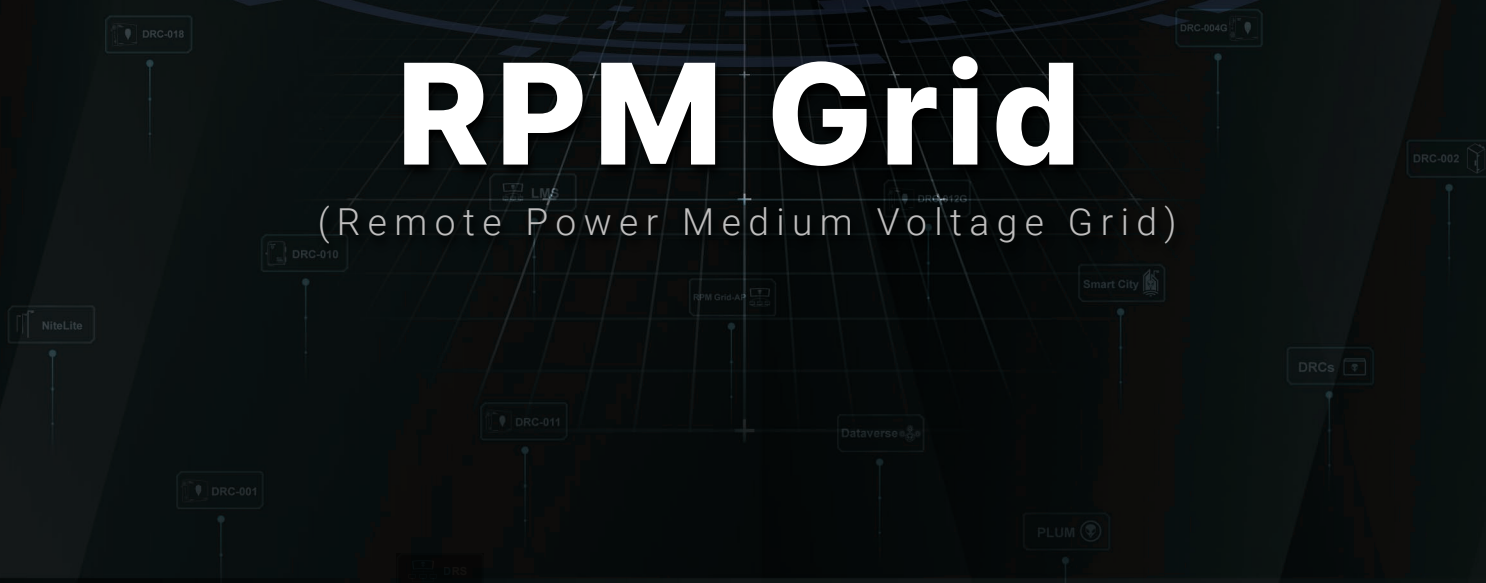VP.Start

SMART GRID
MANAGEMENT SYSTEMS

SIMA Grid, SIMA City, SIMA Home, SIMA Universe, SIMA Big Data

DRCs ...

RPM Grid

(Remote Power Medium Voltage Grid)

RPM Grid

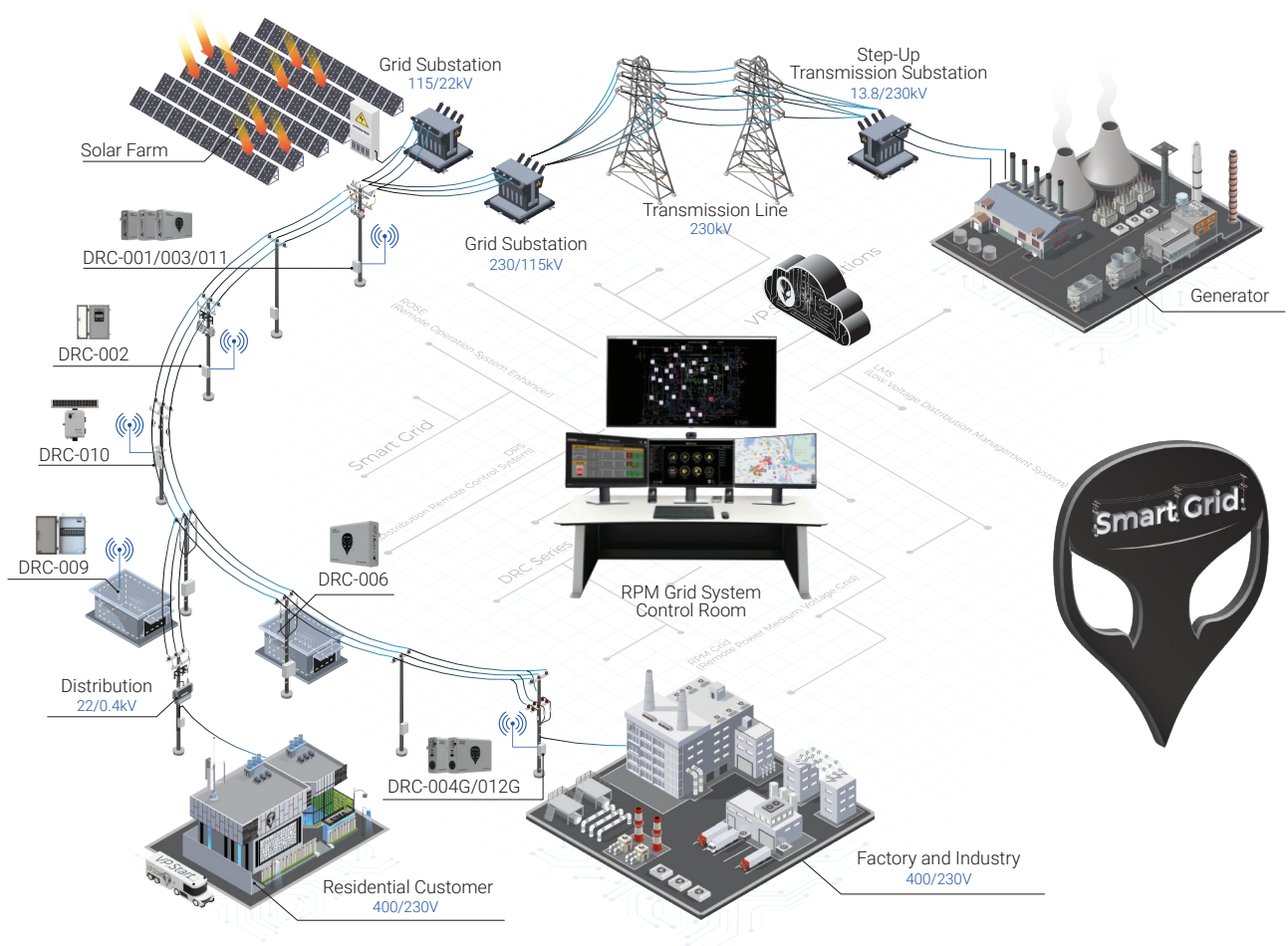## Remote Power Medium Voltage Grid (RPM Grid)

The RPM Grid System (Remote Power Medium Voltage Grid) by VP.Start is a groundbreaking solution designed to simplify electrical grid management. This innovative system transforms the complexities of traditional grid operations into a streamlined process, making it accessible for electrical engineers at all levels.

Imagine a control room buzzing with activity. Operators, equipped with the latest technology, are monitoring the electrical grid in real-time. With just a few clicks, they can view the status of every line, and they receive fault alarms instantly. This is how the RPM Grid System operates.

For years, many utilities struggled with aging infrastructure and outdated systems that hindered their ability to respond to outages and maintain service quality. The challenge was clear: how could they modernize their operations without incurring massive costs?

The Distribution Remote Control (DRC) Devices allow utilities to upgrade their existing infrastructures without the need for extensive overhauls, making it a cost-effective solution. These smart devices seamlessly transmit all information from the powerlines to the RPM Grid System. With its innovative features, cost-effective integration, and robust security, RPM Grid is not just a system; it's a partner in the journey towards a more efficient and reliable electrical grid.
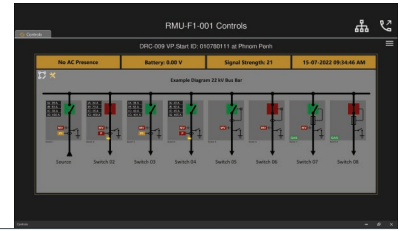
▲ Direct control from the control room over the entire distribution network
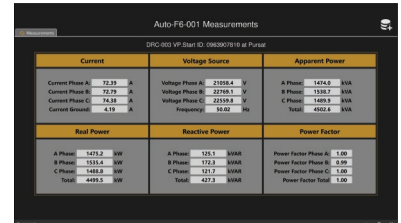
Key Features

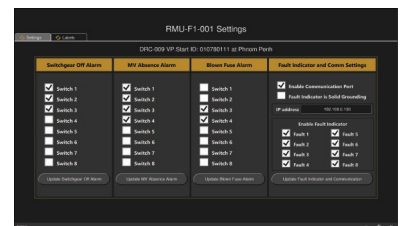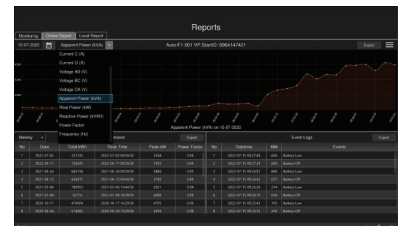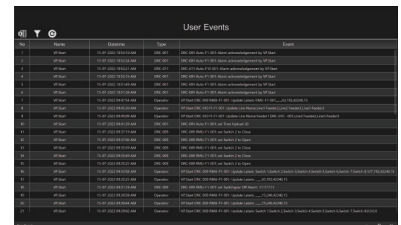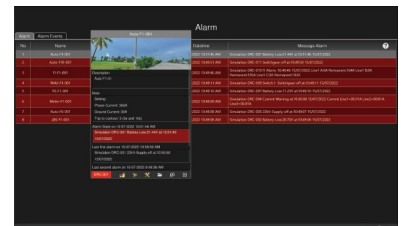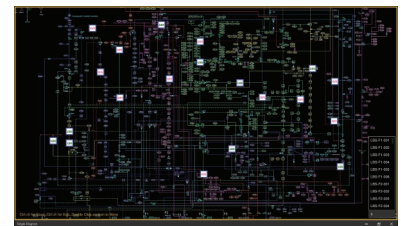|		
Remote Control:	Facilitates remote trip/close operations for Auto Recloser, LBS, Fusesavers, RMU,RTU and Sectional-izers, along with access to device settings and event logs.	
Measurements:	Monitors key electrical parameters such as Current, Voltage, Power (Active, Reactive, Apparent), Power Factor, and Frequency, supporting efficient energy management.	
Setting:	Enables operators to modify electrical equipment parameters via DRC solutions, including hosting, protection, and current settings	
Reports:	Generates comprehensive reports with visual graphs, offering insights into Current, Voltage, Power, Power Factor, and Frequency for efficient analysis.	
User Event:	Logs all operator actions with detailed timestamps, enhancing accountability and system transparency.	
Alarm:	Delivers instant fault notifications and maintains a detailed fault log for future analysis.	
Single Diagram:	Displays electrical equipment schematically for efficient fault identification and network manage-ment.	
Map View:	Integrates with Google Maps for precise location tracking and quick identification of impacted areas.	

Product Specification

Remote Control Unit

Supported Devices	A. Auto Recloser:
	  - Auto Schneider (ADVC)
	  - Auto ENTEC
	  - Auto Cooper
	B.Load Break Switch:
	  - Model ABB (22kV/35kV)
	  - Model S&S Korea
	  - Model Precise (SREC-24)
	  - Model Precise ORAP21.396.6MT
	  - Model Precise SLBS.24
	  - Model Schneider PLA
	  - Model Schneider RL-Series
	  - Model ZW32
	  - Model ENTEC KPS
	  - Model JK-SGS (Cover)
	  - Model JK-SGS (Uncover)
	  - Model LBS SEL
	  - Model SPG-24
	C. Ring Main Unit:
	  - Model SIEMENS
	  - Model ABB
	  - Model RM6
	D. Fusesaver:
	  - SIEMENS Fusesaver
	E. Over Head Fault Indicator:
	  - Overhead Fault Indicator

Operation Security	• System Security with Login Account (Username and Password). • System Login with Operator Photo Record. • User Operation Event Log. • Switchgear Control with System Validation and Operator Photo Record.
Communication Security	• Dynamic Encryption Data Communication Security.
Operation Security	• Data Communication Protocol Support: VP.Start Protocol • DNP3 • Modbus • IEC 60870-5-101/104

System Event Log and Report	A. Operator Action Record:
	  - System Login/Logout.
	  - System Control Event Record.
	B. Power Line Event Record:
	  - Controller Alarm Record.
	  - Switchgear OFF Event Record.
	  - Line Fault Alarm Record.

RPM Grid Function	1. CONTROL 2. SETTING 3. MONITORING 4. REPORTING & LOG 5. ALARM 6. SOFTWARE MANAGEMENT

System Event Log and Report	A. Support Single Line Diagram.
	B. Controller Located Indication on Single Line.
	C. Controller Information Indicated.
	D. Controller Alarm Indication (Blinking)on Single Line.
	E. Support Action:
	   - Click to go to Controller.
	   - Point to Show Controller's Information.
	   - Zoom In/Out.

RPM Grid Function	A. Support google Map.
	B. Controller Located Indication on Map.
	C. Controller Information Indicated.
	D. Controller Alarm Indication (Blinking).
	E. Support Action:
	   - Click to go to Controller.
	   - Point to show Controller's Information.
	   - Zoom In/Out.

Map Support	A. Support google Map.
	B. Controller Located Indication on Map.
	C. Controller Information Indicated.
	D. Controller Alarm Indication (Blinking).
	E. Support Action:
	   - Click to go to Controller.
	   - Point to show Controller's Information.
	   - Zoom In/Out.

Call Control Function	A. Call Line Report (Status, Measurement). B. Call Switchgear Report. C. Call Switchgear Control.

RPM Modem

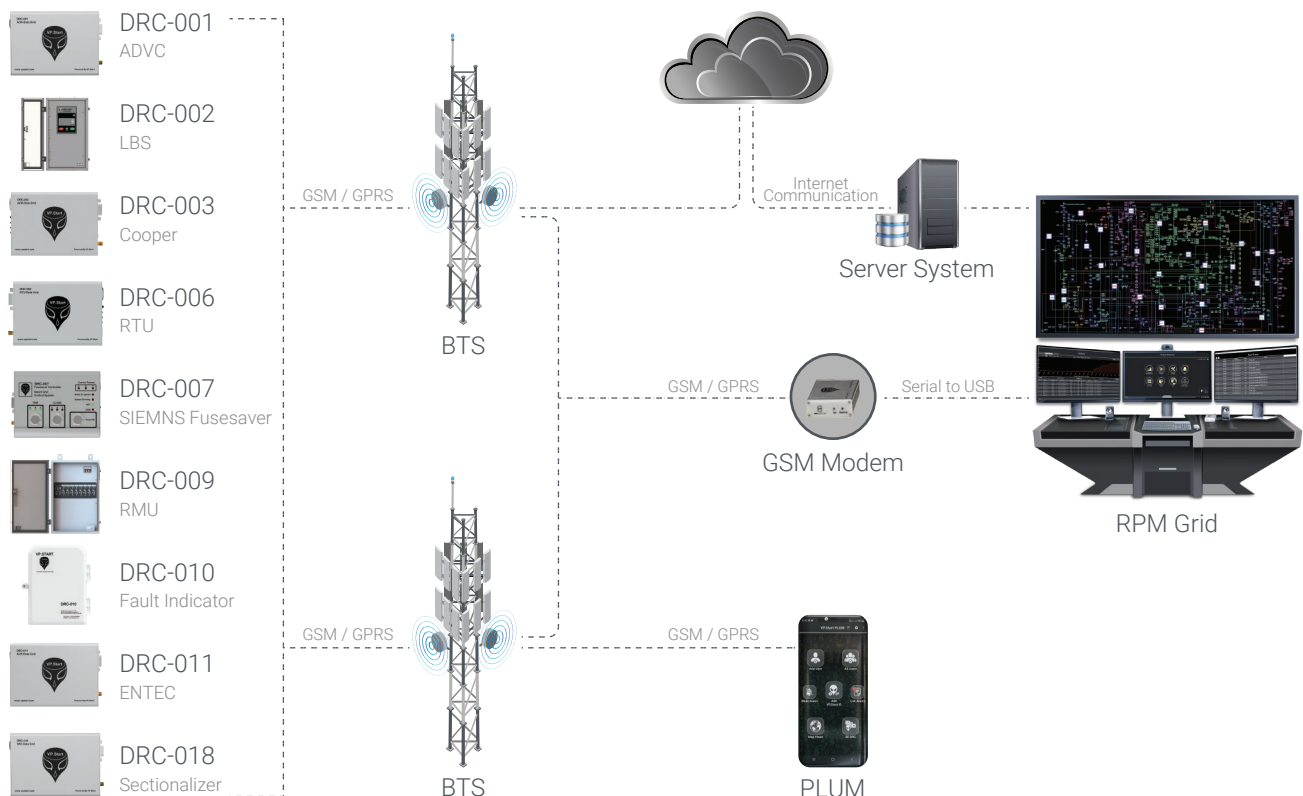|	
Communication Modem	• GSM/GPRS Modem
Communication Support	• GSM/GPRS (900, 1800) MHz
Modem Communication Interface	• USB Communication
Modem Power Operation	• 5 VDC
Modem SIM Support	• Micro SIM Card
Modem SIM Slot	• 1 SIM Card
Ambient Temperature Range	• 0 to 55 °C
Operating Humidity	• < 95 %

VP.Start

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www.vpstart.com

Web Domain Hosting for Online Report

Data Storage	• Internet Hosting (Cloud) & Local Storage
Data Security	• Data Backup • Data Encryption

Modem SIM Slot	A. Data Reporting:
	  - Daily Report
	  - Weekly Report
	  - Monthly Report
	B. Recording Data:
	  - Apparent Power (kVA)
	  - Active Power (kW)
	  - Reactive Power (kVar)
	  - Frequency (Hz)
	  - Current (Amp)
	  - Voltage (V)
	  - Power Factor

Controller Event Log	• Yes

System Architecture

DRC-001 ADVC
DRC-002 LBS
DRC-003 Cooper
DRC-006 RTU
DRC-007 SIEMNS Fusesaver
DRC-009 RMU
DRC-010 Fault Indicator
DRC-011 ENTEC
DRC-018 Sectionalizer

BTS
GSM / GPRS

Internet Communication
Server System
RPM Grid

GSM Modem
GSM / GPRS
Serial to USB

PLUM
GSM / GPRS

DRCs Installed
10,000 ⊕

Smart Grid Systems Installed
17 ⊘

▲ Direct control from the control room over the entire distribution network