

FACILITY-PRO

(Neutron IBMS Software)



Introduction:

The cutting-edge Integrated Building Management System that is transforming the way buildings are managed. With Neutron's facility-pro seamless integration of popular protocols including SNMP, BACnet, MQTT, Modbus, OPC-UA, and Kafka, you can achieve unparalleled efficiency, sustainability, and performance in your Building Operations.

Key Features:

Centralized Web Dashboard

- Unified interface to monitor multiple buildings and systems (HVAC, lighting, power, water, etc.).
- Accessible from any device (PC, tablet, or mobile) via a secure web browser.
- Real-time data visualization through charts, gauges, and maps.

Real-Time Monitoring & Control

- Live monitoring of equipment parameters (temperature, humidity, voltage, current, etc.).
- Remote operation of systems — turn ON/OFF equipment, change setpoints, or adjust schedules.
- Alarm and fault notifications in real time.

Alarm & Event Management

- Configurable alarm thresholds and priorities.
- Event logging with timestamps and user actions.
- Email/SMS/Push notifications for critical alerts.
- Alarm acknowledgment and reporting for compliance.

Energy Management & Analytics

- Automatic energy data collection from meters (electricity, water, gas, BTU).

- Energy consumption dashboards and benchmarking between sites or buildings.
- Load profiling, peak demand alerts, and energy efficiency analytics.

Historical Data Storage & Trend Analysis

- Continuous data logging from sensors and controllers.
- Trend charts for temperature, power, occupancy, etc.
- Data export to Excel, CSV, or PDF for reporting and analysis.

Equipment Scheduling & Automation

- Time-based or condition-based scheduling of systems (HVAC, lighting, pumps).
- Logic-based control through graphical or script-based automation.
- Holiday and special-event overrides.

Multi-Protocol & IoT Integration

- Supports BACnet, Modbus, MQTT, OPC-UA, and REST API for interoperability.
- Integration with third-party systems like Fire Alarm, Access Control, CCTV, etc.
- IoT-based sensor integration for smart building automation.

User Management & Security

- Role-based access control (Admin, Operator, Viewer, etc.).
- Secure HTTPS communication and authentication (OAuth2/LDAP).
- Detailed audit trail for user activities.

Reporting & Dashboards

- Auto-generated reports for energy, alarms, maintenance, and performance.
- Custom dashboard creation for different user roles (facility manager, technician, management).
- Graphical representation of KPI and SLAs.

Predictive Maintenance & Asset Management

- Monitors equipment health based on performance trends.
- Alerts for preventive maintenance schedules.
- Maintenance ticketing or integration with CMMS systems.

Scalability & Multi-Site Management

- Manage multiple sites from a single cloud/web platform.
- Hierarchical view (Region → Site → Building → Floor → Equipment).
- Supports expansion without major infrastructure changes.

Mobile-Friendly Interface

- Responsive design for smartphones and tablets.
- Mobile app or web PWA for remote access, alarm acknowledgment, and reports.

Key Applications:

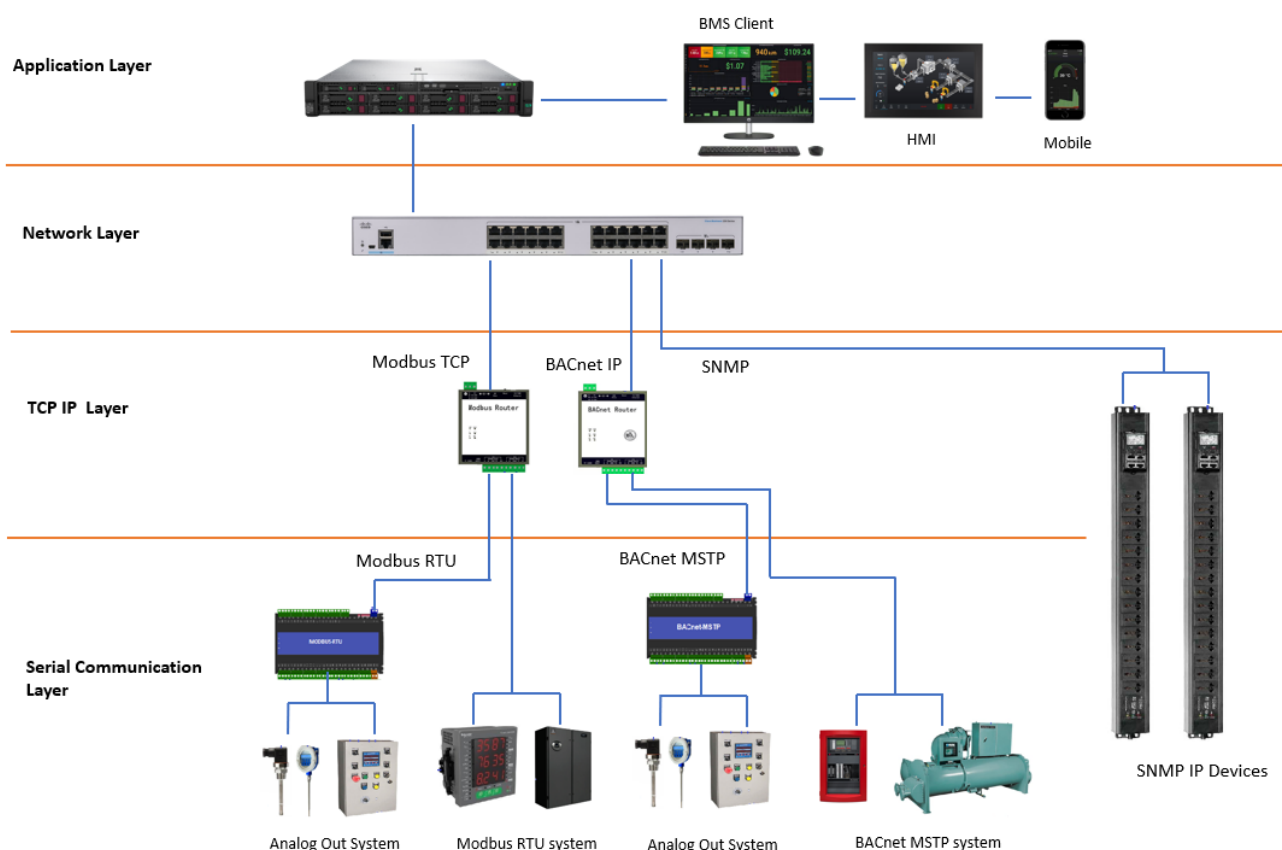
Utility wise Applications:

- HVAC Management
- Energy Management
- Environment Management
- Lighting Management
- Water Management
- Asset Management
- Fire Safety Management
- Access Management

Applications in Business:

- Commercial Buildings
- Transport – Metro, Airport, railways, Bus-hub, etc.
- Power Generation and Distribution plant
- Water reservoir & treatment
- Pharma & Laboratories
- Healthcare and Clean Room

System Architecture:



Supported Communication protocols:

- Modbus, BACnet, MQTT, SNMP, HTTP, CAN, M-BUS etc.

Platform requirement:**1. Server:**

- Up to 1000 Points:
Desktop PC or server -Ryzen 7/ i7, 16GB RAM,512GB NVME SSD
- Above 1000 Points:
Server – Min Spec. Intel® Xeon 2.0 G, 12C/24T, 110.4GT/s, 18M Cache, 32GB RAM, 1TB SSD

2. Operating System:

- Linux - Ubuntu server or desktop 22.04 LTS

3. Virtual Machine:

- VMWare ESXI 6.7

4. Database:

- Influx, MySQL

5. Web-Browser:

- Google Chrome, Firefox, Microsoft Edge
- Mobile Browser: Safari on IOS, Chrome on Android

6. Display:

- Video card and monitor capable of displaying 1024 x 768-pixel resolution or greater

7. Network Card:

- Ethernet adapter (10/100 Mb with RJ-45 connector)

8. Connectivity:

- Full-time high-speed ISP connection recommended for remote sites.

Software Licensing:

Neutron Provides a Perpetual license on the name of End-user which includes 10-year support for version upgradation and Chargeable service support.

Enjoy peace of mind with our dedicated customer support team ready to assist you round the clock.