

NaviTechnology

PasIQ Industrial Software Suite

Technical Datasheet | 2025 Edition

Six Enterprise-Grade Industrial Automation Products
connect@navitechnology.in • navitechnology.in

Table of Contents

01	PasIQ Web SCADA & HMI Editor	Page 3
02	PasIQ ALPR System	Page 4
03	PasIQ MQTT Client & Simulator	Page 5
04	PasIQ OPC UA Client	Page 6
05	PasIQ OPC UA Simulator	Page 7
06	PasIQ Modbus Data Collector	Page 8

01

PasIQ

Industrial HMI • Web-Based SCADA

PasIQ Web SCADA & HMI Editor

Custom SVG-Based SCADA Canvas & HMI Graphics Editor

A browser-native HMI design and runtime environment built on pure SVG graphics, replacing expensive legacy desktop SCADA packages. Designers get drag-and-drop simplicity with full Symbol Factory 3 integration, while engineers get real-time data binding to Modbus and OPC UA data sources via WebSocket — all in any modern browser with zero plugins required.

Specification	Details
Rendering Engine	Pure SVG — zero-loss scaling on any screen size or resolution
Symbol Library	Full Symbol Factory 3 industrial element support (500+ symbols)
Data Binding	Real-time Modbus / OPC UA tags via WebSocket — sub-100ms refresh
Browser Support	Chrome, Edge, Safari, Firefox — no plugins or ActiveX required
Editor Interface	Drag-and-drop canvas with layer management and property inspector
Animation Engine	Dynamic animations tied to live tag values (fill, rotate, blink, colour)
Export Formats	SVG, PNG, embedded HTML page, print-optimised PDF
Hosting	Self-hosted on any web server, Docker container, or local IIS/Nginx
User Management	Role-based access control: Designer / Operator / Viewer tiers
Alarming	Configurable threshold alerts with email & webhook notifications
Audit Logging	Operator action log with timestamp and username tracking
License	Commercial — Free Demo Available

Common Use Cases

- Replace legacy WinCC / iFIX / Citect SCADA with a zero-install web HMI
- Build remote monitoring dashboards for oil & gas terminals and water treatment
- Design operator panels for PLC systems without OEM-locked proprietary software
- Create digital twin visualisations for plant simulation and training

★ WHY CHOOSE THIS?

Replaces heavy, expensive legacy SCADA desktop software with a modern web stack — no per-seat licensing, no Windows-only lock-in.

🎯 TARGET AUDIENCE

HMI Designers, PLC Programmers, Industrial UI/UX Architects, System Integrators

AI-Powered ALPR Optimised for Indian Vehicle Registration Plates

A production-ready AI vision system specifically trained for Indian HSRP (High-Security Registration Plates), regional lighting conditions, and both Hindi & English plate fonts. Runs on commodity hardware — from Raspberry Pi to Jetson Nano — without the overhead of Kubernetes or cloud inference. Delivers enterprise-grade accuracy at edge-computing cost.

Specification	Details
Recognition Accuracy	98%+ on standard Indian HSRP plates in controlled conditions
Inference Time	Sub-200 ms per frame for high-speed vehicle tracking (up to 120 km/h)
Hardware Support	x86 servers, ARM (Raspberry Pi 4, Jetson Nano), standard IP cameras
Camera Compatibility	Standard IP cameras via RTSP / HTTP streams; USB webcam fallback
Script Support	Hindi (Devanagari) & English plate fonts; dual-line plate detection
Lighting Optimisation	Pre-processing pipeline tuned for Indian ambient lighting & glare
Night Performance	IR illumination compatible; contrast-enhanced night mode processing
Integration	REST API, Webhooks, local PostgreSQL / MS SQL logging
Output Formats	JSON response, CSV batch export, real-time SQL insert
Deployment	Standalone binary — no cloud subscription or internet required
Throughput	Up to 30 FPS real-time processing on Jetson Nano; 60 FPS on x86
License	Commercial — Free Evaluation Available

Common Use Cases

- Automated parking management with entry/exit logging and billing integration
- Toll booth automation and traffic flow monitoring on national highways
- Security gate access control with whitelist/blacklist enforcement
- Smart city traffic analytics and vehicle count dashboards
- Vehicle tracking for logistics hubs, warehouses, and port terminals

★ WHY CHOOSE THIS?

The only ALPR solution specifically tuned for India — trained on real Indian road footage, not a generic Western model adapted as an afterthought.

🎯 TARGET AUDIENCE

Smart City Developers, Parking Management, Security Firms, Traffic Authorities, Logistics Companies in India

Standalone MQTT Client & Embedded Broker for IoT Testing

An all-in-one local validation environment for complex edge-to-cloud IoT telemetry pipelines. Bundles a lightweight embedded broker alongside a full-featured MQTT client, removing the need to configure Mosquitto or spin up cloud broker instances during development and QA testing. Deployed as a single standalone executable with zero dependencies.

Specification	Details
Protocol Support	MQTT 3.1, 3.1.1, and 5.0 — full specification compliance
Embedded Broker	Lightweight built-in broker — no Mosquitto, no Docker required
Authentication	Configurable Anonymous & Username/Password authenticated modes
TLS/SSL	Certificate-based encrypted connections (TLS 1.2 / 1.3)
Topic Management	Wildcard subscriptions supported: # (multi-level), + (single-level)
QoS Levels	QoS 0 (fire-and-forget), QoS 1 (at-least-once), QoS 2 (exactly-once)
Payload Formats	JSON, binary, plain text; payload inspector with hex view
Message Logging	Real-time log viewer with topic filter, timestamp, and payload export
Retained Messages	Full retained message support with broker-side persistence
Last Will & Testament	LWT configuration per client connection
Deployment	Single standalone EXE — Windows 10/11, Ubuntu 20.04+
License	Commercial — Free Trial Available

Common Use Cases

- Validate edge device MQTT firmware before cloud deployment
- Simulate MQTT broker for CI/CD pipeline integration tests
- Monitor and debug MQTT traffic between IIoT sensors and gateways
- Test QoS level behaviour and message retention during network interruptions
- Develop and test IoT dashboards without requiring cloud broker accounts

★ WHY CHOOSE THIS?

One EXE does it all — broker + client + logging. No cloud account, no Docker, no Mosquitto config files. Runs entirely offline for secure industrial networks.

👤 TARGET AUDIENCE

IoT Developers, System Integrators, Cloud Architects, Embedded Engineers, QA Teams

Standalone OPC UA Client for Real-Time Industrial Data Browsing & Logging

A feature-rich desktop and headless OPC UA client for connecting to any OPC UA-compliant server. Enables real-time tag browsing, data subscription, historical data access (HDA), and direct logging to SQL databases — the ideal companion for commissioning, diagnostics, and ongoing monitoring of industrial automation systems.

Specification	Details
OPC UA Services	DA (Data Access), HDA (Historical Access), Alarms & Conditions (A&C)
Security Modes	None, Sign, Sign & Encrypt — Basic128Rsa15, Basic256Sha256
Authentication	Anonymous, Username/Password, X.509 Certificate
Subscription Support	Monitored items with configurable sampling intervals (10ms–60s)
Node Browsing	Full server address space tree browser with search and filter
Data Logging	Direct export to PostgreSQL, MS SQL Server, TimescaleDB, CSV
HDA Support	Read historical values with time-range queries and aggregation
Batch Read/Write	Multi-node read/write in a single request for performance
Alarms & Events	Real-time A&C subscription with severity filtering and acknowledgement
Dashboard View	Live tag dashboard with trend charts and min/max tracking
CLI / Headless Mode	Full feature parity via command-line — ideal for scripting & automation
License	Commercial — Free Evaluation Available

Common Use Cases

- Commission and validate PLC / DCS systems during factory acceptance testing
- Monitor live OPC UA tags from SCADA systems, PLCs, and IoT gateways
- Log historical process data to SQL for analytics and reporting
- Diagnose OPC UA server connectivity and certificate issues
- Automate data collection via CLI mode in headless server environments

★ WHY CHOOSE THIS?

One client for browsing, subscribing, logging, and historical access — replaces multiple legacy OPC DA/HDA tools with a single modern, secure solution.

🎯 TARGET AUDIENCE

Commissioning Engineers, System Integrators, OPC UA Developers, Plant Operators, SCADA/MES Teams

High-Fidelity OPC UA Server Simulator for Industrial Testing & Integration

A production-grade OPC UA server simulator designed for testing, integration, and staging of industrial automation systems. Allows engineers to simulate complex OPC UA node hierarchies, variable types, and real-time data changes without needing physical PLC hardware — accelerating development cycles and significantly reducing testing costs.

Specification	Details
OPC UA Specification	OPC UA Part 4 (Services) — UA 1.04 compliant
Node Simulation	1,000+ simultaneous variable nodes from a single JSON config
Data Types	Boolean, Int16/32/64, Float, Double, String, DateTime, ByteString
Security Policies	None, Basic128Rsa15, Basic256, Basic256Sha256
Authentication	Anonymous, Username/Password, X.509 Certificate
Namespace Support	Multiple custom namespaces with hierarchical node trees
Simulation Modes	Configurable sine wave, ramp, random, step, and static value modes
Data Change Rate	Configurable publish interval from 10ms to 60s per node group
Node Configuration	JSON-based node definition — no code required, hot-reload supported
Alarm Simulation	Configurable threshold-based alarm generation for testing A&C clients
Deployment	Windows, Linux, Docker — single standalone binary
License	Commercial — Free Trial Available

Common Use Cases

- Test OPC UA client applications without physical PLC hardware in the lab
- Simulate plant-floor data for SCADA/MES integration testing and UAT
- Validate OPC UA security policies and certificate configurations
- Stress-test OPC UA client subscription handling with 1,000+ nodes
- Demonstrate OPC UA-based systems to stakeholders in a controlled environment

★ WHY CHOOSE THIS?

Simulate an entire OPC UA server with 1,000+ nodes from a single JSON config — no PLC hardware, no network access, no licensing per node.

🎯 TARGET AUDIENCE

Automation Engineers, OPC UA Integrators, SCADA/MES Developers, QA Teams, System Architects

Enterprise-Grade Modbus RTU/TCP Simulator & SQL Data Collector

A high-performance, cross-platform solution for seamless data acquisition from Modbus-enabled industrial devices.

Engineered for Industry 4.0 with native database integration, container support, and a Go-based concurrent engine capable of handling 1,000+ simultaneous node connections across multiple Modbus devices and registers.

Specification	Details
Protocol Support	Modbus TCP, Modbus RTU over TCP, Modbus ASCII
Data Destination	PostgreSQL, TimescaleDB, MS SQL Server — configurable per collector
Concurrency Engine	Go-based backend — 1,000+ simultaneous node connections
Register Mapping	Dynamic coil/register mapping via JSON or CSV import — hot-reload
Input Types	Coils (0x), Discrete Inputs (1x), Input Registers (3x), Holding Registers (4x)
Data Types	16-bit, 32-bit INT/UINT/FLOAT with configurable byte order (ABCD/CDAB)
Polling Interval	Configurable per register group: 100ms minimum polling cycle
Max Connections	50+ simultaneous device connections (hardware-configurable)
Platform Support	Windows 10/11, Ubuntu 18.04+, Raspberry Pi 4, Docker
Deployment	Native binary, Docker container, systemd service, Windows Service
Security	TLS encryption for Modbus TCP tunnelling over untrusted networks
License	Commercial — Free Trial Available

Common Use Cases

- Collect process data from PLCs, drives, and meters into SQL for analytics
- Log energy consumption data from Modbus energy meters to TimescaleDB
- Build Industry 4.0 data pipelines from legacy Modbus equipment to cloud
- Simulate Modbus device behaviour for SCADA system integration testing
- Replace expensive proprietary data historians with an open, SQL-based solution

<p>★ WHY CHOOSE THIS? Industry 4.0 native — not a legacy port. Built from scratch in Go for cloud-ready, containerised industrial deployments with native SQL time-series support.</p>	<p>🎯 TARGET AUDIENCE Automation Engineers, System Integrators, SCADA Developers, Data Engineers, Industrial IoT Architects</p>
--	--

Ready to Get Started?

Free trials available for all PasIQ products. No credit card required.

Email

connect@navitechnology.in

Phone

+91 94833 84542

Website

navitechnology.in