

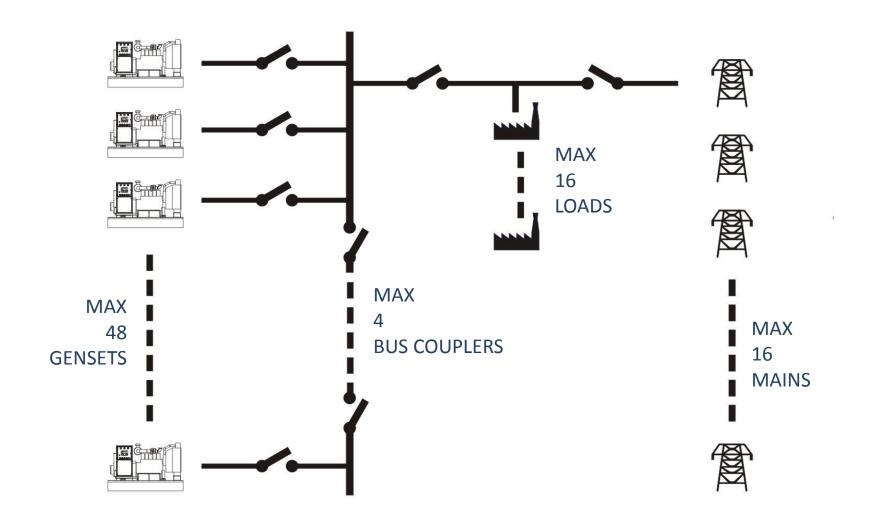


INTERNET ENABLED SYNCHRONIZATION SYSTEM





# **EXPANSION CAPACITY**





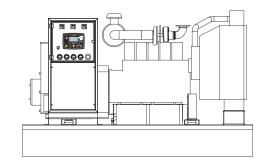


### MULTIFUNCTIONAL

#### THE SAME UNIT IS A ...



- ☐ MULTI-GENSET SYNCHRONIZER & LOAD SHARE UNIT
- MULTI-GENSET MAINS SYNCHRONIZER
- ☐ SINGLE GENSET PARALLEL WITH MAINS
- ☐ AMF UNIT WITH UNINTERRUPTED TRANSFER
- ☐ ATS CONTROLLER
- ☐ REMOTE START CONTROLLER
- ENGINE CONTROLLER
- REMOTE DISPLAY UNIT



**REDUCE YOUR STOCK ITEMS!** 





## EASY PROGRAMMING

- BUILT-IN AUTOMATIC SETUP FOR SYNCH & LOAD SHARE
- EASY TO USE PC CONFIGURATION PROGRAM: RAINBOW PLUS
- □ PC PROGRAM CONNECTS THROUGH USB + RS485 + INTERNET
- REMOTE PARAMETER SETTING THROUGH INTERNET
- ☐ ALL PARAMETERS FRONT PANEL ADJUSTABLE
- ☐ DETAILED TRAINING MATERIAL







## **FLEXIBILITY**

### MONOCHROME & COLOR SCREEN VERSIONS AVAILABLE









# DATA PORTS











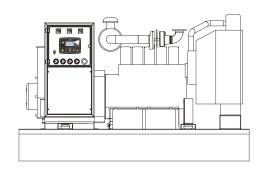


☐ USB HOST (LONG TERM DATA RECORDING)

☐ MICRO-SD CARD (LONG TERM DATA RECORDING)











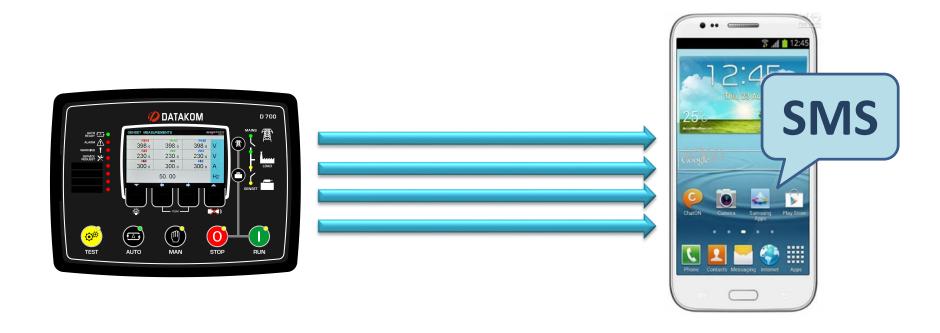
# CONNECTION CAPABILITIES







# SMS SENDING

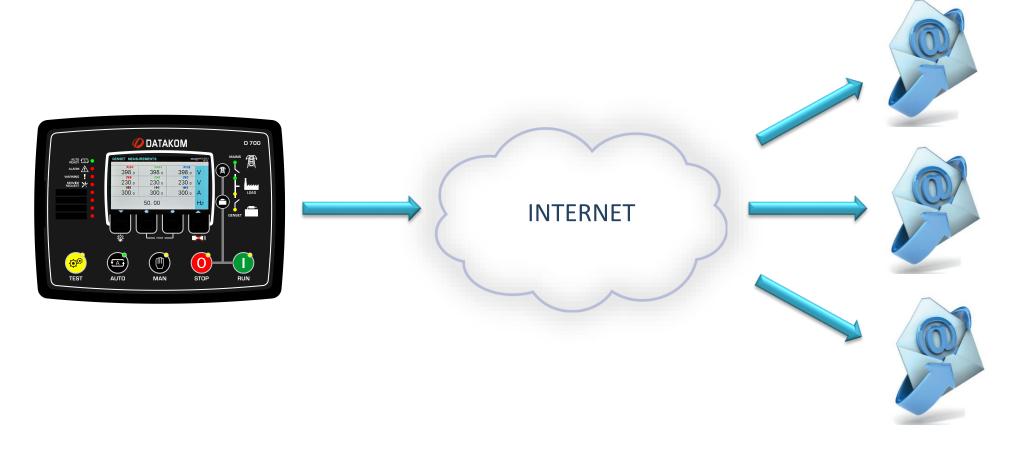


UP TO 4 DIFFERENT PHONE NUMBERS ALLOWED





# E-MAIL SENDING



UP TO 3 DIFFERENT E-MAIL ADDRESSES ALLOWED





## INTERNET FEATURES











☐ CENTRAL MONITORING THROUGH INTERNET

■ E-MAIL SENDING

■ MODBUS TCP/IP

☐ SNMP







**INTERNET** 





# REMOTE MONITORING

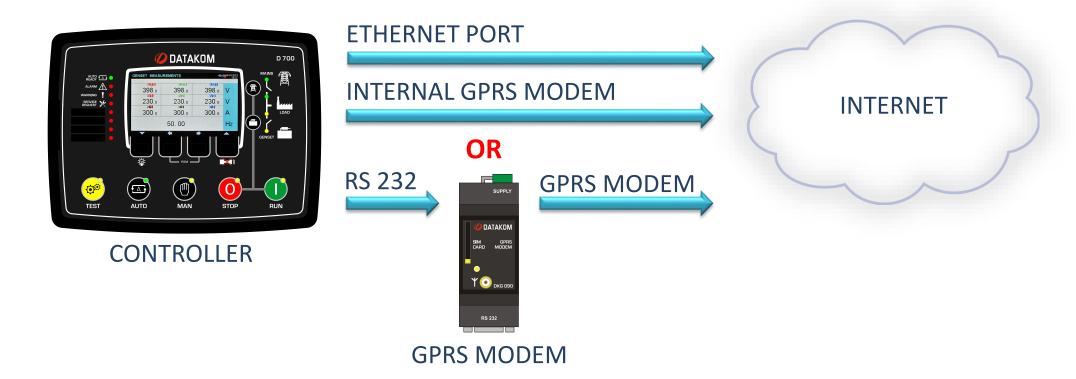






## INTERNET CONNECTION

#### LAN + GPRS CONNECTIONS ENABLED!



DUAL CONNECTIONS ALLOWED FOR ADDITIONAL SAFETY





## **EASY INSTALLATION**

### ETHERNET CONNECTION SUPPORTS **LAN** AND **LOCAL IP**!







RAINBOW SCADA SERVER

- NO **STATIC IP** REQUIRED
- NO PORT REDIRECTION REQUIRED
- NO DATA SERVER REQUIRED
- JUST PLUG & PLAY





### **EASY INSTALLATION**

### GPRS CONNECTION SUPPORTS **DYNAMIC IP** AND **LOCAL IP**!











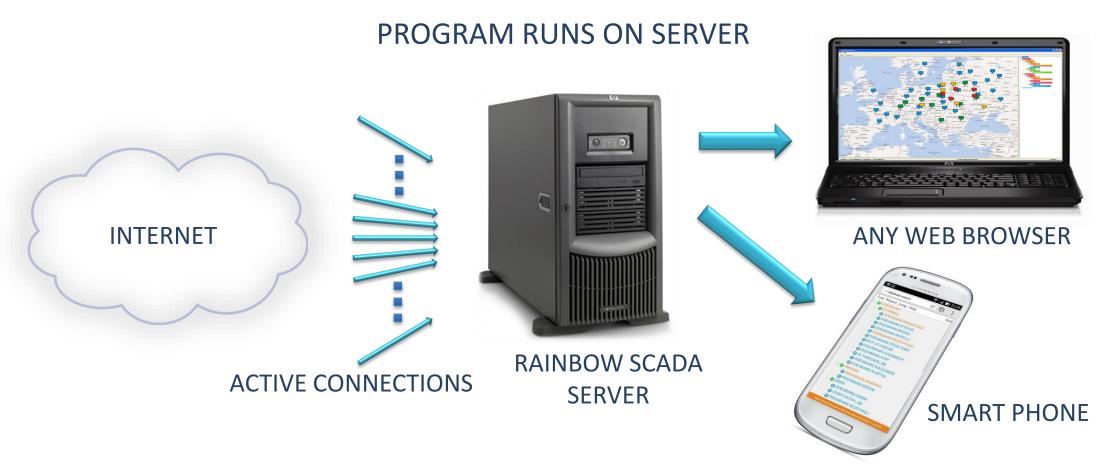
RAINBOW SCADA SERVER

- NO **REAL IP** REQUIRED
- NO <u>STATIC IP</u> REQUIRED
- NO DATA SERVER REQUIRED
- PLUG & PLAY WITH ANY DATA SIM CARD





## RAINBOW SCADA PROGRAM



RAINBOW SCADA SERVER SUPPORTS 60'000 ACTIVE CONNECTIONS





## CHART MODE DISPLAY

#### MONITOR YOUR COMPLETE FLEET ON ONE SCREEN

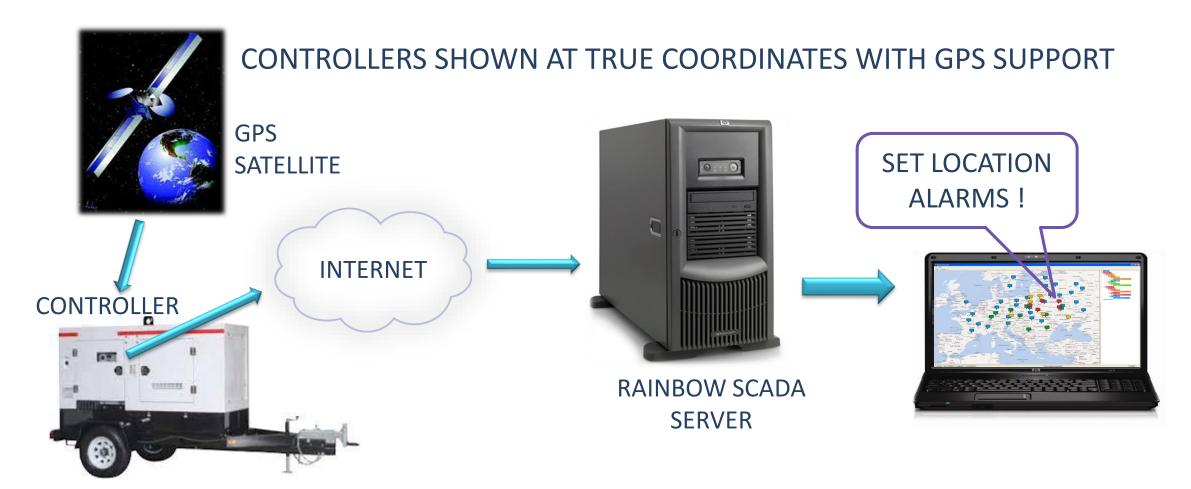


THE COLOUR OF THE BOX SHOWS DEVICE STATUS!





## MOBILE GENSET SUPPORT



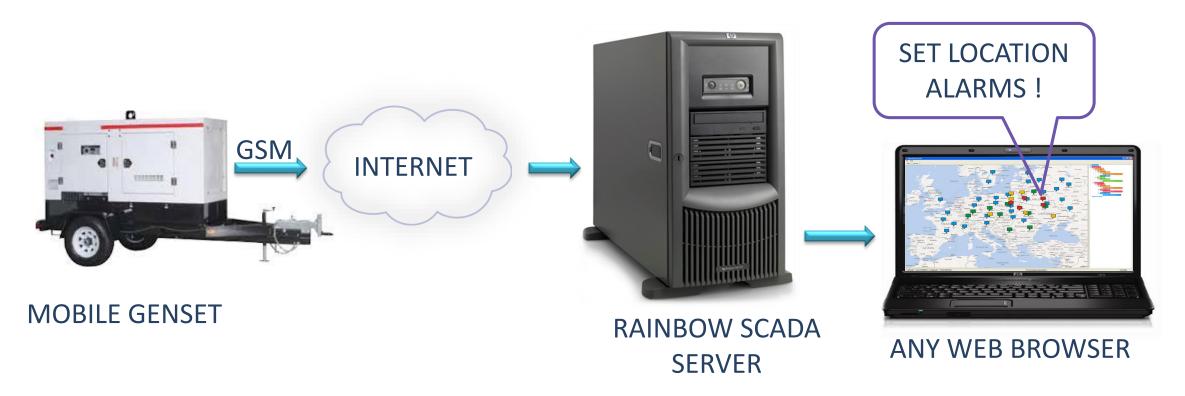
MONITOR YOUR MOBILE FLEET ON-LINE!





## MOBILE GENSET SUPPORT

### LOCATION DETERMINATION OVER GSM NETWORK



MONITOR YOUR MOBILE FLEET ON-LINE!





# GROUPING OF GENSETS







# TABLET PC & SMART PHONE SUPPORT







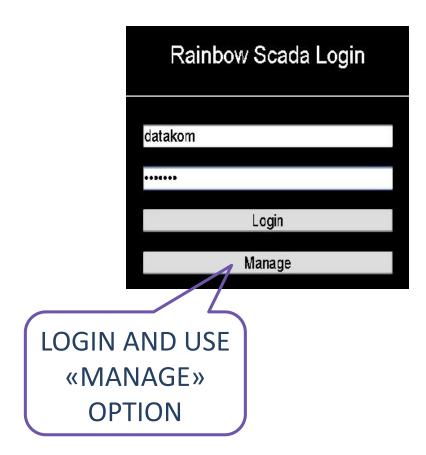
ALL WEB BROWSERS
ARE SUPPORTED

NO NEED TO DOWNLOAD APPS!





## CREATE YOUR OWN ACCOUNT





NO NEED TO WAIT FOR SUPPORT





# CREATE YOUR OWN SUB\_USERS

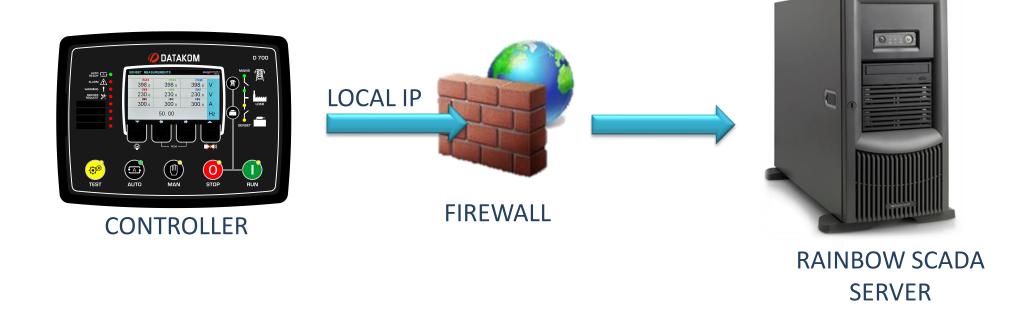






## DATA SECURITY

### DATA IS SENT TO RAINBOW SCADA SERVER ONLY!



NOBODY CAN REACH YOUR CONTROLLER!

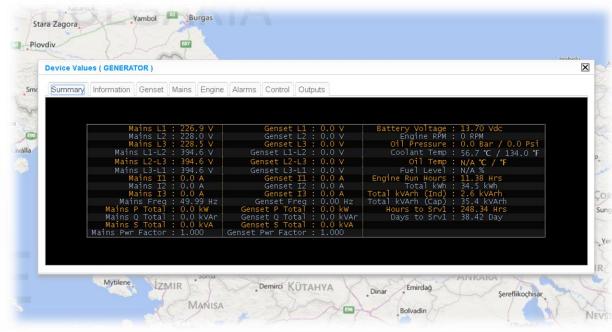




## DETAIL MONITORING

### **MONITOR ONLINE & REAL TIME**







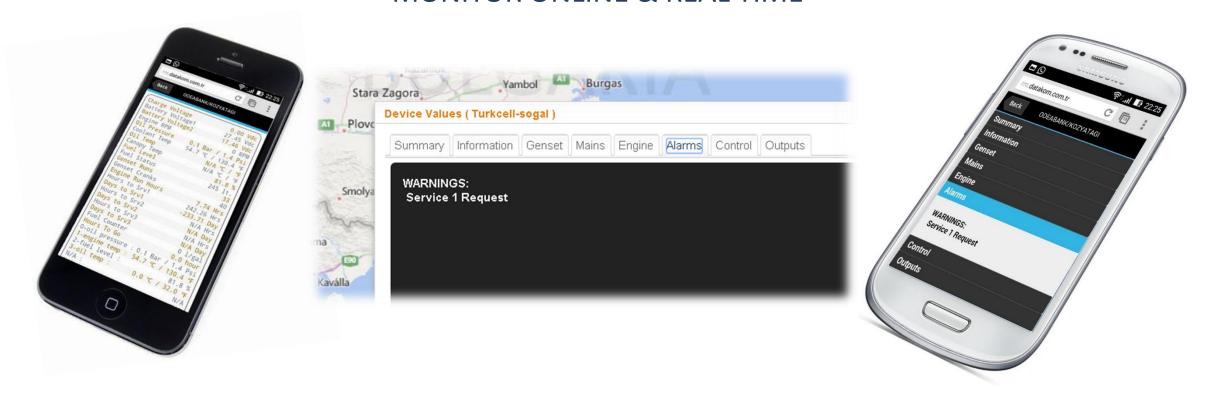
MONITOR WITH PC, TABLET OR SMARTPHONE





## REMOTE ALARM MONITORING

### **MONITOR ONLINE & REAL TIME**



MONITOR WITH PC, TABLET OR SMARTPHONE





## REMOTE CONTROL & REMOTE FAULT RESET

#### **RESET ALARMS ONLINE & REAL TIME**





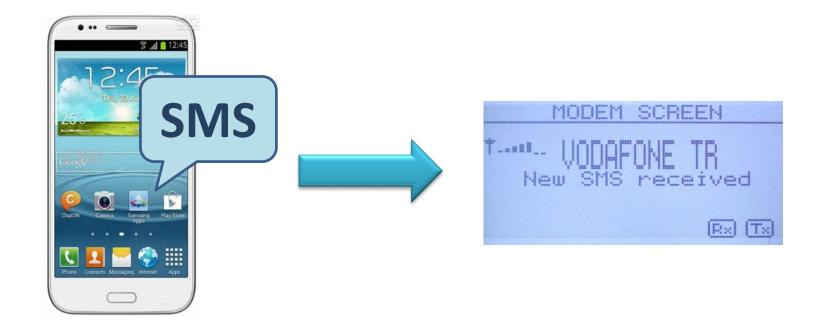
RESET ALARMS WITH PC, TABLET OR SMARTPHONE





# REMOTE FAULT RESET VIA SMS

### YOUR CRITICAL SITE IS ALWAYS UP!

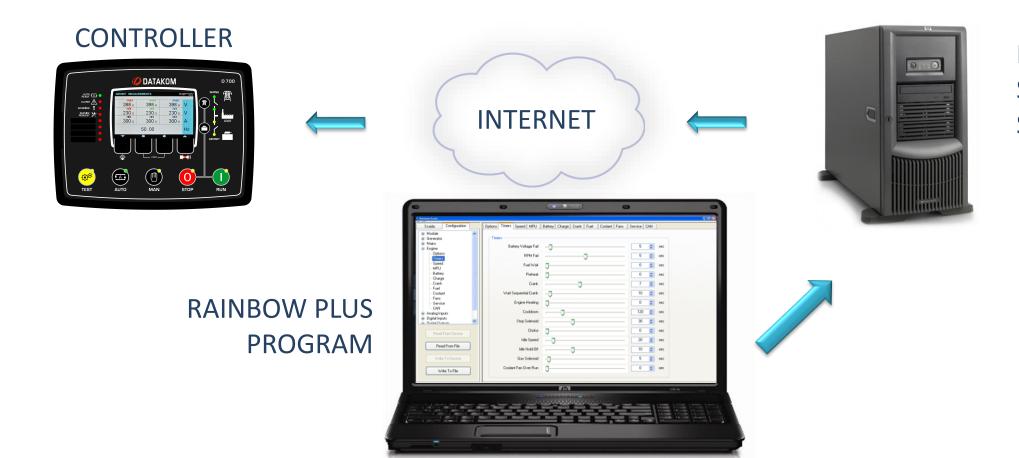


### **RESET ALARMS!**





## REMOTE PARAMETER EDIT



RAINBOW SCADA SERVER

SAVE TIME AND SERVICE COST





## DATA ANALYSIS

### PAST DATA IS STORED ON SERVER!



#### DATA CAN BE SAVED AS:

- JPG FILES
- EXCEL FILES

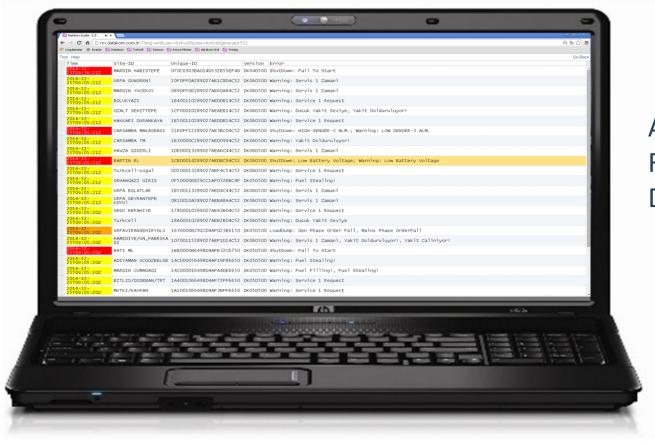
ANALYSE PAST PERFORMANCE OF YOUR SYSTEM!





## ONLINE ALARM MANAGEMENT

### **DESIGNED FOR CONTROL CENTERS**



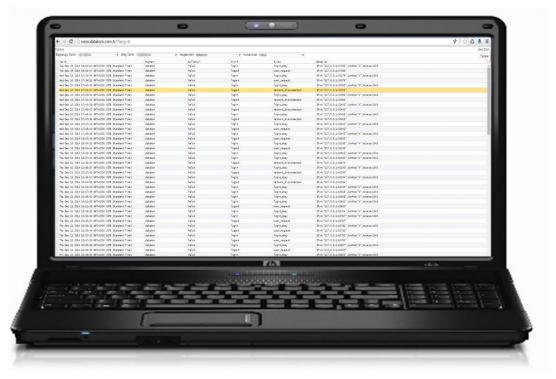
ALARM HISTORY IS RECORDED INTO DATABASE





## CUSTOMER LOGIN HISTORY RECORDING

### MONITOR SUB-USER ACTIVITIES



LOGIN HISTORY IS RECORDED INTO DATABASE

**HELPS TO INCREASE SECURITY!** 





### DETAILED REPORTING

#### ALLOWS TIME-FRAMED REPORTING OF SELECTED PARAMETERS



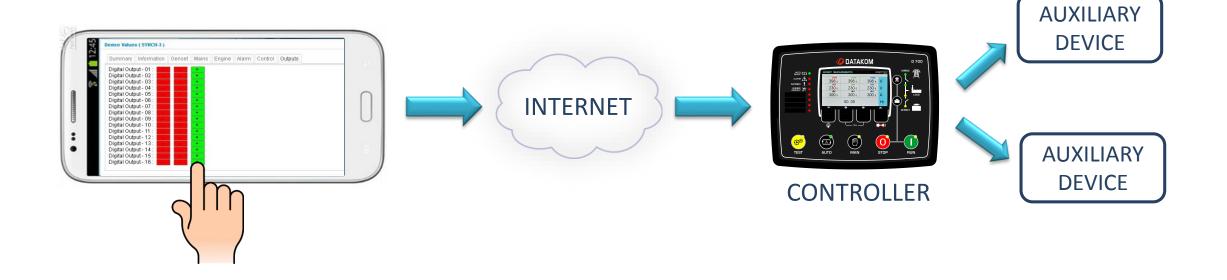
- FUEL CONSUMPTION REPORTS
- kW/fuel EFFICIENCY REPORTS
- POWER GENERATION REPORTS
- POWER CONSUMPTION REPORTS
- AVERAGE VALUES
- MIN-MAX VALUES

PROVIDES HELP FOR BETTER MANAGEABILITY OF YOUR FLEET!





# REMOTE CONTROL OF AUXILIARY DEVICES







# MONITOR ALL DATAKOM PRODUCTS

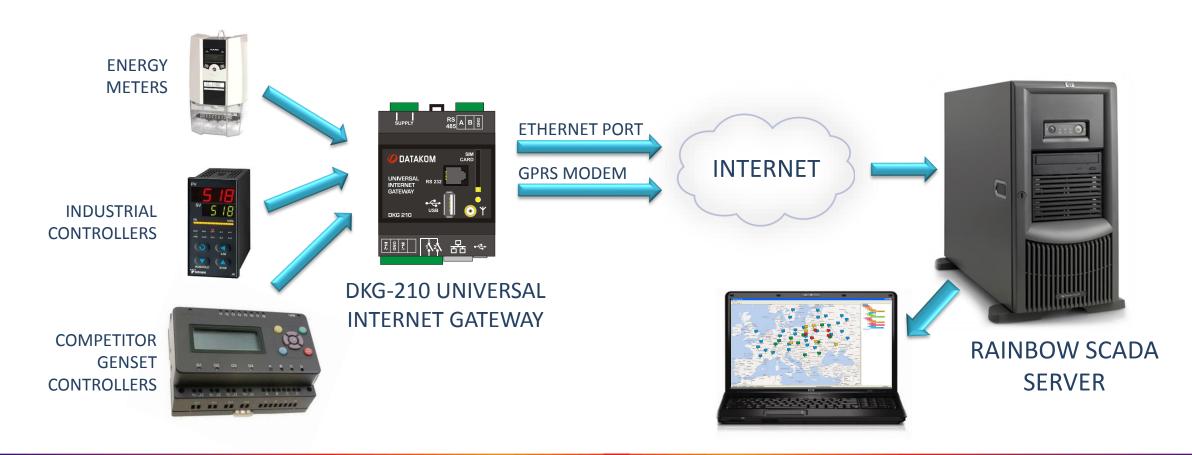






## INTEGRAL APPROACH

### MONITOR THIRD PARTY PRODUCTS







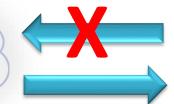
# COST ADVANTAGE

#### MONITOR YOUR SYSTEM WITH LOWER DATA COST!











RAINBOW SCADA SERVER

- CONTROLLERS CONNECT AUTOMATICALLY
- NO NEED TO QUERRY THE CONTROLLER
- ALL DATA IS SENT IN A SINGLE IP PACKET





## COST ADVANTAGE

#### EACH CONTROLLER COMES WITH 2 YEARS FREE MONITORING





- 2 YEARS FREE MONITORING
- **6 MONTHS FREE REMOTE CONTROL**
- **6 MONTHS FREE REMOTE PARAMETER EDIT**
- **6 MONTHS FREE DATA ANALYSIS**





# IMMEDIATE FAULT DETECTION

### REDUCE CUSTOMER'S DOWN TIME WITH FASTER INTERVENTION







NO!





# FAULT SENSING BEFORE FAILURE

### GENERATE ALERTS BEFORE THEY BECOME EMERGENCIES







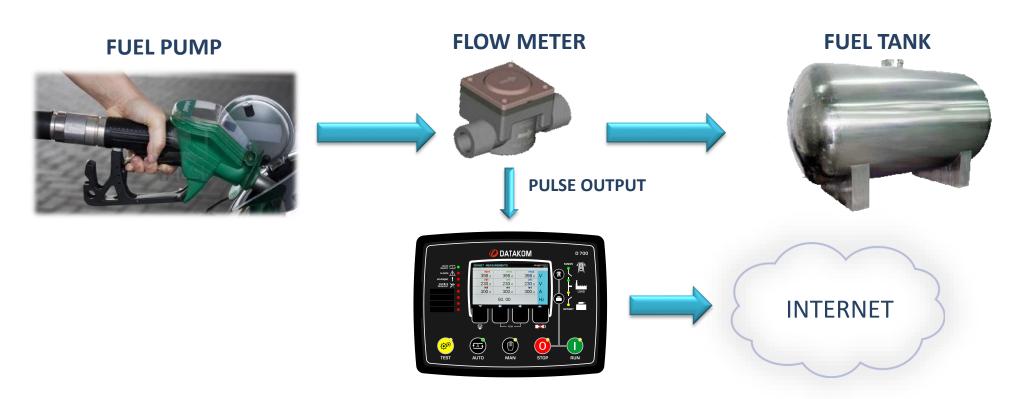






# REMOTE FUEL FILLING MONITORING

### CONTROLLER COUNTS FLOW METER PULSES



SAVE YOUR MONEY BY ELIMINATING FUEL FILLING FRAUDS!





## FUEL CONSUMPTION MONITORING

#### CONTROLLER COUNTS FLOW METER PULSES



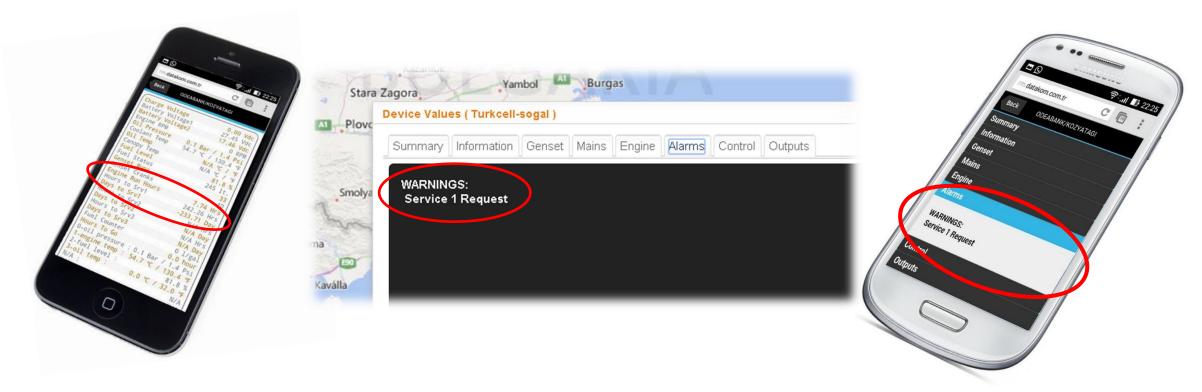
MONITOR YOUR GENSET'S **kW/FUEL** EFFICIENCY





## REMOTE SERVICE MONITORING

### REDUCE YOUR SPARE PARTS COST BY SERVICE PLANNING!



**AVOID UNNECESSARY SERVICE VISITS** 





# LESS MANPOWER FOR SERVICE

### **AVOID UNNECESSARY SITE VISITS**





NO!

YES!





### **ADVANTAGES**







- ☐ GENERATE ALERTS BEFORE THEY BECOME EMERGENCIES
- RESET FAULTS FROM YOUR CONTROL ROOM
- ☐ TEST YOUR GENSET FROM YOUR CONTROL ROOM
- REDUCE YOUR DOWN TIME WITH FASTER INTERVENTION
- AVIOD UNNECESSARY SITE VISITS
- REDUCE YOUR SPARE PART COST BY SERVICE PLANNING
- ELIMINATE FUEL THEFT
- ELIMINATE ENERGY THEFT
- ☐ ELIMINATE FUEL FILLING FRAUDS
- HAVE YOUR CRITICAL SITE ALWAYS UP
- HAVE DATA SECURITY
- ☐ INTEGRATE THIRD PARTY PRODUCTS IN THE SAME NETWORK
- ☐ CONTROL YOUR ENTIRE REMOTE STATION VIA D-500







