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SABRE™ RANGER 5000
Ruggedised BGAN/M2M Satellite Terminal
for Remote SCADA Applications

SABRE™ Ranger 5000 – Rugged and Weatherproof

SABRE™ Ranger 5000, the successor of SABRE™ Ranger M2M, just gets better! It is a compact all-IP, BGAN Machine-to-Machine (M2M) satellite terminal which provides reliable and secure IP data connection and it is an IP66 rated ruggedized terminal designed to withstand all types of weather conditions. The rugged mounting bracket (optional accessory) is made of stainless steel and it is designed for ease of setting up and effortless antenna pointing for outdoor installation.

The Connected World - Legacy Device Connectivity

The "Internet of Things" (IoT) refers to billions of Internet connected devices, ranging from industrial sensors to surveillances equipment, warning or alarm systems and a wide range of measuring devices. Moving from a world of isolated systems – to one where systems communicate with each other and the cloud server – allows companies to make more efficient and productive use of their assets and business processes. SABRE™ Ranger 5000 comes with a host of legacy device interfaces, such as built-in GPIOs, analog input port, RS232 and Ethernet ports, where business operations can continue to benefit from bringing both legacy and new equipment together on the same network. It also comes with a RS485 (Modbus) interface that supports direct connection

of multiple sensors without the need of using a separate Remote Terminal Unit (RTU).

The ultra-low idle power consumption (~1W) of SABRE™ Ranger 5000 terminal allows you to use a small solar panel to power up the system and makes it perfect for providing end to-end IP connectivity to sites that are off the grid.

Peace of mind – Robust and Reliable

It is a robust and reliable terminal that brings BGAN M2M technology to the field of SCADA applications for gathering data in real time from remote unmanned locations.

It is fully compatible with the Remote Terminal Manager (RTM) and M2M Access Platform (M2MAP), which allows the user to graphically view the location of the terminal and monitor the terminal status. The terminal can be controlled or configured remotely through SMS commands and the logs can be retrieved for debugging.

SABRE™ Ranger 5000, one of the key components of connectivity to realize the power of the IoT!

Wide range of sensors and actuators can be directly connected to SABRE™ Ranger 5000 terminal. Some examples are shown below:
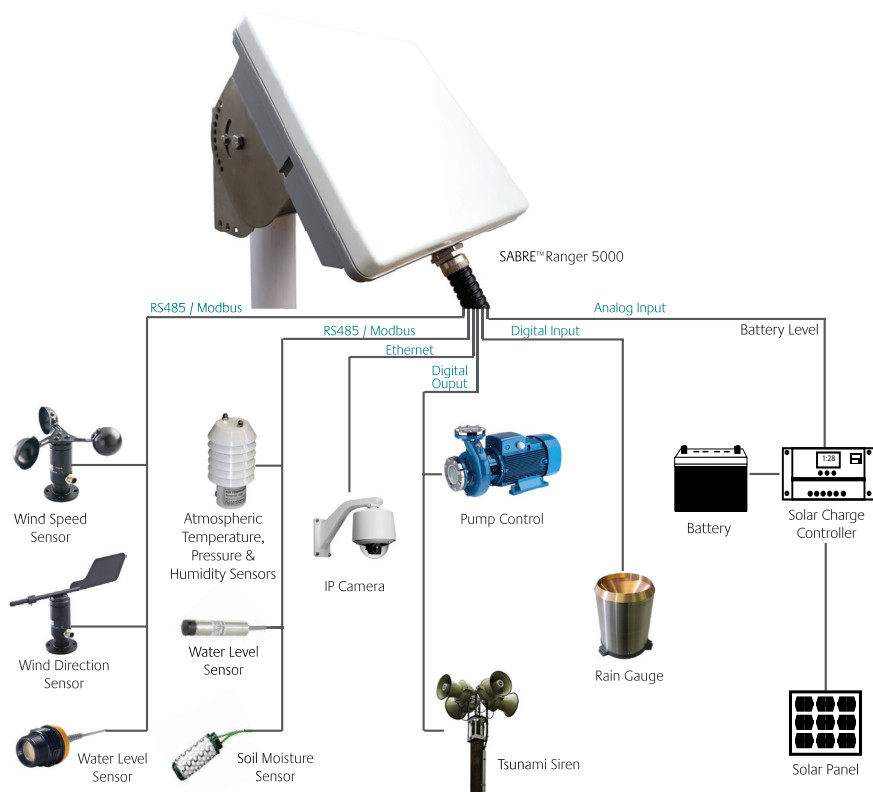
APPLICATIONS

Utilities
- ■ Recloser control
- ■ Transformer monitoring
- ■ Distribution automation
- ■ Solar & wind monitoring
- ■ Advanced metering infrastructure (AMI)
- ■ Hydro power-capacity planning
- ■ Sub-station monitoring

Oil and Gas
- ■ Pipeline monitoring
- ■ Flow measurement
- ■ Wellsite monitoring & control

Mining
- ■ Asset tracking
- ■ Geo fencing
- ■ Remote automation & control

Environmental/Agriculture
- ■ Water management and flood warning
- ■ Earthquake warning
- ■ Tsunami monitoring
- ■ Smart Farming
- ■ Weather monitoring

Package Contents
- ■ SABRE™ Ranger 5000 terminal
- ■ Quick Start Guide
- ■ Certificate of Inspection Sheet

Accessories
- ■ Mounting bracket

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Technical Specifications

Frequency Band
Transmit: 1626.5MHz – 1660.5MHz & 1668MHz - 1675 MHZ
Receive: 1518MHz – 1559MHz

Antenna
Type: Built-in patch antenna

Bearer Data Rate
M2M SIM
Standard IP: Up to 448/464kbps (send /receive)

BGAN SIM
Standard IP: Up to 448/464kbps (send /receive)
Symmetric Streaming IP: 32, 64, 128kbps

GNSS Air Interface
Integrated GNSS receiver and antenna
Supports GPS / Beidou / Glonass

Services
Standard IP, Streaming IP (BGAN SIM), SMS

Interfaces
2 x Ethernet Ports (RJ45)
2 x 12 PIN Terminal Block
　　1 x RS232 / RS485 with Modbus
　　1 x RS232 (debug)
　　4 x GPIO – Output
　　4 x GPIO – Input
　　1 x Analog Input Port
　　1 x Local wakeup - Input
1 x Power Supply Input (2 wires) Terminal Block
1 x DC Output
1 x Antenna Pointing Switch
5 x Pointing LEDs
1 x Antenna Pointing Buzzer
1 x Safe mode button
1 x SIM card holder
1 x Micro USB Port (reserved)

Firmware Upgrades
Over-the-air or via Ethernet RJ45

Supports 3GPP AT commands

OS Agnostic (supports access via Web-MMI)

Environmental
Operating Temp: -40°C to +75°C
                        Full operation when temp <+55°C
Operating Humidity: 95% (Non-condensing at +40°C)
Storage Temp: -40°C to +80°C
Water & Dust: IP66 compliant

Electrical
DC input: +10.8V to +32V
Power Source (min):   30W (excluding*)
*DC output: +12V/1A (for external devices)

Power Consumption
Receive: < 6 W
Transmit: 20 W (typical)
Standby mode: ~ 1 W
Low power standby Mode: < 50mW

Weight
~2.5 Kg

Dimensions
241(L) x 239(W) x 71(H) mm

Wind Loading
Up to 125 mph (200kph) with mounting bracket supplied by Addvalue

Regulatory Approvals
CE
FCC
IC (Industry Canada)
NEMA Type 4X
RoHS
IP66
Inmarsat Type Approval

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