Drivers

DEVELOPMENT SUPPORT

- .NET 8.0+** API for runtime modules, protocol drivers, and custom extensions in C#
- MicroPython** Scripting for logic automation, event handling, and data transformation
- Native C/C++** High-performance driver development for system integration

TECHNICAL SPECIFICATIONS

Operating Systems	Linux GNU, MS Windows 7+
CPU Architectures	x86-64, ARM64, ARM32
Runtime	Cross-platform .NET 8.0+ for server and desktop
Architecture	Real-Time Database core with modular service layers
Security	PKI, TLS 1.2/1.3, X.509 certificates
Licensing	GNU GPL V3+ Commercial available

TYPICAL USE CASES

BMS/VMS Integration

UPS & DEA Monitoring

Industrial MES

IIoT Gateway

Protocol Gateway

SCADA Systems

KEY BENEFITS

- Central integration point for heterogeneous systems
- High-performance real-time data handling
- Scalable from embedded to enterprise deployments
- Extensible protocol and driver framework
- PKI-ready security infrastructure

SUPPORTED PLATFORMS

Linux
GNU

Windows
7 and newer

{rx-platform} serves as a robust integration platform between BMS and VMS systems, while also enabling supervision integration for existing UPS and DEA units under BMS. By combining a **real-time database**, **extensible protocol framework**, and **PKI security infrastructure**, it provides a unified foundation for modern building and industrial automation systems.