

GenIP 20i

- Monitor yours alarms (Voice, SMS, Email, TCP frame)
- Manage securely yours serial & Ethernet devices
- Consult Log files (up to 10 different files)
- Add logical and analog (current or voltage) sensors
- Drive remotes logical or analog (current or voltage) outputs

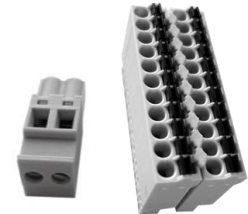
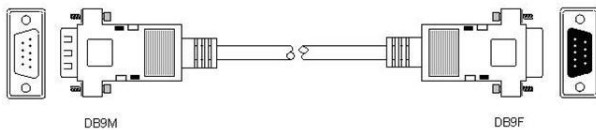


- ✓ **GSM / GPRS Industrial Gateway**
Ethernet / RS232 / RS485 / USB
- ✓ **DIN Rail aluminum case**
- ✓ **2x digital Inputs**
- ✓ **2x Analog (Current / Voltage / Digital) Inputs**
- ✓ **2x digital Outputs**
- ✓ **2x Analog (Current / Voltage / Digital) Outputs**
- ✓ **Modbus RTU / Modbus TCP converter**
- ✓ **Alarm Management (SMS / Email / GSM / GPRS)**
- ✓ **Modbus (Master / Slave) protocol**
- ✓ **Datalogger (Log files internal memory or external USB key)**
- ✓ **Optional Vocal Alarm Message (MP3 file)**

GenIP 20i packaging



- ✓ 1 packaging with quick start instructions
- ✓ 1 GenIP 20i
- ✓ 1 RS232 cable : Sub-D 9 M / Sub-D 9 F
- ✓ 1 straight Ethernet cable
- ✓ 1 hinged Quad-Band antenna to screw
- ✓ 1 Push-IN connector : RS485 – I/Os
- ✓ 1 screw connector : power supply



Mechanical characteristics



Back view

DIN Rail mounting clip



Side view

IP31 aluminium casing

- ✓ Dimensions: 104 mm * 55 mm * 105 mm
- ✓ Weight: 430 gr
- ✓ Approvals : R&TTE, CE
- ✓ Warranty: **5 years**
- ✓ Optional coating



GenIP 20i Architecture



- ✓ Environment: Linux
- ✓ ARM 9 plateforme (400 MHz)
- ✓ Web server: Apache
- ✓ IP stack: Linux
- ✓ Automatic detection of Ethernet (10/100 Mps)
straight or crossed cable (MDI/MDI-X)
- ✓ Interface Web configuration (LAN / GPRS)



TCP / IP features

- ✓ IP Routing
- ✓ SMTP / POP3
- ✓ HTTPS / HTTP Server
- ✓ FTP Client
- ✓ RAS Client / Server
- ✓ DHCP Client / Server
- ✓ TCP Client / Server
- ✓ UDP Client
- ✓ DynDNS (to have a GPRS Network static IP adress)
- ✓ Ping ICMP management
- ✓ Secured IP tunnel: VPN SSL (Point-to-point)
VPN IPSec (Up to 5 tunnels)



- ✓ Integrated and automatic firewall
- ✓ Port Forwarding / Port Triggering



Alarm Management

ALARMS



- on change of state of logic / analog Inputs
- on analysis of frame:
 - Serial link (Data / Modbus)
 - Ethernet (TCP / SMTP)
 - GSM / GPRS
- on transition RS232 signal (DTR)
- on communication failure (LAN or WAN)
- on modem power failure
- on log file size
- on Time out



ACTIONS



- SMS
- Email: SMTP & POP
(through Ethernet or GPRS)
- GSM DATA frame
- GPRS frame (TCP / UDP / FTP)
- Voice Option (send MP3 file)

ACKNOWLEDGEMENTS

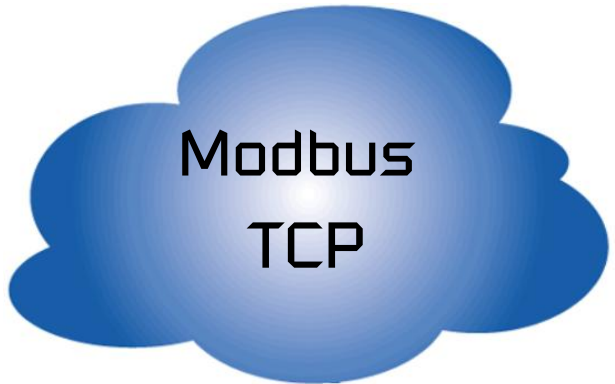
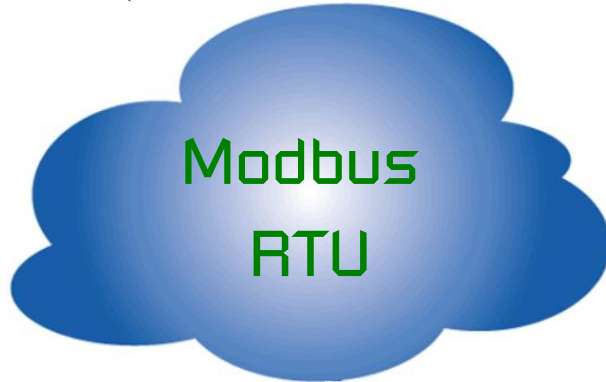


- SMS
- Email
- DATA frame
- GPRS frame (TCP)



Modbus RTU / TCP Converter

RS232 / RS485 protocols
or via GSM / GPRS



Ethernet protocols
or via GSM / GPRS



Variables & Macro Commands

- Possibility to use dynamic variables to store frame, words, variables etc...
- Transmission of customized messages upon actions, Time out, **change of states logic / analog I/Os ...**

- Possibility to launch remote actions with Macro Commands

Send Macro Commands by SMS, Email, TCP frame via GPRS

Secured acces with login and password / email address / phone number / IP address

Examples : GPRS CONNECT (automatic GPRS connection)

GPRS DISCONNECT (Stop GPRS connection)

Do action « Action name »

(like an automatic connection between 2 GenIP 20i)

GET GPRS IP, GET LAN IP, FTP GET, FTP PUT,

SEND SMS xxxx, SEND EMAIL xxxx ...



I/O Management

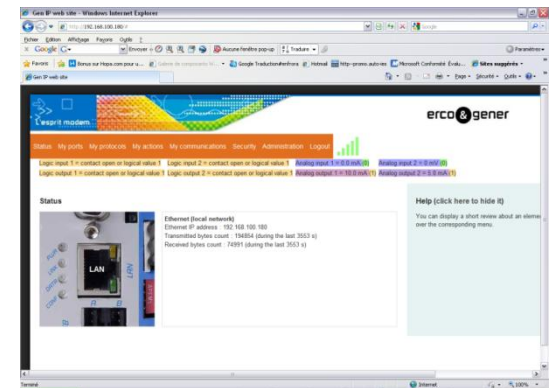
- **2 digital Inputs**
- **2 digital Output**
- **2 analog Inputs (Current, Voltage, Digital configurable by software)**
- **2 analog Outputs (Current, Voltage, Digital configurable by software)**

- **Counting registers for all the inputs**
- **Actions on simple or double change of state for digital inputs**
- **Actions on low and high level for analog inputs**
- **Drive digital (open / close / PWM) and analog outputs**
- **Combinational equation of inputs**
- **Monitoring of the states of I/O (Web interface or by SMS)**
- **Datalogging (1 Moctets internal, 100 Mo USB Key)**
 - **Digital / Analog Inputs / Outputs**
 - **Dynamic messages**
 - **Alarms**



Others Features

- **Serial link (RS232 / RS485) between 2 GenIP (Ethernet / GPRS)**
- **Monitoring of the wireless link : connection, level**
- **Monitoring transmitted datas volume (GPRS, SMS) since the power ON of the GenIP 20i**
- **Macro Commands / Scripts builders**
- **Import / export of Script files**
- **Import / export of GenIP 20i configuration**
- **Scheduler**
- **Modbus Slave**
 - **Drive logic and analog Outputs of GenIP 20i**
 - **Ask for logic and analog Inputs of GenIP 20i**
 - **Send SMS by GenIP 20i**
- **Modbus Master**
 - **Management of Modbus Slave devices with Datalogging in Memory or USB Key, or by TCP / FTP**
- **Serial (RS232 / RS485) datas bufferisation with Datalogging in Memory or USB Key, or by TCP / FTP**
- **Modem simulator (AT commands + RS232 signals)**



Future Features

End of February 2012

- Client GnuDIP (Gestion des adresses IP Dynamiques)
- SCP (= Secure Copy Protocol) provides to transfer files between UNIX machines via secure SSH protocol. It's fast and it's done safely on a single port 22 (default).
- IKE (Automatic management of passwords for VPN IP Sec)
- Optimization of Custom messages to use GenIP 20i in Ethernet > SMS / Email Gateway mode.
- Transmission of MP3 file stored in a local FTP server.
- Management of 3G connectivity (HSDPA : DL 3.6 Mbps, UL 384 kbps) for High speed applications >>> **GenIP 30i**



GenIP 20i Markets



✓ Industrial Automation (Serial and Ethernet Modbus PLC)

Factory of manufacture, Water Station, Consumable products distributors, Washer Stations ...

✓ Building mangement

Lighting, Heater, Access Control,

Security of isolated site (videosurveillance, opening door, detection of presence)

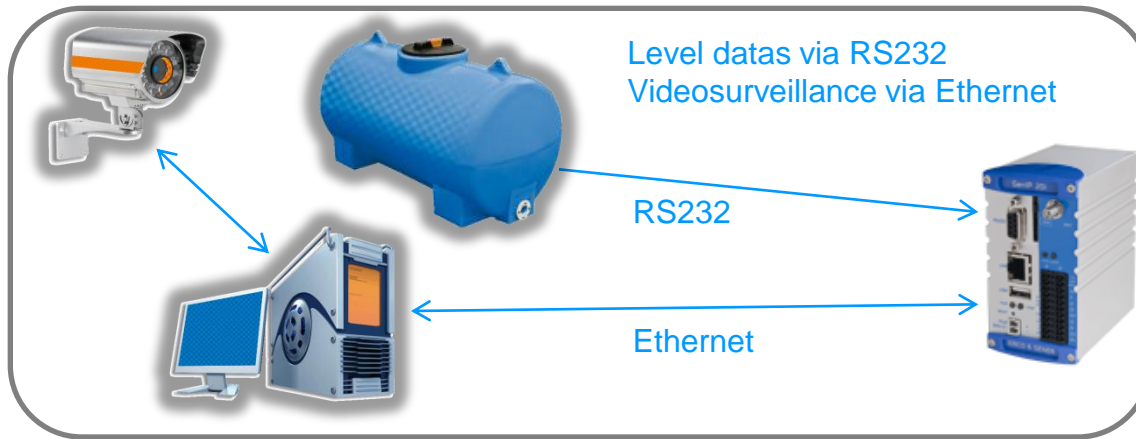
✓ Energy meters (Mode idle >>> very low consumption)

Cyclic Storage of datas and impulses meter

✓ Irrigation in the agriculture

Message of States with possibility to drive motors like you want by SMS, Email, Internet

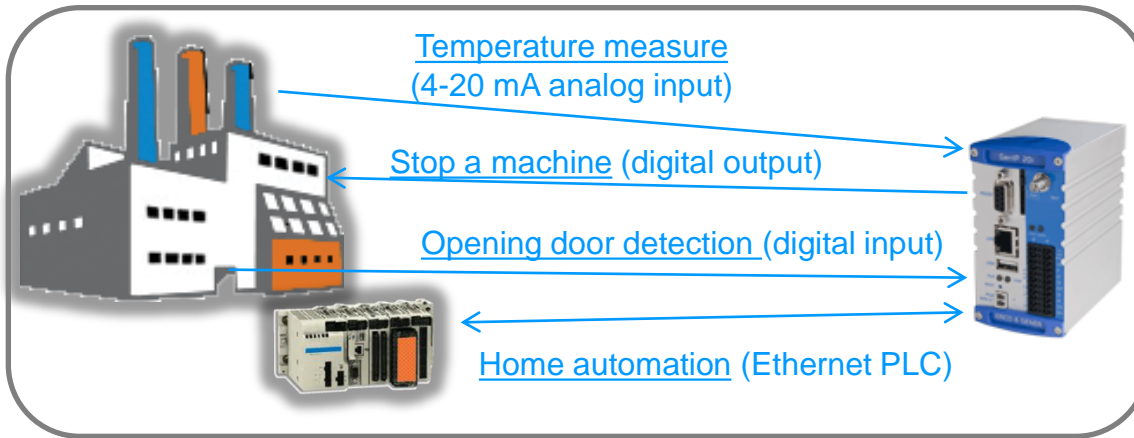
GenIP 20i Success Story



✓ Monitoring of levels of fuel tanks

- ❑ **Domain of application:** Fuel Industry / Distribution
- ❑ **Customer:** Confidential (France)
- ❑ **Application:** Monitoring of levels of fuel tanks+ video surveillance
- ❑ **Used product:** GenIP 20i
- ❑ **Why to choose ERCO & GENER:**
 - DIN-Rail industrial gateway in a rudge box
 - DynDNS feature to solve GPRS IP adress
 - Remote Update GenIP 20i firmware by GPRS to benefit on last features
 - Complete remote management of the GenIP 20i by SMS, Web
 - I/O for access control (opening door, alarm siren)
 - Alarm management by SMS, Email, TCP
 - Long experience of **ERCO & GENER** in M2M markets since 1981

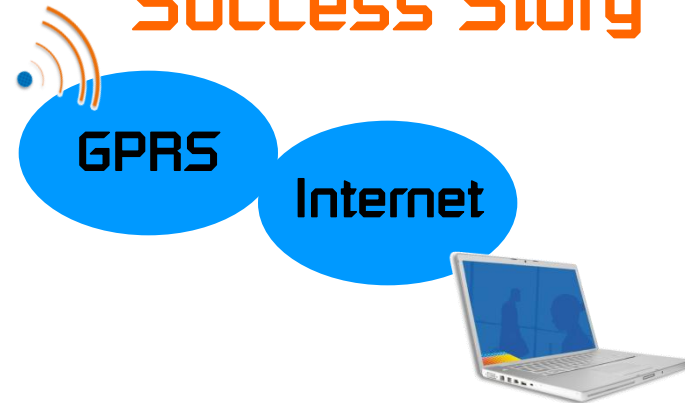
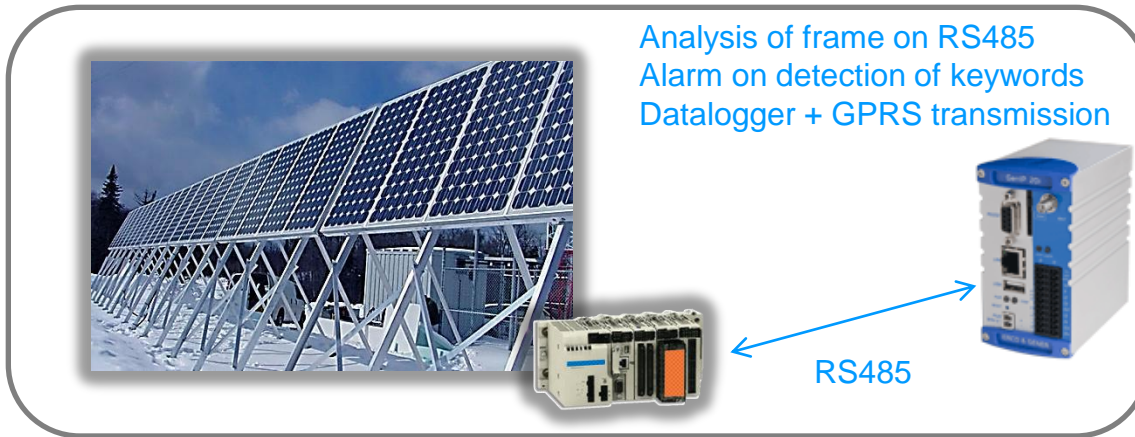
GenIP 20i Success Story



✓ Building HVAC monitoring

- ❑ **Domain of application:** Industry / **HVAC** (Heating, Ventilation, Air-Conditioning)
- ❑ **Customer:** Confidential
- ❑ **Application :** Boiler Temperature monitoring + access control + home automation
- ❑ **Used product:** **GenIP 20i**
- ❑ **Why to choose ERCO & GENER:**
 - Management of a 4-20mA analog input to measure temperature in a boiler room
 - Management of a digital input to detect opening door
 - Management of a digital output to stop a machine
 - Alarm management by SMS and by Email
 - Communication with a Ethernet PLC (Modbus TCP) to manage Home automation
 - DynDNS Client feature (to have a static GPRS Network IP adress)
 - Remote Update GenIP 20i firmware by GPRS to benefit on last features
 - Complete remote management of the GenIP 20i by SMS, Web

GenIP 20i Success Story



✓ AMR / AMI – Photovoltaic panels

- ❑ **Domain of application:** Industry / Metering
- ❑ **Customer:** Confidential
- ❑ **Application:** concentrator and alarm transmitter for photovoltaic panels meters
- ❑ **Used product:** GenIP 20i
- ❑ **Why to choose ERCO & GENER:**
 - Collection of consumption informations from n counters via RS485 Modbus request
 - Datalogging of consumption informations inside the GenIP 20i
 - Transmission of consumption informations by GPRS
 - Transmisson of alarms on detection of keywords on RS485 link
 - Complete remote management of the GenIP 20i by SMS, Web

Applications

Technical alarms management

Loss of modem connection



DTR



ASCII frame

ALERTE

IP frame

IP_ALERTE

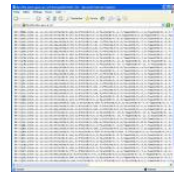
Logical / analog Inputs



Timeout



Log file size



Power failure



SMS



EMAIL



VOICE
Option



DATA

Modbus TCP
or
Modbus RTU

Technical alarms
management

-  SMS
-  EMAIL
-  VOICE Option
-  DATA

Ethernet or
RS232 / RS485

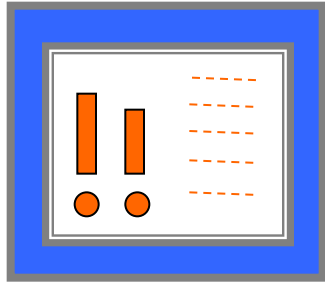
GPRS

GPRS

Monitoring of remote
installation

ADSL





Touch-sensitive screen



Monitoring via GPRS of an industrial ethernet device



ADSL





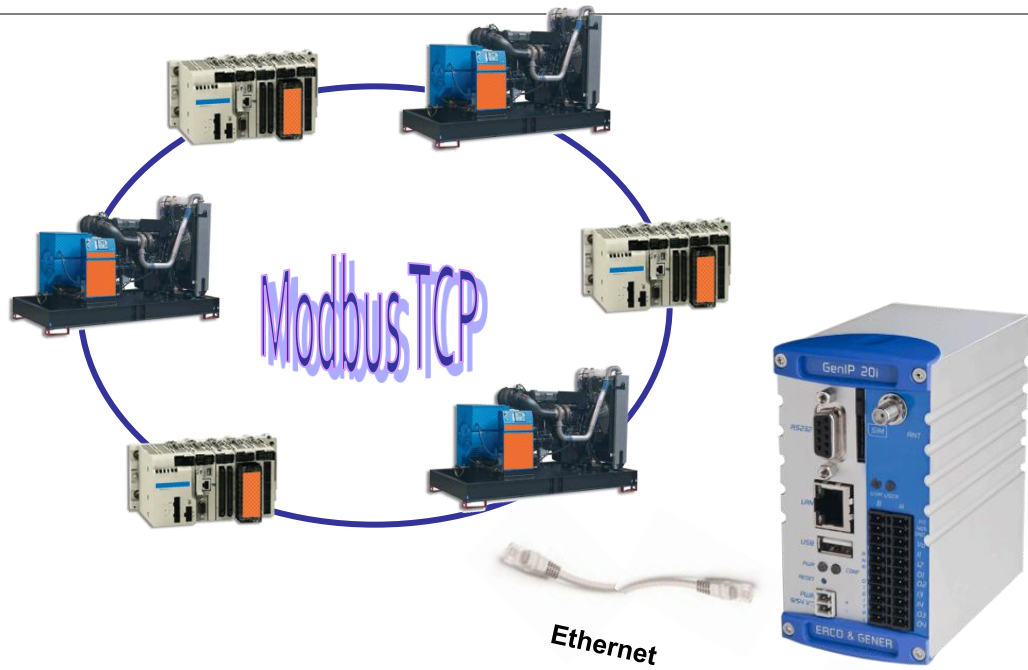
IP camera (Ethernet)



ADSL

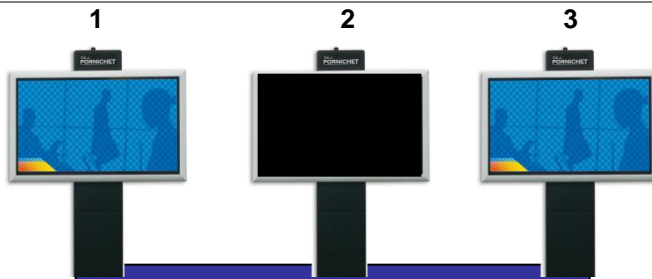


Remote video surveillance
Acces control



Interconnection of
PLC (Programmable Logic controller)
Mixing of serial / Ethernet equipments





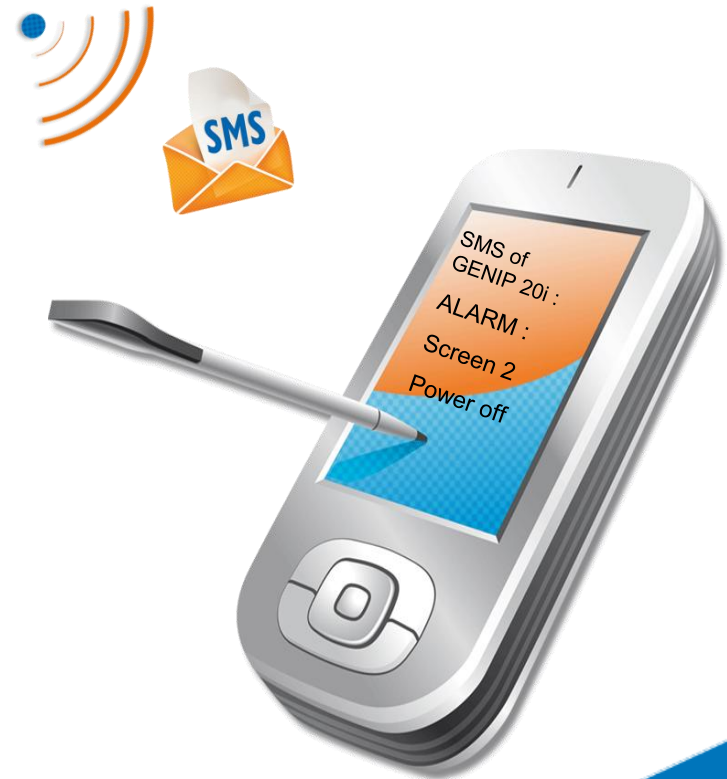
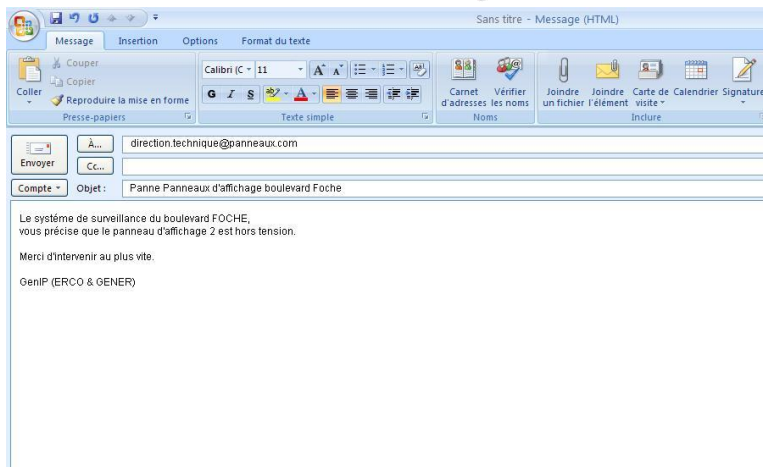
Ethernet network



Ethernet

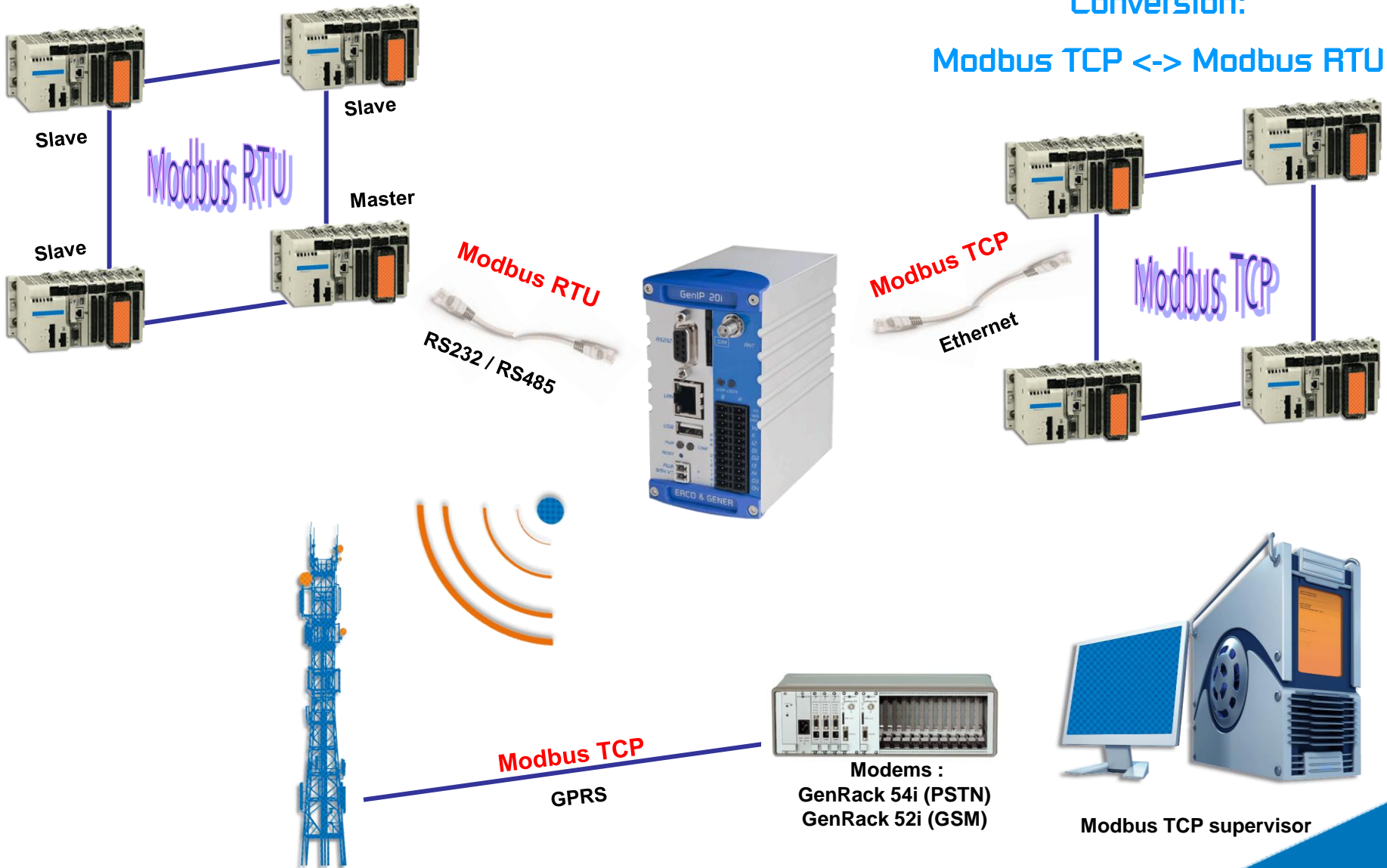
On breakdown detection:

- Send SMS to maintenance
- Send Email to the technical department



Conversion:

Modbus TCP <-> Modbus RTU

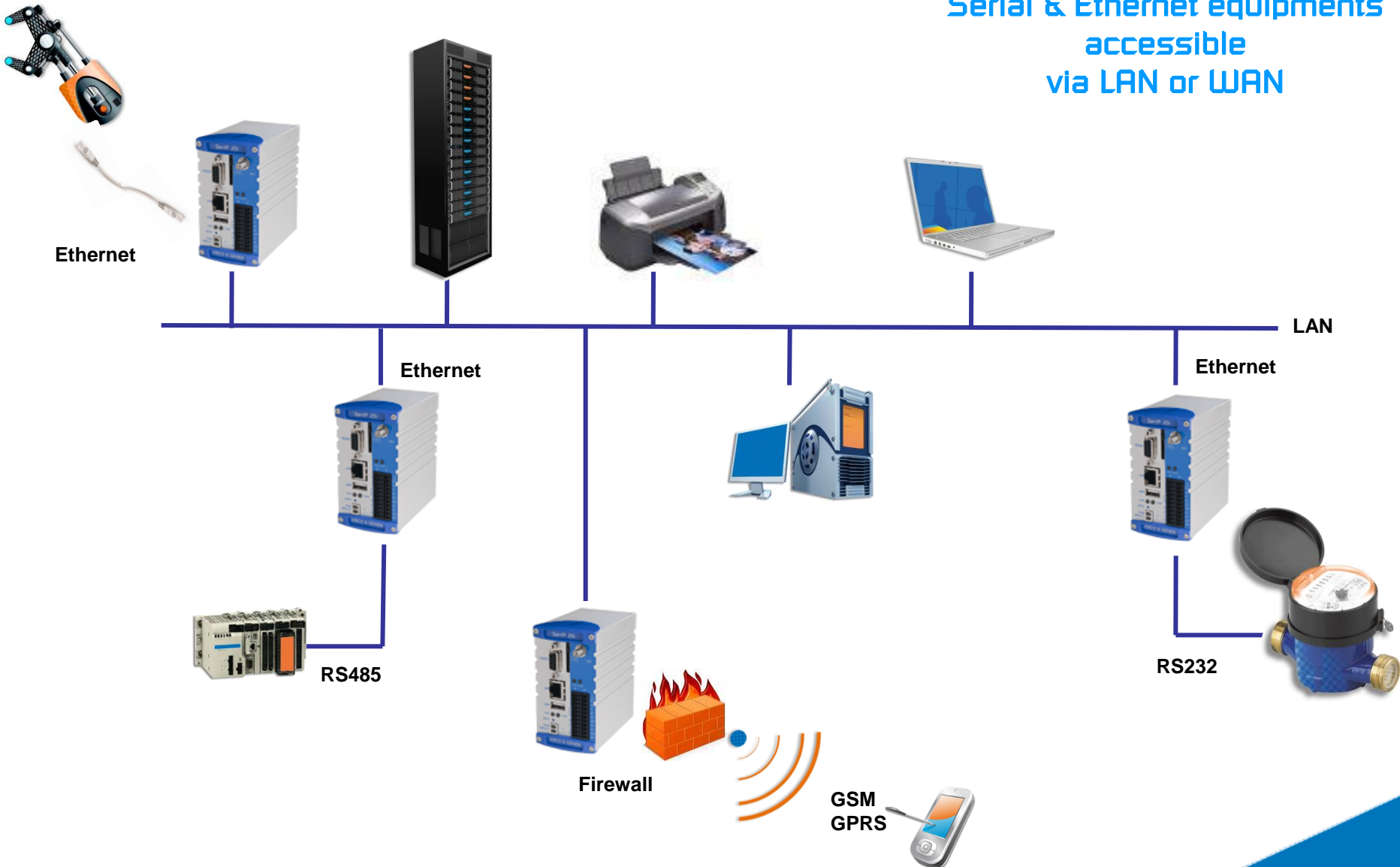


Modbus TCP supervisor

Modems :
GenRack 54i (PSTN)
GenRack 52i (GSM)

Modbus TCP
GPRS

Serial & Ethernet equipments
accessible
via LAN or WAN



Remote equipment management

