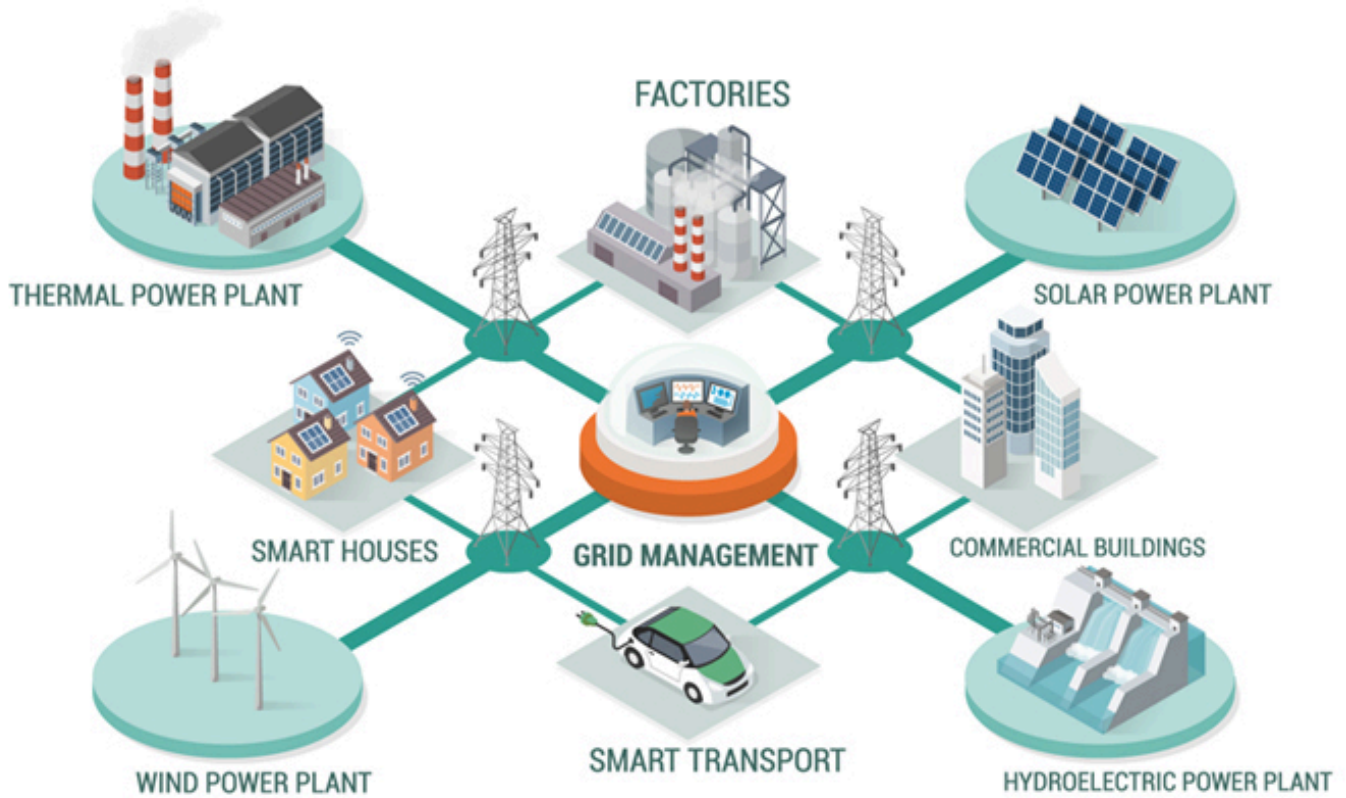


Electrical Infrastructure Automation

SCADA | SAS | Gateways



Our Products



RsS SCADA



Protocol Simulator



RsS ICx Gateway



Source Code Libraries



CRP

RBH Solutions : Your Technology Partner



Interoperable



Cyber Secure



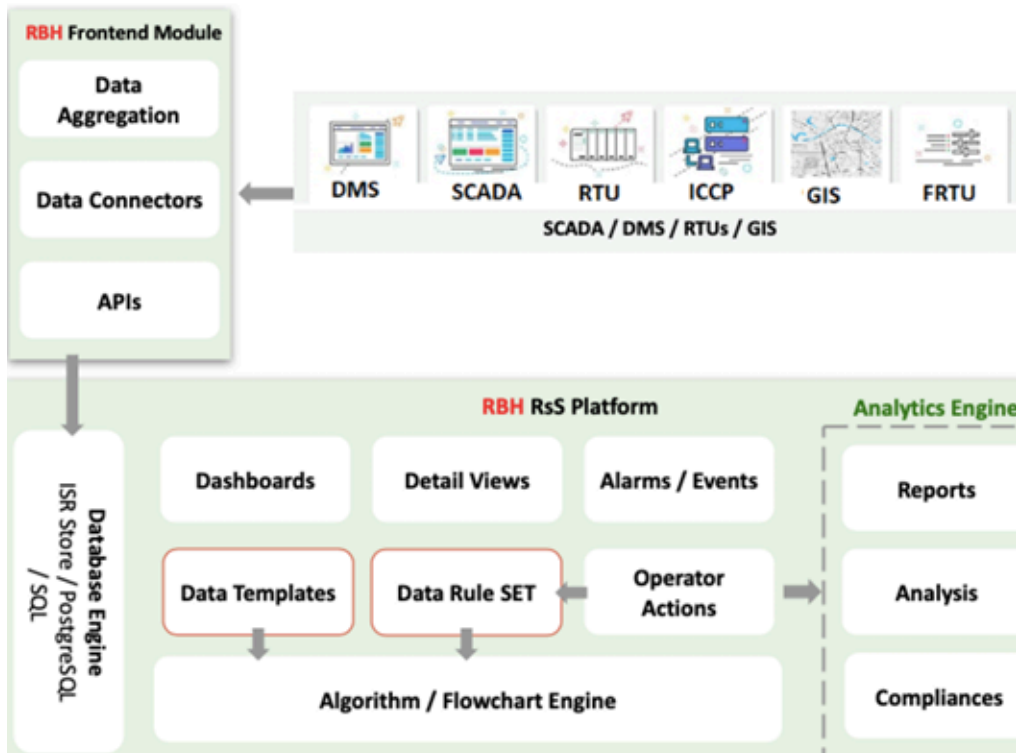
**OEM Inhouse
Development**



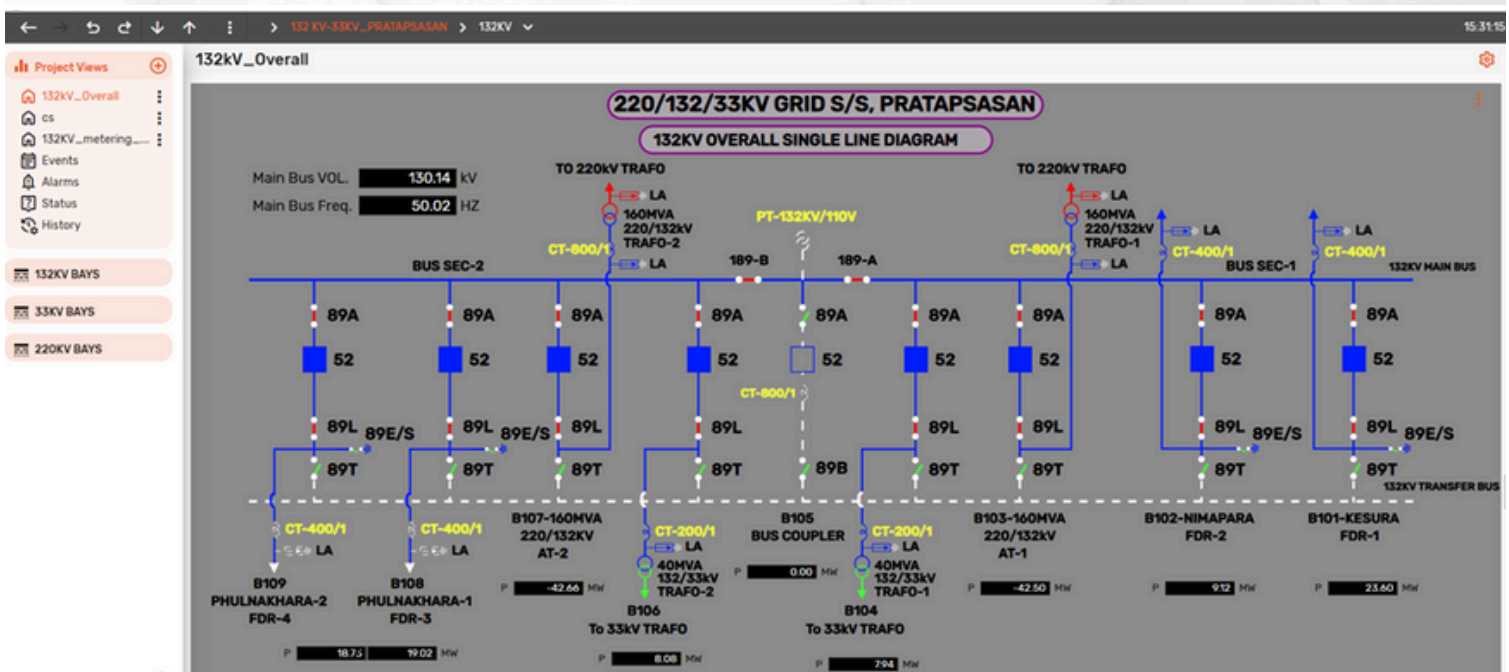
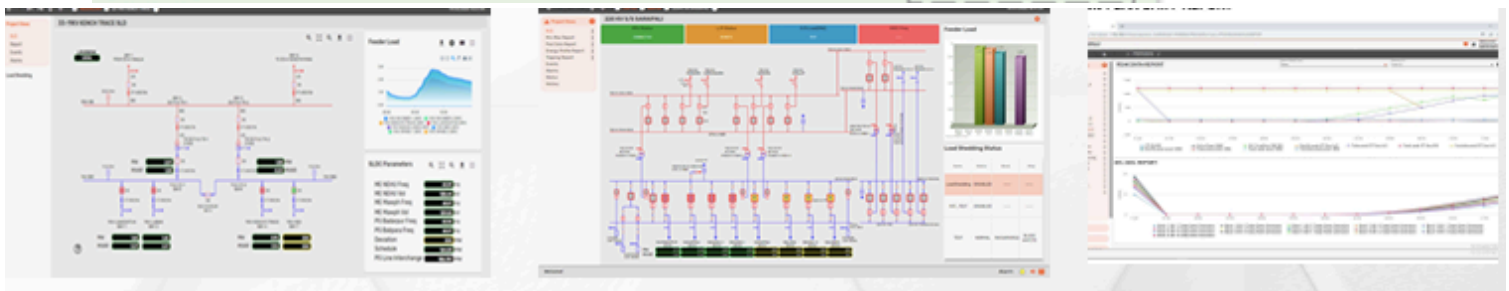
Electrical SCADA and Asset Management Platform

Smart Grids: Digitization | Monitoring | Control | Analytics

RsS SCADA Framework



- ❖ OS Independent
- ❖ Multi Protocol
- ❖ Multi Layer Redundancy
- ❖ Full Featured Algorithm Engine
- ❖ Complete Analytics Platform



Renewable

Automation Products & Solutions

Solar SCADA and PPC:

Integration with Power Plant Controllers (PPC) for seamless solar power management, including real-time performance monitoring and optimization; working experience with various EPC players like Tata Power and MNCs like Siemens, Hitachi etc.

Wind Turbine Energy Farm Management:

Advanced SCADA Solutions for monitoring, controlling and optimizing wind farm operations; already working with various OEM and O&M Companies.

SLDC Telemetry Integration:

Realtime and stable data communications with State Load Dispatch Centers (SLDC) for enhanced grid stability and compliance; working with various state SLDCs.

Hydro Power SCADA:

Tailored SCADA Solutions for efficient hydro power plant operations and resource management.

Water Plant Management Solutions

Sewage Treatment Plants (STP) :

Advanced SCADA Solutions for real-time monitoring and optimization of sewage treatment processes.

Water Treatment Plants(WTP) :

Reliable automation solutions to ensure efficient water purification and distribution systems.

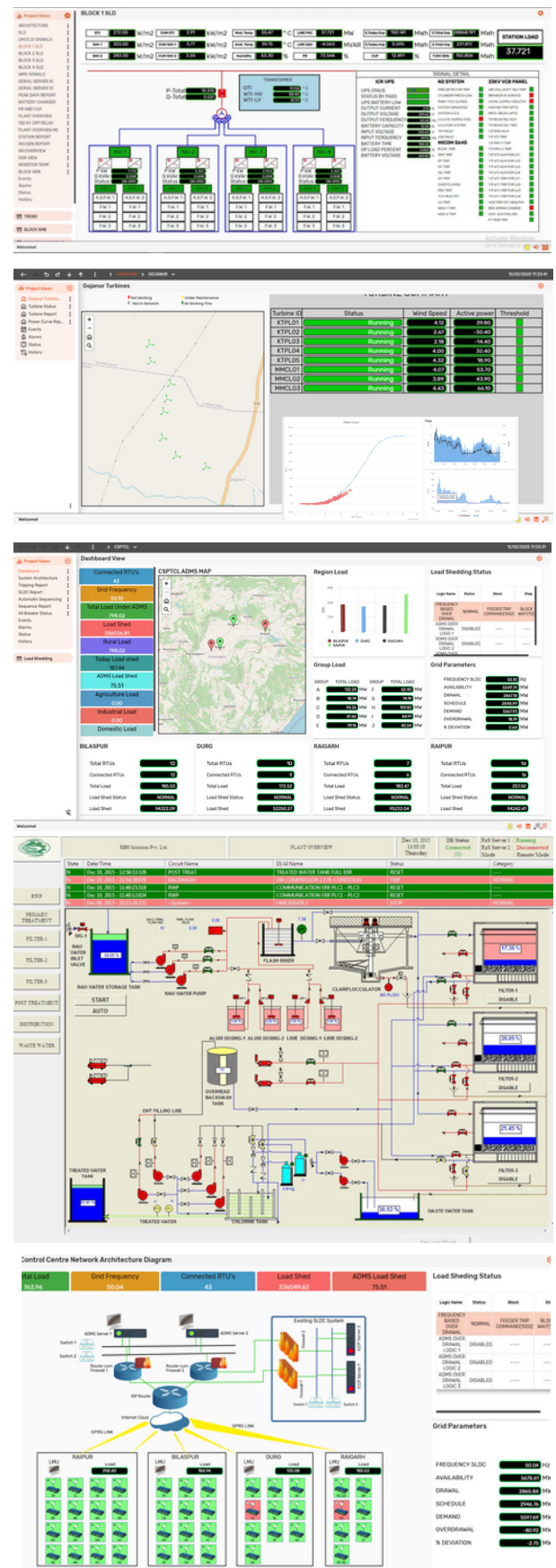
Key Implementations

Substation Automation System
Electrical SCADA
Central SCADA: STAMS & RDSS
Renewable SCADA, Telemetry
Cloud Energy Management Solutions for Wind Turbines
SAS / SCADA Upgradations
Automatic Demand Management System

Seamless Monitoring & Control | Optimized Performance | Smart Data Analytics | Reliable Grid Integration

Whether it's solar, wind, or hybrid plants, our cutting-edge solutions are designed to elevate operational efficiency, ensure grid compliance, and contribute to a greener, more sustainable future.

Looking to take your renewable energy project to the next level with next-gen SCADA & PPC technology. Let's connect and explore how we can collaborate for a brighter tomorrow!





RsS SCADA



Protocol Simulator



RsS ICx Gateway



Source Code Libraries



CRP

OUR CLIENTS



IndianOil



HARTEK®
Making Your Future Powerful™



ALSTOM

SIEMENS

Schneider Electric



SEL

Hitachi Energy



Honeywell



Rockwell Automation

Atos

ABB



NERPC



etap®



- OEM & Turnkey Projects
- Easy Customization & Fastest Delivery
- System Integration & After Sales Support



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RsS SCADA

RsS ICx Gateway

RsS ICx RTU

Protocol Analyzer (RPA)

RBH CRP

RBH PRODUCTS ARE DESIGNED IN COMPLIANCE WITH CYBER SECURITY NORMS

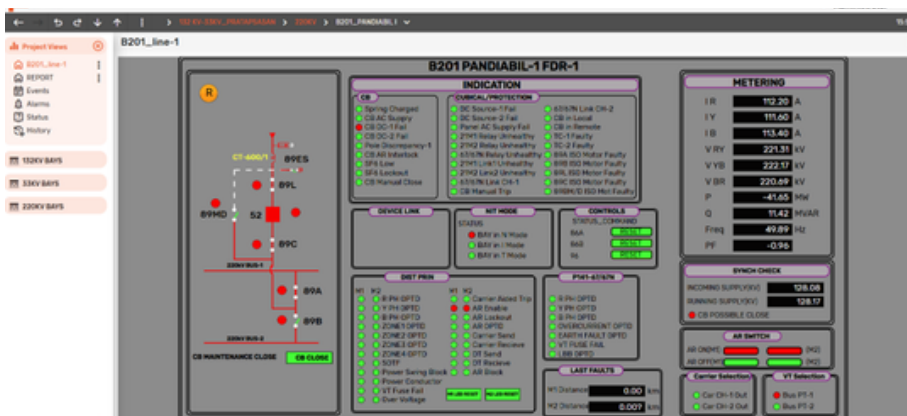


ELECTRICAL SCADA

SAS | RDSS | STAMS | LV SCADA

RsS SCADA is a Vendor Agnostic Platform that can interface with any BCU / IEDs / Metering Solution / Control Center over IEC 60870-5-101 / 104, IEC 61850, MODBUS, DLMS, IEC, DNP3, MQTT, etc.

SCADA Systems <ul style="list-style-type: none"> Substation Automation Centralized Monitoring System Automatic Demand Management System Historian System: Time Series DB 	Renewable Solutions <ul style="list-style-type: none"> Asset Management: Operations, Maintenance and Analytics Energy Monitoring Systems Plant Performance and Optimization Integrated Plant SCADA Electrical SCADA Telemetry Solutions
Gateway Systems <ul style="list-style-type: none"> Gateway / Data Concentrator M2M / Remote Devices Connectivity over VPN Metering Headend / Data Concentrators IEC / MODBUS / DLMS / OPC / IEC / DNP3 / MQTT 	Projects & Solutions <ul style="list-style-type: none"> Trunking Automation Projects Protocols Source Code Libraries Protocol Simulators SCADA / SAS Upgradation Projects



- > 650+ SCADA Projects
- > 6000+ Gateway Supplied
- > References upto 765 kV Substation
- > Upto 2M Tags Supported
- > Upto 100K Devices Connection Supported



Revolutionizing Electrical SCADA with RsS Platform

Seamless Integration & Advanced Automation

RsS SCADA Platform is an intelligent Substation Automation System (SAS) that seamlessly interfaces with multiple protocols, including IEC 60870-5-101/104, IEC 61850, MODBUS, DLMS, ICCP, and DNP3. Ensuring secure, efficient, reliable and scalable electrical platform suitable for any Transmission and Distribution deployment.

Key Features:

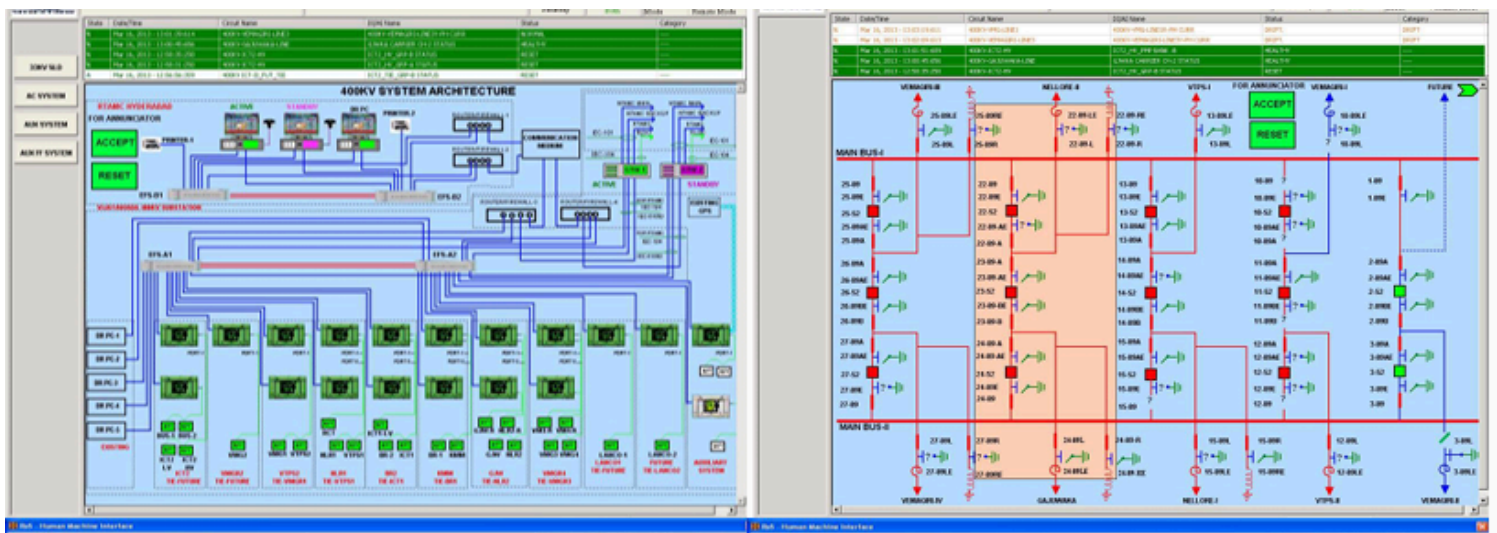
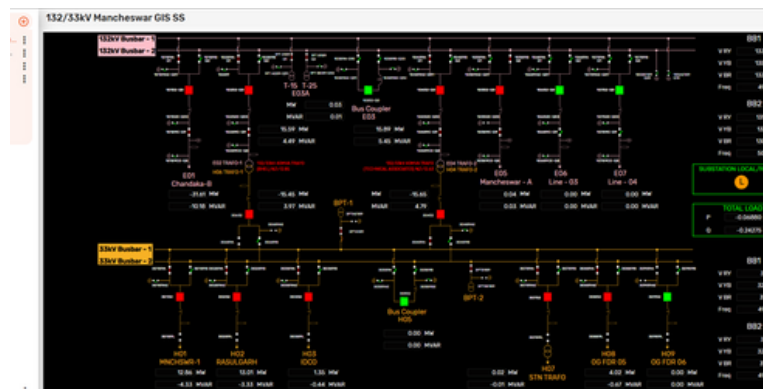
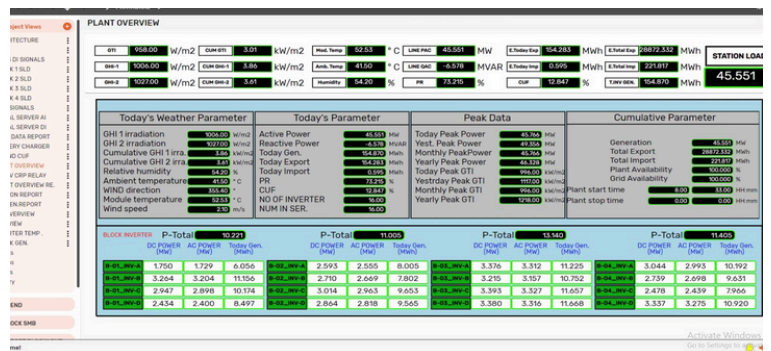
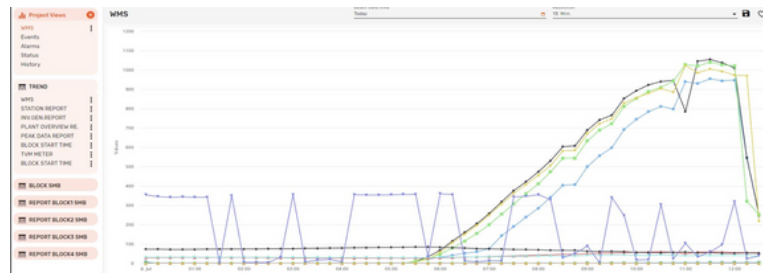
Multi-Protocol Support – Ensures compatibility with various devices of any make, supporting varied standards.

Real-Time Monitoring – Gain complete visibility into your power distribution.

Cloud-Enabled SCADA – Remote access with high-level security and reliability.

Scalable Architecture – Supports up to 765KV and 100K devices in a single network.

AI-Driven Predictive Maintenance – Minimize downtime and optimize performance.



SUBSTATION AUTOMATION

Key Features & Benefits:

IEC 61850-Compliant – Ensuring seamless interoperability between devices.

Monitoring & Control – Real-time data visualization for informed decision-making.

AI-Powered Fault Detection – Reduces downtime with predictive maintenance.

Cybersecure Infrastructure – Advanced protection against digital threats.

Gateway Solutions – Multi Vendor - Multi Protocol Integration. SLDC Integration

Transforming Power Management with Advanced Automation

RSS Substation Automation System (SAS) integrates cutting-edge technology to optimize the efficiency, security and reliability of power distribution networks.



Why Choose RsS Substation Automation?

Increased Efficiency – Automated switching and fault management.

Cost Optimization – Lower operational expenses with predictive analytics.

Scalable Architecture – Supports various voltage levels up to 765KV.

Seamless Grid Integration – Smart communication between substations and central control rooms.

Key Implementations

Substation Automation System

Electrical SCADA

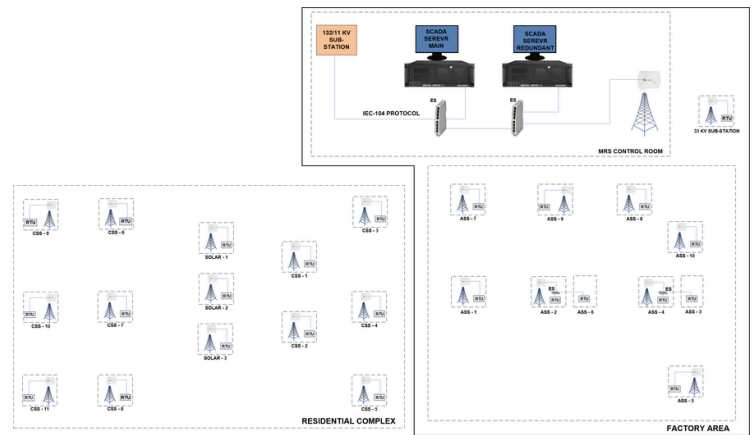
Central SCADA: STAMS & RDSS

Renewable SCADA, Telemetry

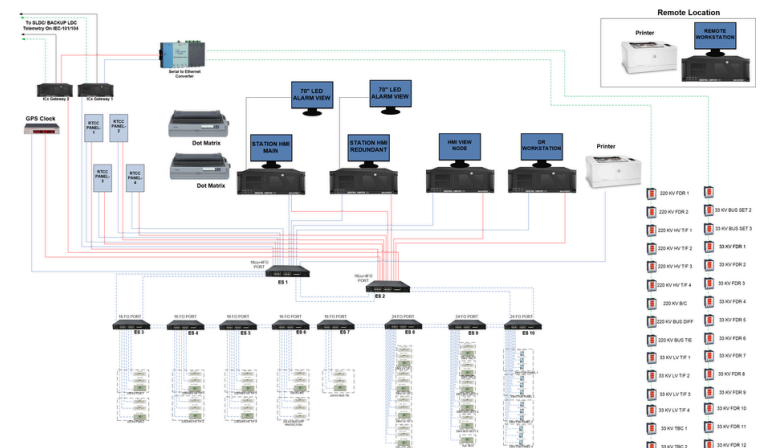
Cloud Energy Management Solutions for Wind Turbines

SAS / SCADA Upgradations

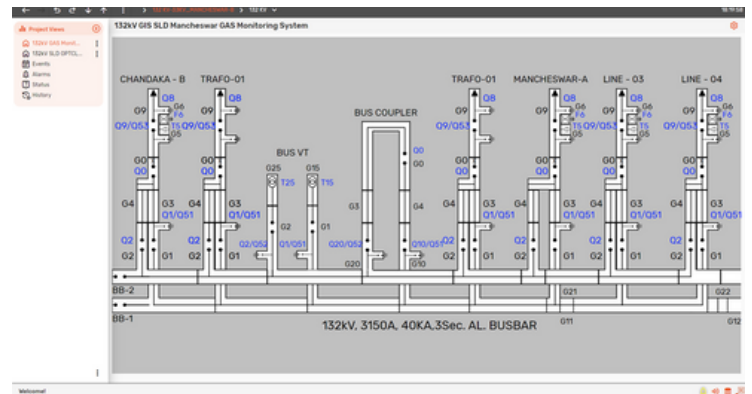
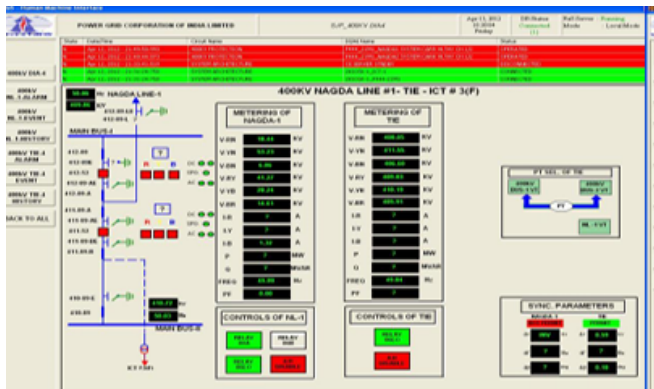
Automatic Demand Management System



RF Based Substation Automation System



Redundant Substation Automation System



GIS SLD

- OEM & Turnkey Projects
- Easy Customization & Fastest Delivery
- System Integration & After Sales Support



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RsS ICx Gateway

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Protocol Analyzer (RPA)

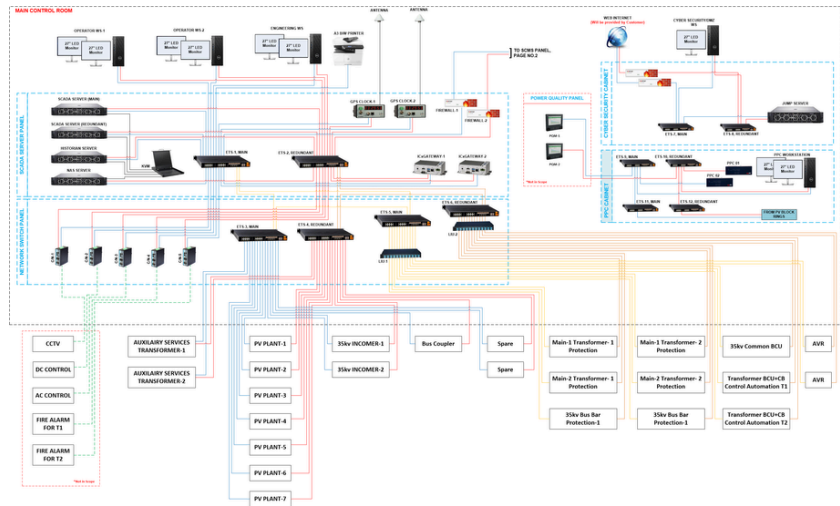
RBH CRP

SOLAR SCADA

Harness the Sun with Smart Solar SCADA by RBH RsS Platform

Optimize Your Solar Power with Intelligent Monitoring, Control and Analytics

RsS Solar SCADA provides a comprehensive solution for monitoring and controlling solar power systems, ensuring maximum efficiency and reliability.



Key Features & Benefits:

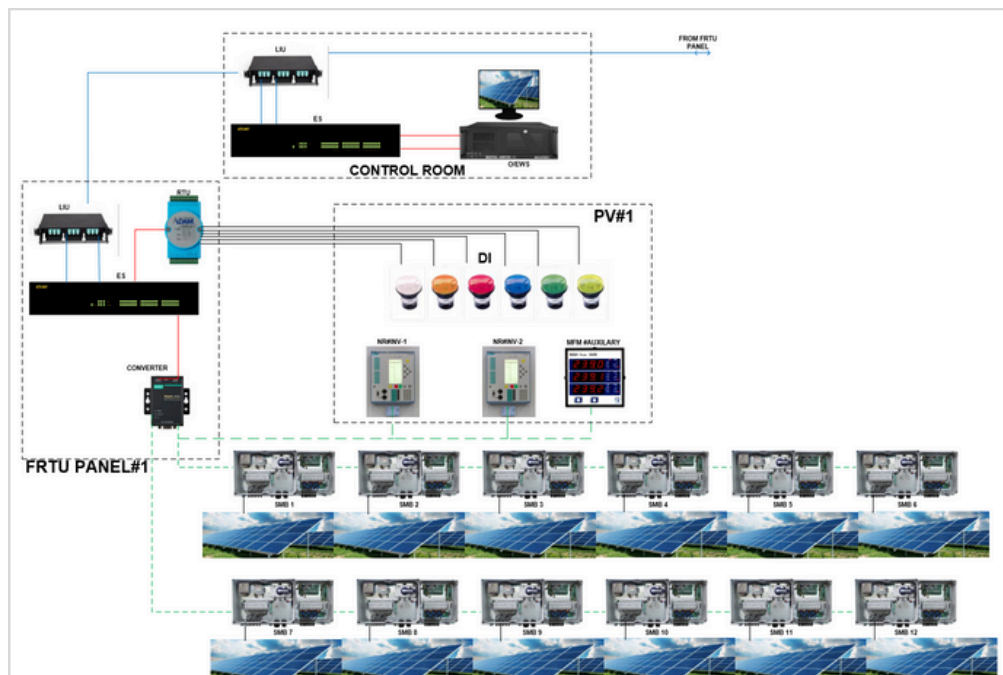
Real-Time Monitoring – Track energy generation, consumption, and system performance.

Fault Detection & Alerts – Instantly identify issues and reduce downtime.

Advanced Analytics – Gain insights with data visualization and predictive analytics.

Secure Cloud Access – Monitor your solar assets from anywhere, anytime.

Seamless Integration – Compatible with inverters, weather stations and energy meters.



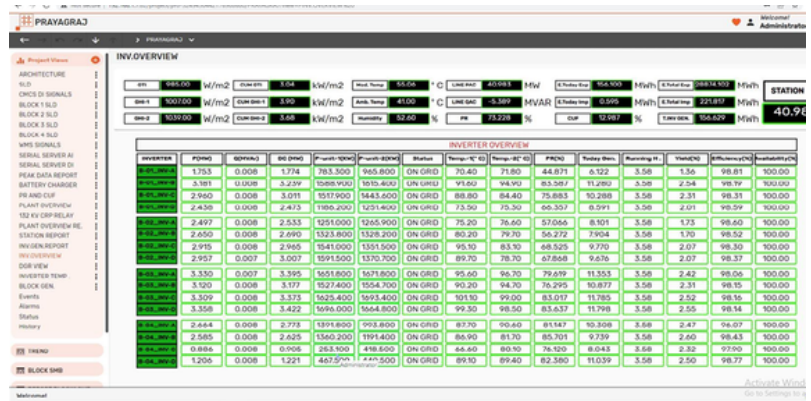
Why Choose RsS Solar SCADA?

Increased Energy Yield – Optimize performance with data-driven insights.

Reduced Operational Costs – Automate maintenance and fault management.

Environmental Impact – Lower your carbon footprint with green energy.

Scalability – From rooftop solar to large solar farms, we support all scales.



PPC in Solar SCADA

Power Plant Control (PPC) in Solar SCADA System is a crucial component that ensures the efficient operation of solar power plants. It integrates the control of various subsystems, including inverters, battery storage, and grid connections, to monitor and optimize energy production in real-time.



Whether it's solar, wind or hybrid plants, our cutting-edge solutions are designed to elevate operational efficiency, ensure grid compliance and contribute to a greener, more sustainable future.

Looking to take your renewable energy project to the next level with next-gen RsS SCADA & PPC technology. Let's connect and explore how we can collaborate for a brighter tomorrow!



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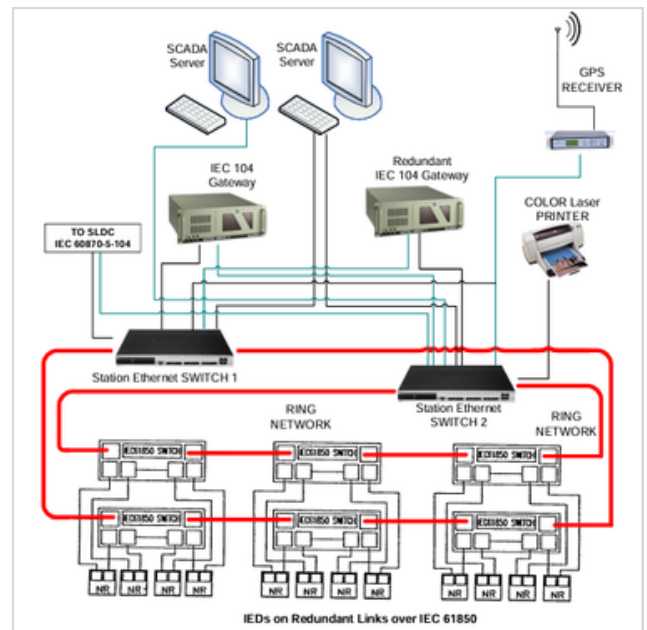
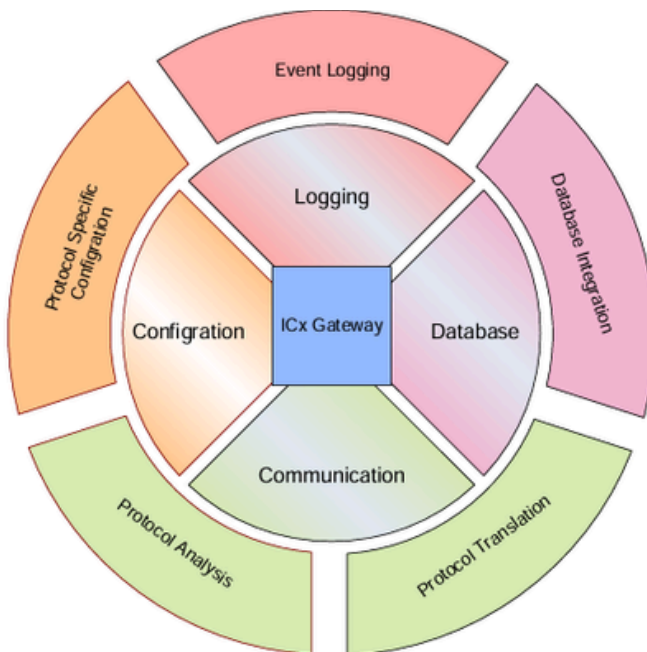


RsS ICx Gateway Platform

Solutions for SCADA communications and protocol translation

RsS ICx Series Gateway is flexible and most advanced solution for information sharing among diverse control systems using different communication standards / protocols. RsS ICx provides fast and economical solutions by utilising the existing infrastructure in the most efficient way. Gateway design helps eliminate the inconvenience typically encountered while bringing the diverse systems online and communicating among non-supporting systems.

RsS ICx Gateway Modules



Sample Implementation

- **Substation Gateway:** RsS ICx can communicate with SCADA System / remote devices (RTU / PLC / Transformers / IEDs) and transfer the data to Remote Control Centers.
- **Automatic / Remote Metering Device:** RsS ICx can read data from meters and communicate this data to AMR Applications.
- **IED Data Concentrator:** RsS ICx can communicate with Multiple IEDs and extends the full control for the Master Station over single interface for all the IEDs.

Configuration, Database & Maintenance

Configurator: RsS ICx Gateways comes bundled with WINDOWS based Configuration Tool that allows easy data points (tags) configuration and mapping yet allowing full control over the application and protocol. RsS ICx allows direct integration of MS Excel sheet, enabling faster and user-friendly parameter configuration (basic as well as advanced). All protocol mappings and communication related parameters are comprehensively covered in Excel Sheets thus allowing complete and easy management of data points.

Database Management: When Excel Datasheets are imported into RsS ICx Gateway, new Database is created. RsS ICx allows versioning (with user comments) of the Database and user can switch to any version of the database as per requirements.

Maintenance: RsS ICx Gateways has inbuilt Maintenance and Diagnosis Capabilities. It includes:

- Protocol Analyzer: Featuring protocol packet capturing & analysis, and Error Logging
- Gateway Start / Stop
- Database Management: Database Downloading and Switching

KEY Gateway Features

Implementation:

- Protocol Converter
- Data Concentrator
- Pass-through Configuration (Transparent Device)
- Protocol Analyzer / Monitoring

Redundancy:

- Device Redundancy: RsS ICx gateway devices can be configured for redundancy allowing seamless switchover from one device to another without effecting the communication.
- Link Redundancy: Over a single RsS ICx gateway, communication links (Serial / Ethernet) can be configured for redundancy, eliminating single point of failure.

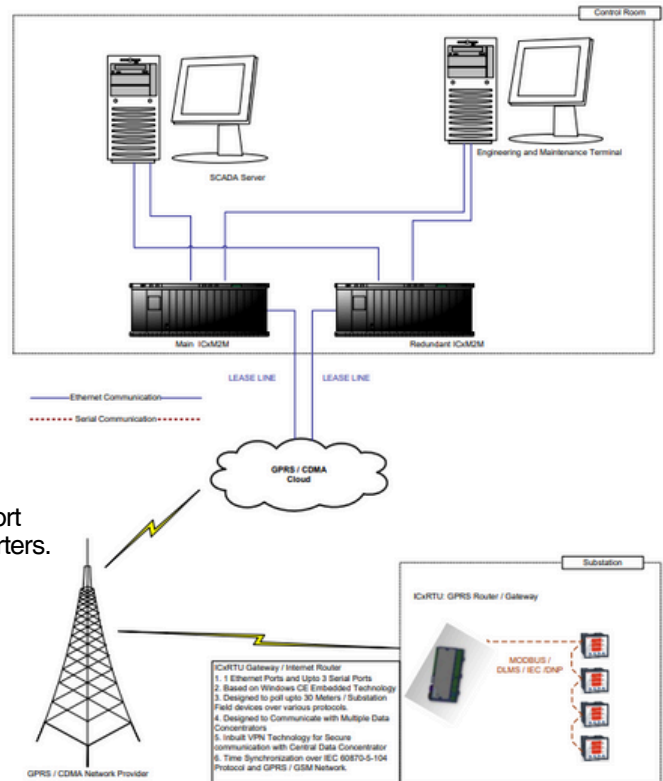
Interfaces

- Full compatibility with Industrial standard Interface.
- Supported media types are:
- Serial Interface (RS 232, RS 422, RS 485): 30 Devices per Port
- Direct Support for Serial to Ethernet Terminal Devices Converters.
- Ethernet/LAN (TCP/IP): 100 Devices per LAN Port
- Fiber Interface though Add-on Module
- Clients: Upto 5 Master / Clients per protocol supported.

The RsS ICx Gateway supports the following Protocols:

- IEC 60870-5-101 Master/Slave
- IEC 60870-5-103 Master/Slave
- IEC 60870-5-104 Client/Server
- IEC 61850 Client/Server
- ICCP Client / Server / Bi-Directional
- SINAUT Master
- DNP3 Serial Master/Slave & DNP3 Network Master/Slave
- MODBUS RTU Serial Master/Slave & TCP Master/Slave
- Ethernet I/P
- Profibus DP Master/Slave
- BACnet Master / Slave
- DLMS Master/Slave
- OPC DA & AE Client / Server
- CDC Slave
- OPC UA Client / Server
- MQTT
- Rest APIs

Custom Protocol Support: All protocols supported are developed and maintained indigenously. RBH has experienced team and expert domain knowledge to successfully develop and deploy any customer specific protocols.



RPA 2004 : Including 61850 Edition

A Real-time Protocol Analyzer : accurate analysis, better decisions, faster results

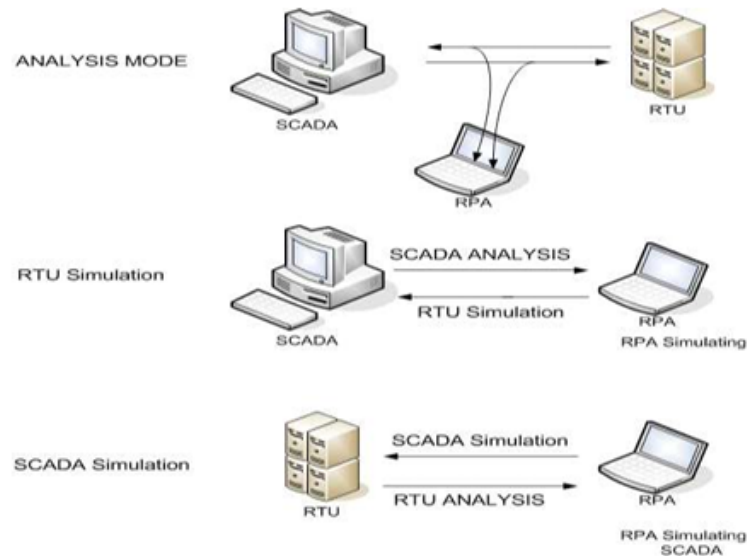
RPA 2004 is a state-of-the-art solution designed for reliable & precise SCADA protocol analysis and simulation. Designed for Electrical Professionals as users, RPA does not require specific Protocol Knowledge. RPA is developed using latest technologies, which helps to integrate SCADA/DCS database into analyzer resulting in faster analysis. RPA 2004 is a full-featured protocol test unit that provides the user with a powerful and flexible tool for testing and monitoring of SCADA system (including SCADA Master and SCADA RTUs/IEDs). Advanced features like integration with MS Excel for Reports Generation and refined Graphical User Interface (specifically designed considering Electrical professionals as users) allows faster and accurate diagnosing of communication problems. RPA is available in two variations:

✓ **RPA 2004 Professional:** Rightly featured analysis and simulation covering all protocol related activities. This variation is developed for End Users, Utilities and Onsite Testing Activities
Three modes of operating are supported by RPA.

✓ **Monitor Mode:** In this mode RPA monitor the communication between SCADA and other end device. Interpreted message is displayed for both.

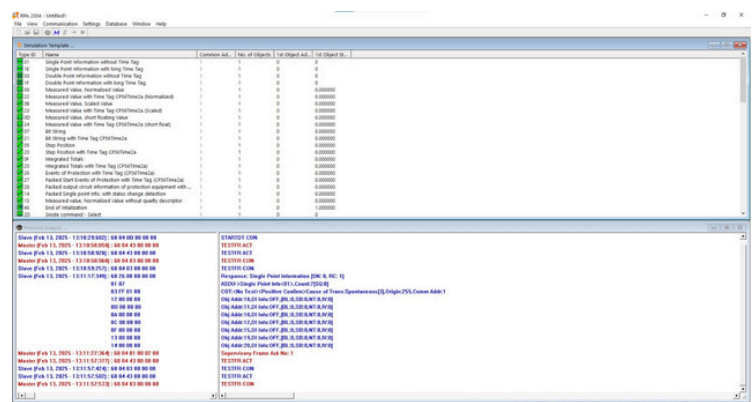
✓ **RTU Simulation Mode:** This allows RPA to act as RTU for Master SCADA Station. Convenient user database mapped set-up menus allow the user to specify points to Simulate. Similar SCADA like displays, with possibility to define sequence of points to be simulated in order to make simulation representing real world scenario.

✓ **SCADA Simulation Mode:** This allows RPA to act as SCADA for testing the RTUs, Gateways and other remote end systems. Easy to configure simulation templates and possibility to define the sequence of simulation are key features of this mode.



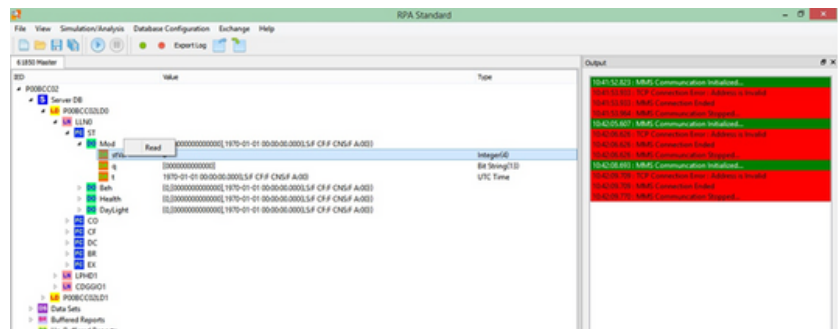
RPA 2004: Protocol Support

Protocol	SCADA Mode	RTU Mode	Analysis Mode
IEC 60870 – 5 -101	•	•	•
IEC 60870 – 5 -103	•	•	•
IEC 60870 – 5 -104	•	•	•
MODBUS RTU	•	•	•
MODBUS ASCII	•	•	•
MODBUS TCP	•	•	•
DNP 3	•	•	•
IEC 61850	•	•	•
HNZ (Under Development)	•	•	•
Profibus DP (Under Development)	•	•	•



RPA 2004: Product Features

- ✓ Full featured Protocol Simulation and Analysis.
- ✓ Full Compatibility with Industry standard Protocols
- ✓ Simulation of Multiple SCADA/ RTUs/IEDs
- ✓ History Logging.
 - » Database Mapped Analyzed Data with Time Stamping
 - » Protocol Mapped Analyzed Data with Time Stamping
 - » RAW Data with Time Stamping
 - » All communication and protocol related communication errors with time stamping
- ✓ Status Indication Showing Success and Failure of Messages.
- ✓ Reporting is the one of the highlights of RPA. Supports direct report generation in Microsoft® EXCEL® showing:
 - » Time Tagged Raw Data
 - » Time Tagged Protocol Analyzed Data
 - » Time Tagged Raw Data Databased Mapped Data
 - » Failure Analysis Reports
- ✓ Full integration of SCADA/RTU Data Base, helping in faster and accurate simulation and analysis. Supported File Formats for Database imports
 - » TEXT
 - » EXCEL / WORD
 - » BINARY / XML
- ✓ RPA records all the protocol related statistics that facilitates continuous monitoring. Following counters are provided:
 - » Total Message Sent / Received
 - » Parity Errors
 - » Framing Errors
 - » Protocol Errors



Features	RPA 2004 Professional
Simulation Type	
• Monitor Mode	•
• RTU Mode	•
• SCADA Simulation Mode	•
• Multiple SCADA/RTU's/IED's	•
Report Archiving	
• Logging with Time stamping	•
• Fault analysis report	•
Report Format	
• EXCEL	•
Main Displays	
• Raw data	•
• Protocol Interpretation	•
• Database Interpretation	•
• Parameter setup	•
• Database Import	•
• Simulation setup	•
Error Reporting	
• No. of Master/Slave Messages	•
• No. of Master/Slave Correct Messages	•
• No. of Master/Slave Port/Hardware Messages	•
• No. of Master/Slave Other Error Messages	•



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CRP

Control & Relay Panel

Reliable Protection & Control for Power Systems

The CRP (Control & Relay Panel) is a critical component in power system automation, ensuring seamless protection, control, and monitoring of electrical networks. Designed for high reliability and efficiency, the CRP integrates advanced relay technology with SCADA connectivity, making it ideal for substations, power plants, and industrial applications.

Applications :

Substation Automation – Efficiently manages switching operations, protection relays, and grid communication

Power Generation & Distribution – Ensures reliable operation of generators, transformers, and feeders.

Industrial & Commercial Power Systems – Provides protection for critical power infrastructure in factories, refineries, and large facilities.

Renewable Energy Systems – Integrates with solar, wind, and hybrid power systems for stable grid connectivity.



Working experience with BHEL, NTPC, Thermal Power Plants, Solar Power Plants, Wind Power Plants, State Utilities, CSPTCL, PGCIL, NERPC, Mishra Dhatu Nigam Limited, Railways, Military Engineering Services (MES) Cement Plant, EPC .



Benefits of RBH CRP:

Enhanced Power System Reliability – Ensures quick response to faults and abnormalities.

Seamless Integration – Supports communication with SCADA and automation systems.

Reduced Downtime – Provides fast fault detection and protection mechanisms.

Future-Ready Design – Adaptable for smart grid and IoT-based applications. Single Window Solution.



Why Choose Our CRP Solutions?

Custom-Engineered Solutions – Tailored designs for your specific protection and automation needs.

Industry-Compliant & Certified – Meets global standards for power system protection and follow PGCIL Norms (PGCIL approved hardware, Relays and BCUs used).

Expert Support & Service – Comprehensive technical support for installation, configuration, and maintenance.



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