Gantner instruments

Monitoring and Control of Utility Scale Photovoltaic Systems

MAXIMIZE THE ROI OF YOUR PV SYSTEMS

• Performance monitoring • Data acquisition • Visualization
• Analysis • Reporting • Custom features

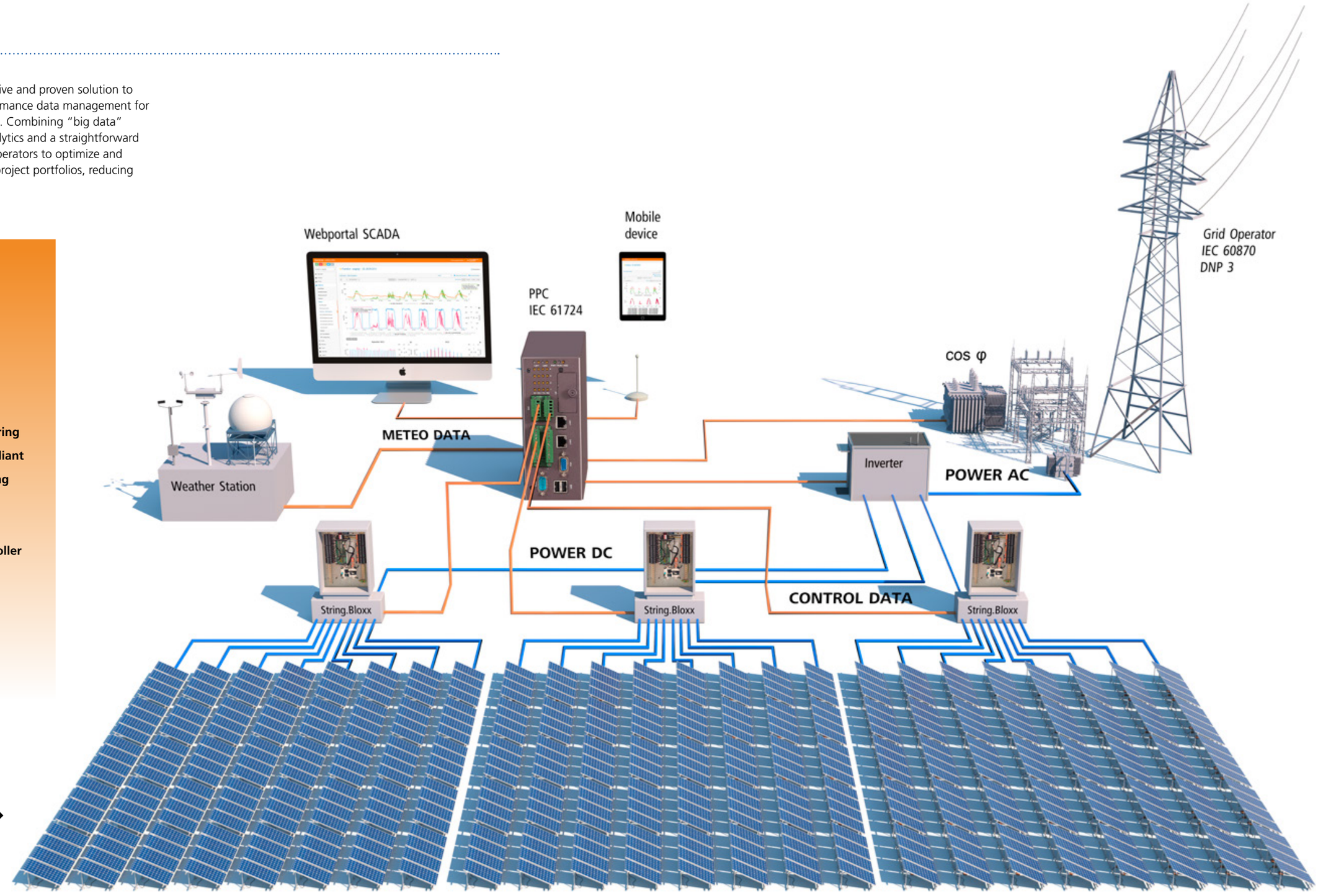
Quality made in Germany

DAQ CONCEPT

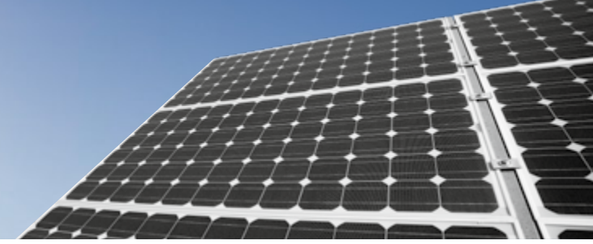
Gantner provides a comprehensive and proven solution to the growing challenge of performance data management for utility-scale PV project portfolios. Combining "big data" processing with easy-to-use analytics and a straightforward user interface enables project operators to optimize and control the performance of PV project portfolios, reducing O&M costs and LCoE.

INTELLIGENT SOLUTIONS

- **AC/DC Combiner**
- **Data Logger**
- **DNP3/IEC 60870**
- **Environmental Monitoring**
- **IEC 61724-1:2017 compliant**
- **Independent Monitoring**
- **Made in Germany**
- **Meteo station**
- **PPC Power Plant Controller**
- **RAS**
- **SCADA**
- **VDE-AR-N 4110**
- **VDE-AR-N 4120**
- **Worldwide Service**
- **Web Portal (SaaS)**



1500 V in stock



HARDWARE

We offer a broad range of hardware devices for monitoring of utility scale PV Power Plants.

Gantners latest string level monitoring devices „string.bloxx“ provide current measurements 10 times more accurate compared with competing monitoring solutions, not susceptible to temperature variance. Designed as an integral component of our individually customized DC Combiner boxes (DCB) „string.CB/CC“ they are applicable for string voltage up to 1500V and dimensioned for up to 32 PV strings. The composition of our highly demanded DCBs has been ten of thousand times successfully proven itself in various solar projects, often with very special requirements in terms of both technical performance and of regional standards as well as in extreme climatic conditions

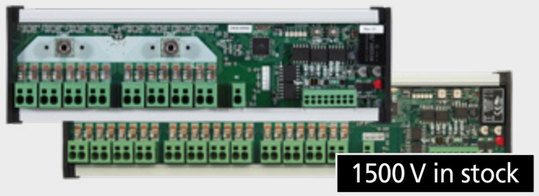
The heart of Gantners monitoring solution is the inverter independent datalogger Q.reader which tracks and controls all power plant information. The scalable modular design allows to control up to 100MW by one Q.reader. As Power plant controller (PPC) it provides all important functionality as absolute production constraint, power gradient constraint, voltage control, power factor control etc.

Also grid communication to electricity providers is in the scope of our solution and based on IEC 60870 standard

COM.bloxx and Z.bloxx are extension modules to the Q.reader.

AC Combiner boxes are used in PV Power Plants with decentral inverters to combine the AC power output of several inverters.

string.bloxx 116/124 E 1500 V



- Designed for 1500 VDC
- Dimensioned for upt to 32 PV strings

string.bloxx 08/16/24

- 8, 16, 24, 32 PV string inputs
- Shunt based technology with accuracy of 0.25 %

Z.bloxx

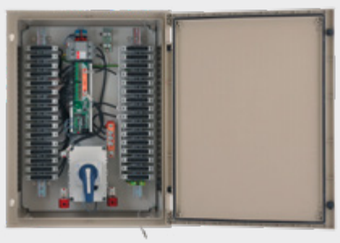
New

- Q.reader extension module for monitoring and control of analog as well as digital in-/outputs

AC Combiner

- Perfect customized solution for your individual PV project

string.CB/CC 08/16/24/32



- 8, 16, 24, 32 PV module string inputs
- Wall or ground mountable enclosure

COM.bloxx

New

- Q.reader RS485 extension module for data transmission via Ethernet/LAN

GLOBAL COMPETENCE
REFERENCES IN 26 COUNTRIES

MADE IN GERMANY


230 MW Egyptian Solar Park under construction

Shunt measure-ment ensures high accuracy and good stability:

Accuracy 0.25 %
Stability 0.01 %/K

Consistently designed for 1000/1500 VDC:

Terminals, cables, connectors, housings

DATA LOGGER AND CONTROL

Gantner's intelligent Q.reader data logger tracks and controls all power plant information.

The Q.reader integrates string level (current, voltage), inverter data, meteorological data from weather stations, grid measurements and other state variables (switch gear, transformer status). At the same time, it also acts as a power controller for the Distribution Network Operator (DNO).This accurate data acquisition and control concept is inverter independent and gives feedback about losses due to inverter malfunction, soiling, shading, PV module degradation etc.

Scaleable modular design

Up to 100 MW can be controlled by one Q.reader

Exemplary features of the data logger Q.reader

- Data logging and Power Plant Control PPC
- Scalable system architectures based on Linux
- IEC 60870, DNP3
- Protocols implemented from all leading inverter manufactures
- Configuration by Web frontend
- Distributed IO's analog and digital
- Communication RS-485, Ethernet interface
- Data transfer via cable (Modem, Ethernet/LAN) or wireless (GSM/LTE, WiFi)
- Industrial data memory
- Fanless design
- Touch screen display
- 100 MWp controlled by one single Q.reader central
- Compliant with new IEC 61724 Ed.2 "Photovoltaic System Performance Monitoring Guidelines for Measurement, Data Exchange and Analysis"

Power Plant Controller Features

• Absolute production constraint
• Power gradient constrain
• Voltage control
• Reactive power control
• Power factor control
• Frequency control

SOFTWARE

gantner.webportal

Gantner.webportal and SCADA solutions for PV performance monitoring, data storage, visualization, analysis and automated reporting provide transparency about the performance of your PV investment.

gantner.RAS

Gantner.RAS is a remote access service for global fleet management of onsite DAQ devices. Designed for Gantner Q.reader hardware and third party devices.

Main benefits with **gantner.**webportal

- Reduced risk for owner/investor and operator
- Comprehensive financial KPIs for investors
- One unified platform for effective and automated PV plant management
- Vendor-independent PV plant monitoring
- Provides baseline for energy prediction (day ahead), energy trading, etc.
- Fully compliant w/ international standards like IEC 61724 Ed.2
- Optimized PV production leads to increased asset value

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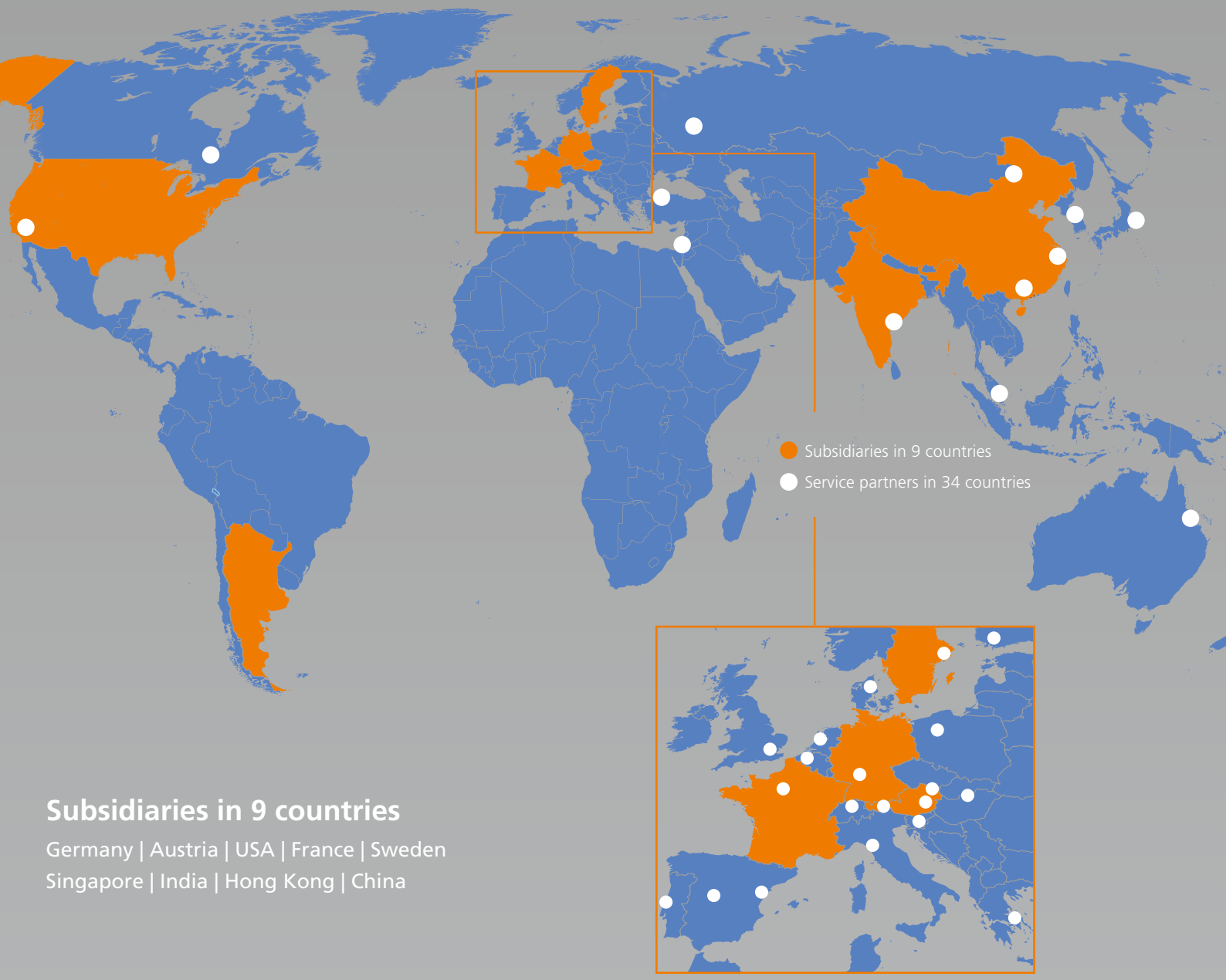
GLOBAL COMPETENCE



Subsidiaries in 9 countries

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Singapore | India | Hong Kong | China

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