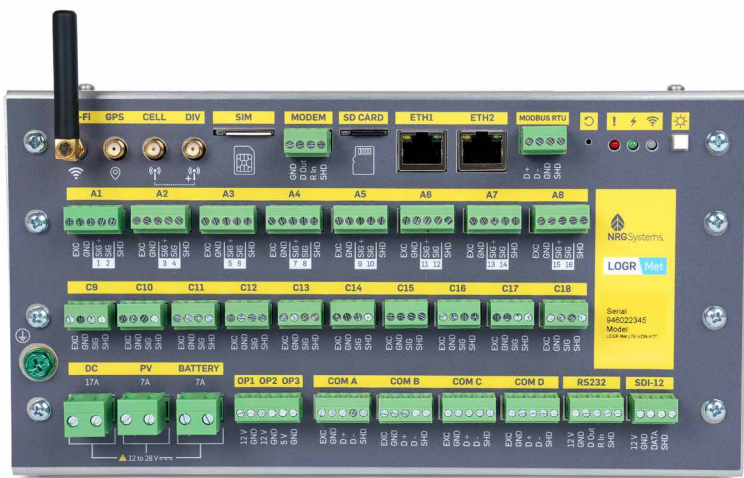# NRG LOGR | MET

## THE NEXT GENERATION IN WIND AND SOLAR RESOURCE ASSESSMENT AND MONITORING



The LOGR | Met Data Logger is a secure, highly versatile data logging system, powering NRG's trusted data ecosystem with unparalleled ease of use and efficiency. Its flexible and scalable design, advanced measurement capabilities, and intuitive interface ensure the highest quality data and seamless integration into any measurement campaign, driving project success at every stage.

### Key Features:

- **Advanced security measures** such as data encryption and encrypted web access protect information and reduce risk by ensuring data integrity and confidentiality

- **Unmatched sensor compatibility** via 16 differential/analog channels and 48 serial channels coupled with expandable storage makes LOGR | Met the renewable energy industry's most versatile and scalable data logger

- **Flexible connectivity** features include dual ethernet ports for simultaneous and secure local and SCADA network connections, an integrated cellular modem to maintain accessibility in remote locations, and built-in Wi-Fi for immediate on-site device access and configuration capability

- **Optimal accessibility** through integration with NRG Mobile App and NRG Cloud facilitates effortless data synchronization, real-time measurement monitoring, remote site configuration, and secure data management from anywhere

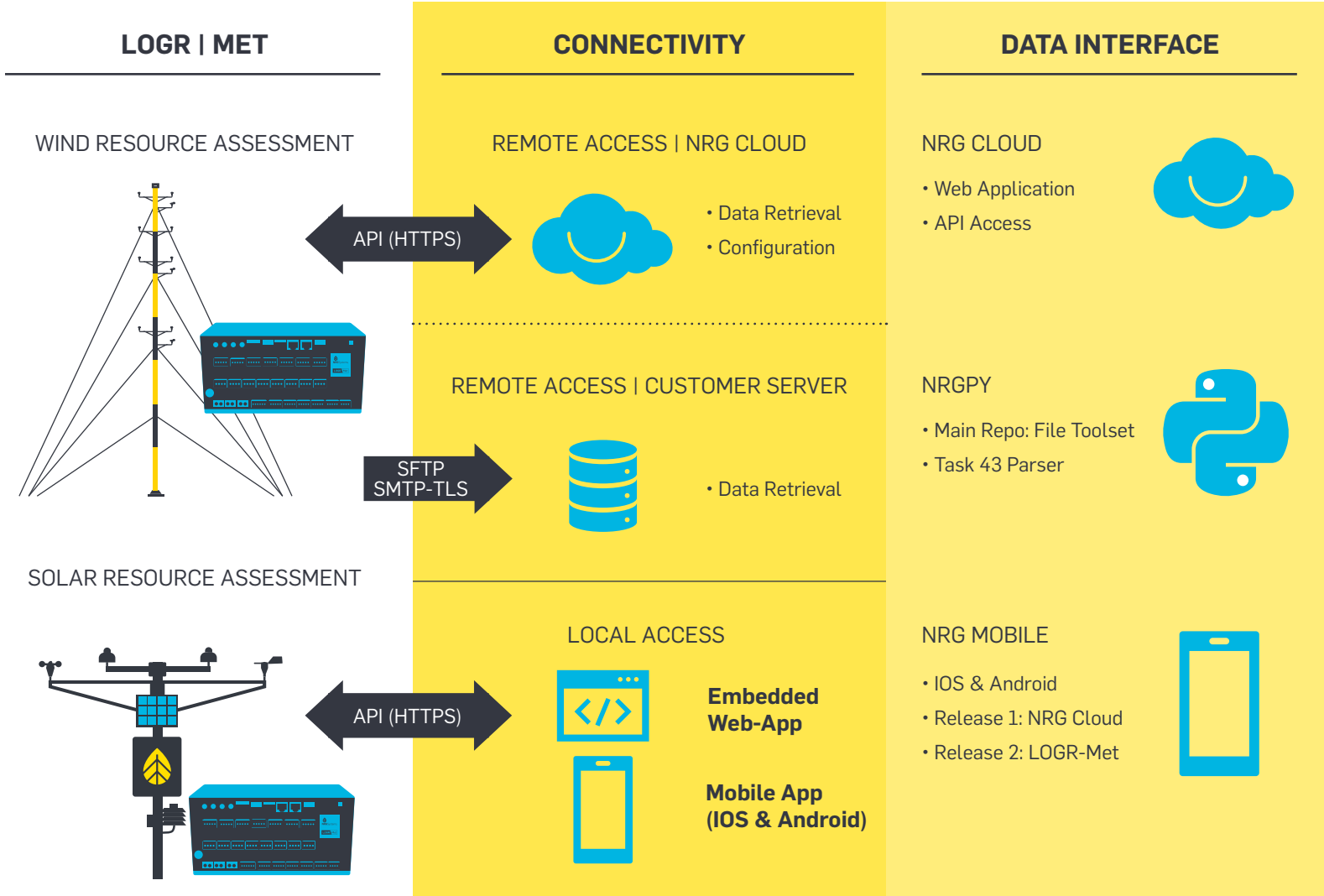- **Enhanced data accuracy** thanks to the precise geolocation information provided by built-in GPS

# NRGSystems®

# DATA LOGGER COMPARISON

| | SymphoniePRO (26-Ch) | LOGR | Solar | LOGR | Met |
|---|---|---|---|
| **Sampling Interval** | 1 Hz | 1 Hz | 1 Hz |
| **Averaging Interval** | 1-60 min | 1 min | 1, 5 or 10 min |
| **Storage Medium** | 8 MB internal flash memory with options for either 512 MB or 2 GB SD card | 8 GB microSD | 8 GB microSD (upgradeable) |
| **Terminal Termination** | Screw Terminals | Screw Terminals (Plugs) | Screw Terminals (Plugs) |
| **Channel Capacity** | 14 analog channels: 7 built-in, 7 configurable with signal conditioning modules (P-SCMs) | 14 analog channels, 7 differential | 8/16 differential/analog channels |
| | 2 RS-485 communication channels, each full or half duplex with support for up to 6 devices | 24 serial channels via 2 RS-485 communication ports | 48 serial channels via 4 RS-485 communication ports |
| | 12 counter channels, 10 calculated channels | 5 counter channels, 10 calculated channels plus dedicated soiling ratio calculation | 10 counter channels - independent terminals, 20 calculated channels |
| | No dedicated soiling channel | 2 PV Input channels (soiling measurement) | No dedicated soiling channels |
| **Recorded Parameters** | Average, St. Dev, Min/Max 1-sec sample, Max 3-sec gust with di- rection, Sum for totalizer inputs | Average, St. Dev, Min/Max 1-sec sample, Max 3-sec gust with direction, Sum for totalizer inputs | Average, St. Dev, Min / Max 1-sec sample, Max 3-sec gust with direction, Sum for totalizer inputs |
| **Security** | Logger access PIN with 2-day lockout after 8 failed attempts, 128-bit data file encryption with user-specified password | Password-protected web server access | • Password-protected web server access.<br>• Optional data encryption at rest<br>• Encrypted web-gui access SFTP, SMTP (TLS) |

| | | SymphoniePRO (26-Ch) | LOGR \| Solar | LOGR \| Met |
|---|---|---|---|---|
| **Resolution** | **Analog Measurement Accuracy** | ±0.04% Full Scale | Uncertainty (k=2): 450 µV @ (-10 to +10) V \| 61 µV @ (-1 to +1) V \| 8.5 µV @ (-70 to +70) mV | Uncertainty (k=2): 450 µV @ (-10 to +10) V \| 61 µV @ (-1 to +1) V \| 8.5 µV @ (-70 to +70) mV |
| | **Analog Measurement Resolution** | 16-bit A/D conversion (76 uV resolution across 5 V range) | 24-bit signed A/D conversion | 24-bit signed A/D conversion |
| **Configuration** | **User Interface** | SymphoniePRO Desktop Application | Web-based user interface via Ethernet connected computing device with supported browser | • Web-based user interface via<br>• Ethernet/Wifi/Cellular connected computing device with supported browser<br>• Mobile & Desktop Application for configuration<br>• NRG Cloud |
| | | LCD with 16 button keypad with audible feedback | Recessed reset button on front panel | • Recessed reset button on front panel<br>• 3 LEDs & Audible Beeper |
| **Power** | **Batteries** | Two (2) 1.5 volt D-Cell batteries (included with logger) | • 12V external battery for system power<br>• Coin cell battery for clock backup | • 12V external battery for system power<br>• Coin cell battery for clock backup |
| | **External Power Input** | 14 VDC iPackGPS 2300mhA equipped with PV provides autonomous power to data logger when connected, making D-Cell batteries back up power | 16 - 28 VDC | 10 to 28V DC input |
| | **External Solar Input** | Yes, 16-28 VDC | External charge control required | PV Input (integrated charge controller) |
| | **External Power Output** | 5V, 12V sensor power | Constant 12 V source for powering analog sensors (50 mA per excitation port, 7 ports) | Constant 5 & 12V and pulsed source for powering sensors |
| | | Requires external power supply | Constant 12 V source for powering Modbus sensors (1000 mA shared by three COM-A ports and additional 1000mA to COM-B port) | Constant 12 V source for powering Modbus sensors (1000 mA for each of the 4 COM ports with one terminal block per port) |
| **Software** | **Type** | Desktop App | Onboard web server for logger configuration and administration | Onboard web server for logger configuration and administration |
| **Environmental** | **Operating Temperature Range** | -40 °C to 65 °C (-40 °F to 149 °F) | -40 °C to 65 °C (-40 °F to 149 °F) | -40 °C to 65 °C (-40 °F to 149 °F) |
| | **Operating Humidity Range** | 0 to 100% relative humidity non-condensing | 0 to 100% relative humidity non-condensing | 0 to 100% relative humidity non-condensing |
| | | IP65 | IP65 ingress protection with proper installation in NRG shelter box enclosure | IP65 ingress protection with proper installation in NRG shelter box enclosure |
| **Physical** | **Dimensions** | (222 x 187 x 74) mm | (190 x 102 x 102) mm | (246 x 135 x 132) mm |
| **Other** | **Web Service** | NRG Cloud | NRG Cloud | NRG Cloud |
| | **Programmability** | User friendly | User friendly | User friendly |
| | **Smart Sensor** | 2 ports | 2 ports - 4 terminal blocks | 4 ports - 4 terminal blocks |
| | **Warranty** | 2 years | 2 years | 2 years |
| | **Mobile App** | ✗ | ✗ | ✓ |
| | **GPS** | ✓ | ✗ | ✓ (for units with internal modems) |
| | **Modem (4G LTE)** | iPack | External | ✓ |

# POWERING NRG'S DATA ECOSYSTEM WITH LOGR | MET

| LOGR | MET | CONNECTIVITY | DATA INTERFACE |
|---|---|---|

## LOGR | MET

### WIND RESOURCE ASSESSMENT

### SOLAR RESOURCE ASSESSMENT

## CONNECTIVITY

### REMOTE ACCESS | NRG CLOUD

API (HTTPS)

- Data Retrieval
- Configuration

### REMOTE ACCESS | CUSTOMER SERVER

SFTP
SMTP-TLS

- Data Retrieval

### LOCAL ACCESS

API (HTTPS)

**Embedded Web-App**

**Mobile App (IOS & Android)**

## DATA INTERFACE

### NRG CLOUD

- Web Application
- API Access

### NRGPY

- Main Repo: File Toolset
- Task 43 Parser

### NRG MOBILE

- IOS & Android
- Release 1: NRG Cloud
- Release 2: LOGR-Met

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**NRG**Systems®