ENERGY PRODUCTION
DATA MONITORING AND MANAGEMENT

B+B SmartWorx

Powered by **ADVANTECH**

3 TANK MONITORING

1 POWER PLANT

4 WIND TURBINES

2 WATER TREATMENT

5 SOLAR PANELS

6 ELECTRICAL SUBSTATION
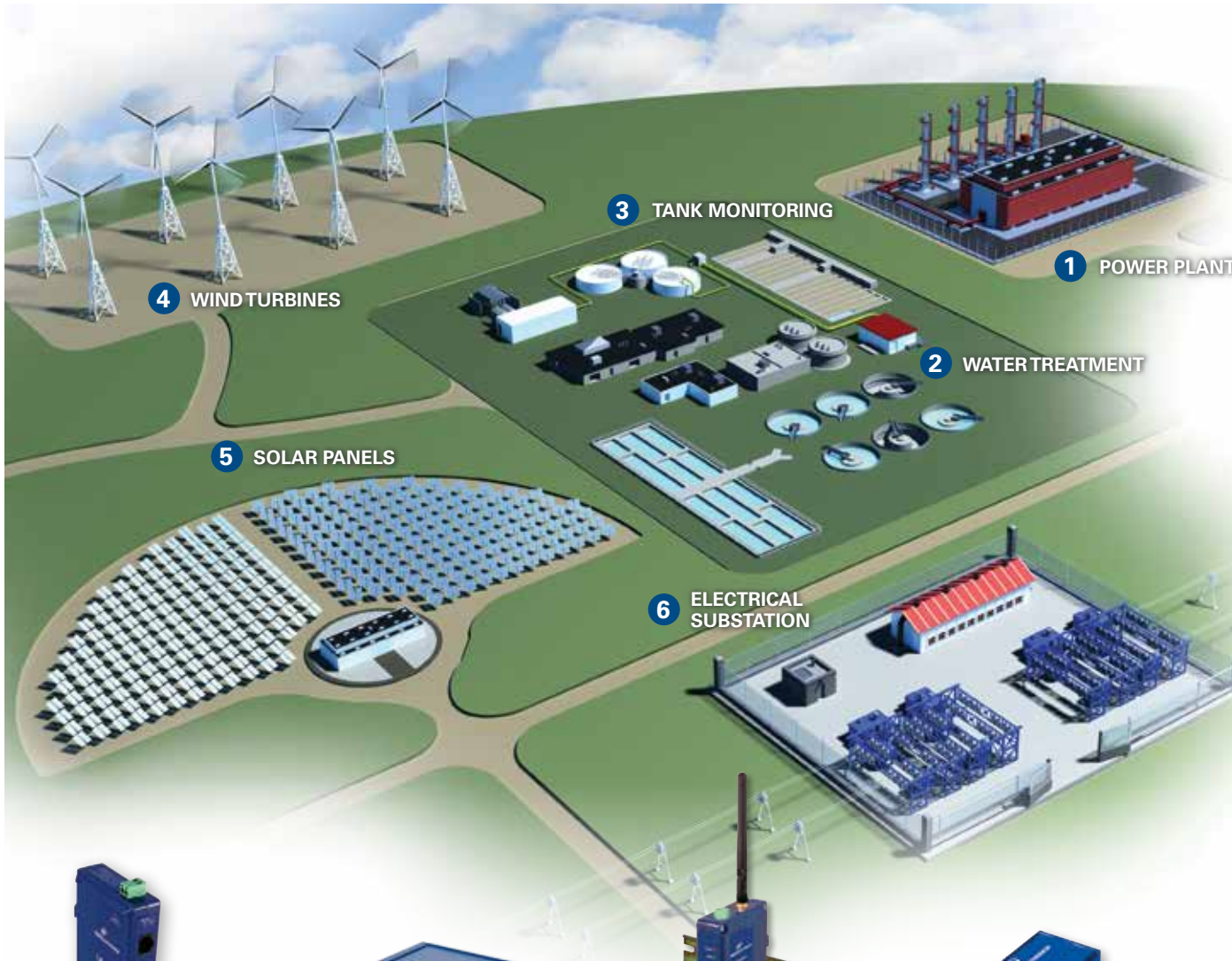
Energy utilities are expected to deliver uninterrupted, trouble-free service. It is no wonder they demand reliable data communication infrastructures.

Advantech B+B SmartWorx provides rugged, reliable M2M networking devices and connectivity solutions that keep these service critical networks running, even in harsh environmental conditions. Today, you can put this expertise to work for you.

Advantech B+B SmartWorx can help integrate the latest data technology solutions with legacy systems to ensure networks provide dependable performance. Whether you're designing a new system, retrofitting an existing one, or exploring connectivity options at your network's edge, Advantech B+B SmartWorx can help you reimagine your network, then select the data communication solutions necessary to make it a reality – with expert technical support every step of the way.

Wired or wireless, Modbus to TCP/IP, mountaintops to deserts, Advantech B+B SmartWorx products and solutions provide reliable data communications:

- Class 1/Division 2 rated products
- Wireless cellular routers, radio modems, I/O
- WiFi access points, routers, bridges, serial servers
- Serial converters, isolators, repeaters, surge protectors, cards
- Ethernet switches, routers, extenders
- Ethernet serial servers, gateways, media converters
- Custom & OEM engineered connectivity solutions

1 **POWER PLANT**
Modbus Ethernet to Serial Gateway
Model# MESR901

2 **WATER TREATMENT**
WiFi Cellular Router
Model# Spectre LTE & 3G series

3 **TANK MONITORING**
Wireless Radio Modem
Model# ZP24D-250RM-SR

4 **WIND TURBINES**
Mini Copper-to-Fiber Converter
Model# IE-MiniMc

5 **SOLAR PANELS**
Heavy-duty Surge Protector
Model# HESP4DR

6 **ELECTRICAL SUBSTATION**
Industrial Isolated Serial Repeater
Model# 4850PDRi-PH

www.advantech-bb.com

ENERGY UTILITIES
DATA COMMUNICATION SOLUTIONS

B+B SmartWorx

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INDUSTRIAL 10/100 MINI MEDIA CONVERTERS

- Cabinet-to-cabinet connectivity (I/O to PLC)
- Communication distances over 100 meters
- EMI/RFI shielding against transients, surges and spikes
- Secure, tamperproof networking via fiber
- NEMA TS2 (select models); EEE 802.3af compliant
- 10/100 and 10/100/1000Mbps options
- PNP, auto-negotiation, auto-cross (twisted pair cable)
- PoE, DC, AC, USB powering options; wide temperature

WIFI CELLULAR ROUTERS

- 3G: HSPA+/UMTS/CDMA/EDGE/GPRS
- 3G: 14.4 Mbps download, 5.5 Mbps upload
- 4G: LTE, EVDO, CDMA, UMTS, GSM
- 4G: 100Mbps download, 50 Mbps upload
- 10/100 Ethernet, 802.11b/g/n, Modbus. WiFi option
- VPN: IPsec, OpenVPN, PPTP, L2TP, EasyVPN, GRE
- DHCP, NAT/PAT/NAT-T, VRRP, DynDNS, VLAN, SMS, NTP
- Security: HTTPS, SSH, Firewall functions

WIRELESS INDUSTRIAL RADIO MODEMS

- 900 or 868 MHz, 2.4 GHz with AES encryption
- Up to 40mi/64km (line of sight, antenna dependent)
- RS-232/422/485; Modbus compatible
- Heavy-duty, DIN rail industrial case and components
- Wide temperature (-40 to 85°C)
- Wide power input: 10-48 VDC or 18-30 VAC
- UL Class1/Division2 (long range models)

MODBUS ETHERNET/SERIAL GATEWAYS & INDUSTRIAL SWITCHES

- Managed, unmanaged, PoE/PoE+
- UL Class 1/Division 2; NEMA TS 2 options
- Ethernet enable serial devices; real-time web managing
- Modbus TCP, ASCII, RTU, master/slave flexibility
- Serial DB9 or TB, copper, fiber, Ethernet pass-through
- Wide operating temperature (-40 to +80 °C)
- Wide 10-58 power range

THREE-STAGE SERIAL SURGE PROTECTOR

- Three stages of protection on every data line:
  1) Gas discharge tube
  2) Series resistor
  3) Transient voltage suppressor
- Protected signal ground connection
- Rugged terminal block connections
- Dedicated chassis ground lug
- NEMA TS2; Wide operating temperature

INDUSTRIAL ISOLATED SERIAL REPEATERS

- UL, C1/D2 listed; IEC-61850-3, IEEE-1613
- NEMA TS2; Shock/Vibration
- 2kV optical isolation on input/output/power
- Modbus ASCII/RTU compatible
- Wide temperature: -40 to 85°C
- 10-48 VDC input power
- IP30 metal panel mount case

Since 1981, Advantech B+B SmartWorx has designed and manufactured solutions to support many types of energy generation and distribution infrastructures.

COAL & FOSSIL FUEL PLANTS

SOLAR POWER GENERATION

HYDRO-ELECTRIC POWER SYSTEMS

WIND POWER GENERATION

NUCLEAR POWER GENERATION

PUBLIC WATER UTILITIES

WASTEWATER TREATMENT AND MONITORING

WELL LEVEL MONITORING