GridEx®

–FMTP+
From Minus to Plus

Explorer • Analyzer • Test Tool

Sets you in control of your Smart Grid IEC 61850 networks

GOOSE

Sampled Values

GOOSE SV

Commissioning

Troubleshooting

Maintenance

NET VS SCL

POWER

SYNC

GridEx

USB

ETH1

ETH2

TRPS

24VDC

–FMTP+

GOOSE

Sampled Values

GOOSE SV

IEEE SMARTGRID

SEK SVENSK ELSTANDARD

IEC

IEEE Advancing Technology for Humanity

SmartGrid Engineered by FMTP

GridEx**plorer**™

- Live measurements
- Secure connection
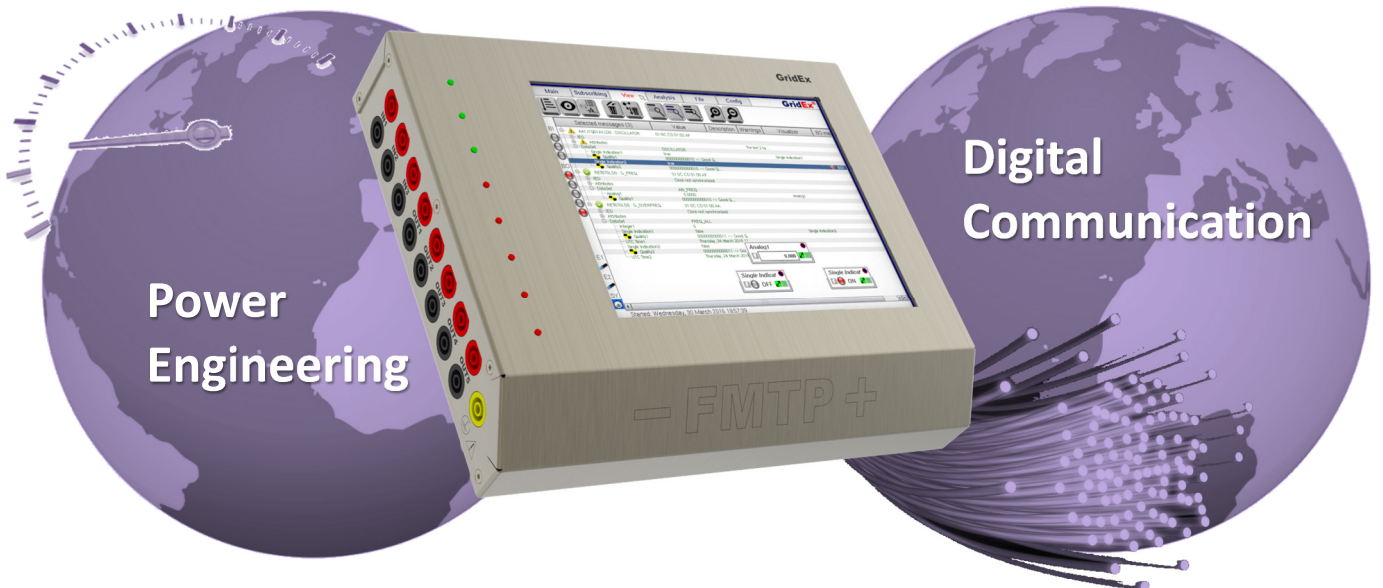- Aided maintenance
- In-circuit connections
- Combined ETH/FO contacts
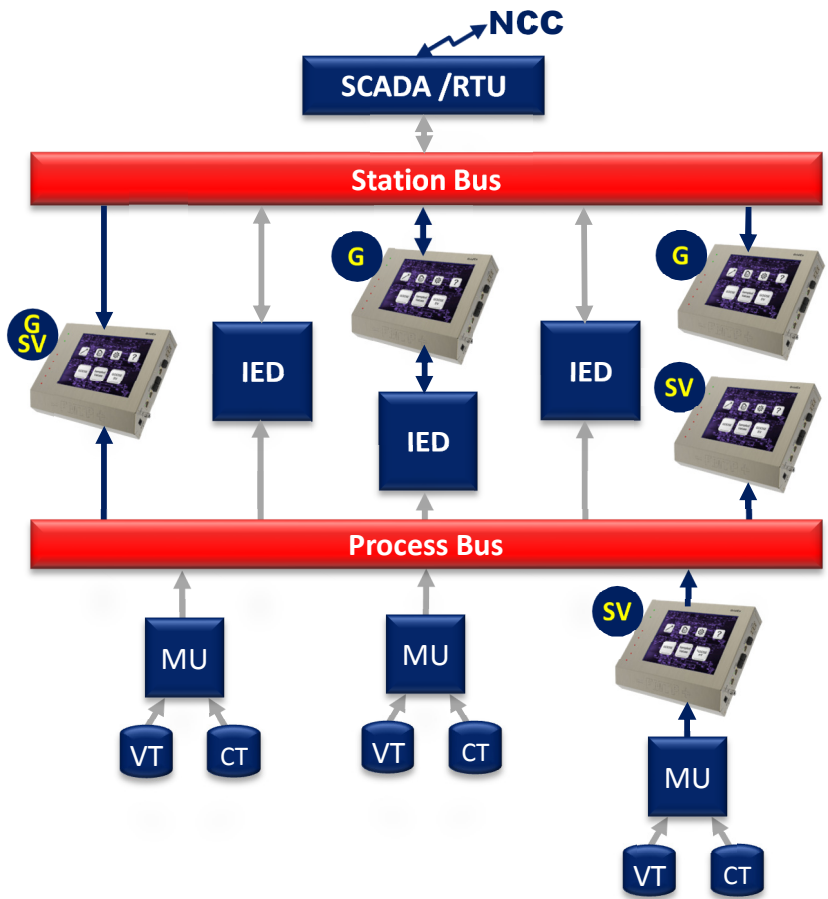
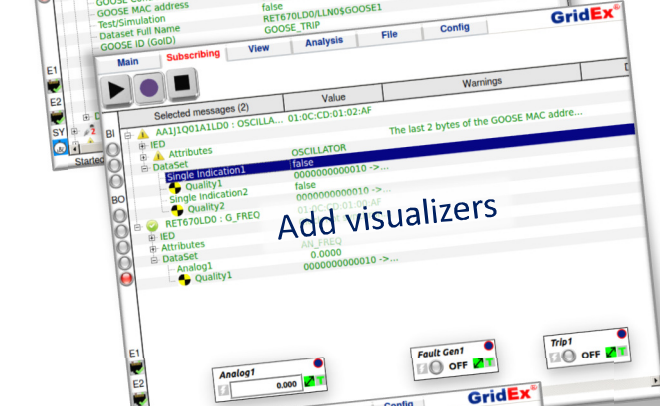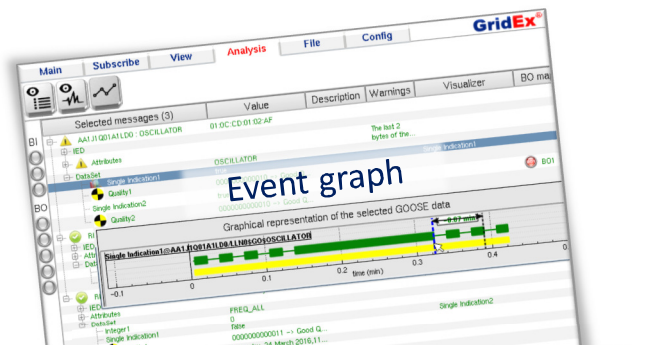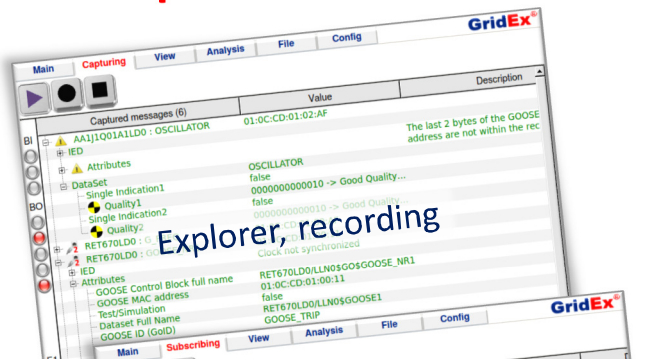## GridEx® Sets you in control of your IEC 61850 networks

Easy to use: plug, explore and analyze

Instant start-up

Customized and robust embedded system

No computer needed

Accurate timing analysis, time synchronization

Supports your investigations, flexible connections

Troubleshooting and maintenance

Compare station SCL file vs reality

Advanced aid and support: error detection, inconsistencies, warning explanation, helpful comments and recommendations, Intelligent, proactive analysis, valuable information
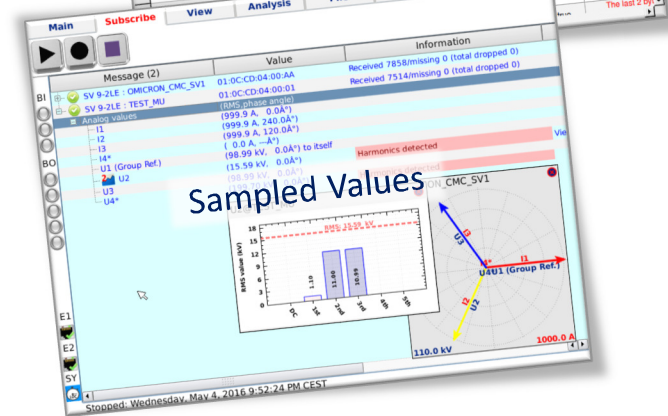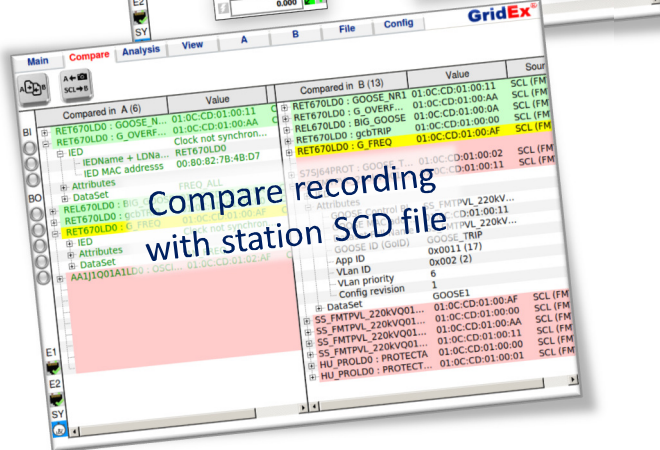
GridEx® Bridges the gap between the worlds

Power Engineering

Digital Communication

GridExpert™

Explorer, recording

Add visualizers

Compare recording with station SCD file

Event graph

Event list

Sampled Values

Explorer / Sniffer

Capture GOOSE	Easy View	Advanced View
Show Changes	Sort	Logs

Data Analysis

Analyze	Info Comments	Graphical Viewer
Event List	Warning List	Reports

Signal management

Select	View	Subscribe
Connect to BO	Warning List	Reports

Sampled Values (SV)

Capture SV	Waveform graphs	Sync info MU
Harmonic Calculation	Power Calculation	

Compare

Capture vs SCL	SCL vs SCL	Capture vs Capture

Hardware configuration

FO RJ45	DHCP Static	Time SYNC

Wizard - Smart features

GridEx Assisted tests	Station IEDs analysis	Time sync Analysis

GridEx Series™

Technical Specifications

Ethernet ports
Two separate 100 Mbps Ethernet ports (ETH1 and ETH2) for both optical or electrical connection
- Optical port for LC connector (multi mode fiber)
- Electrical port for RJ45

ETH2 ports allow in-circuit (point to point) connection

USB ports
Three USB ports for connection of external devices such as storage of data and mouse
- USB 2.0 type A

Time Synchronization
- BNC connector for 1PPS time synchronization input signal
- SNTP client functionality

Binary inputs (GridEx 120 only)
Three galvanic isolated binary inputs.
Sensitive to DC voltage (voltage sense) and/or free contact position (contact sense).
Protected against wrong connection.
- Voltage sense max 250 V DC, threshold ~12 V DC
- Contact sense: output voltage 19 V DC, current 15 mA

Binary outputs (GridEx 120 only)
Five independent normally open solid state outputs.
Protected against wrong connection. Built-in current limiter.
- Rated voltage range 48 – 220 V DC
- Current carrying capacity continuous 200 mA DC

IEC 61850
SCL file importing
All Ed.1 & Ed.2 SCL files are supported

Simulation GOOSE
Ed.1 test GOOSE supported
Ed.2 simulation GOOSE supported

Mappable GOOSE to binary outputs
Single -/double indication, integers and analog values

Sampled Values (SV)
According to IEC 61850-9-2 LE

Environment
Operating temp. 0°C to +50°C (32°F to +122°F)
Storage temp. -20°C to +70°C (-4°F to +158°F)
Humidity 5% – 95% RH, non-condensing

CE-marking
EMC 2004/108/EC , LVD 2006/95/EC

General
Internal storage 4 GB solid state , Memory 1GB DDR3
User interface 8,4" touchscreen
Power input 24V DC max 1.25A
Dimensions 265 x 212 x 56 mm (10.4 x 8.5 x 2.2")
Weight: 2,4 kg (5.3 lbs)
        3,4 kg (7.5 lbs) with accessories and case
Stainless steel with clear coating for electrical insulation

GridExcellence™

Standalone

8,4" Touch screen

Status LEDs

3 binary inputs

5 binary outputs

Grinded stainless steel

Back stand 45°

3 USB ports:
Storage, Mouse

1+2 ETH ports
RJ45 / FO LC

Time sync 1PPS

Ordering information

	Article number
GridEx 110, soft case, power adapter	14001-ww-I10
GridEx 120, I/O board, soft case, power adapter	14001-ww-I20
Accessories	
Soft case	14001-ww-SC1
Hard case	14001-ww-HC1
Fiber Optic Multimode cable LC/LC Duplex 3 m (10ft)	14001-ww-FO1
Fiber Optic Multimode cable LC/ST Duplex 3 m (10ft)	14001-ww-FO2
Fiber Optic Multimode cable LC/SC Duplex 3 m (10ft)	14001-ww-FO3
Set of banana cables (10pcs)	14001-ww-TL1

Software update and service programs available – Be Always updated and maximize uptime - Please ask your local reseller