GEONET NETWORK LOGGERS + DATA HOSTING SYSTEM

GEOKON®

MODEL 8920, 8930 SERIES

GEOKON®
Server + OpenAPI

Networked
Addressable
Logger

Secure Cellular/
Wi-Fi Connection

Networked
Tilt Logger

Networked
8-Channel
VW Logger

Secure data access
via Vista Data
Vision or GEOKON
AGENT Software

GeoNet Network Loggers + Wireless Data Hosting System with Cloud integration and secure data access

APPLICATIONS

Typical applications include:

- Groundwater monitoring
- Tailings dams
- Mining/slope stability
- Structural monitoring of buildings, bridges, excavations and tunnels
- Historical structures

INTRODUCTION

GEOKON Model 8920 and 8930 Series Loggers offer a high-value, networked data collection option for all GEOKON vibrating wire instruments and digital sensor (MEMS IPI and VW) strings. Each logger comes from the factory ready for deployment and may commence with data acquisition in minutes.

Sensor data is collected and transferred via a cellular or Wi-Fi network to a secure cloud-based storage platform where it can be accessed through the GEOKON OpenAPI. Industry leading data visualization software, such as Vista Data Vision, or the free GEOKON Agent program can be used with the OpenAPI for data viewing and reporting. Commissioning, billing and configuration are accomplished via the easy to use GEOKON API Portal.

The portal allows users to activate loggers, change settings, configure sensor channels, and view current logger status.

The API Portal can be found at api.geokon.com and the GEOKON Agent program can be downloaded at www.geokon.com/software.

Tilt Loggers, which combine the functionality of a biaxial tiltmeter and a Network Logger, are also available.

Model 8960 Digital Vibrating Wire interfaces can be connected to GeoNet Multi-Channel and Addressable Loggers to expand the capacity of the logger. Multiple VW interfaces can be daisy-chained together to bus the data to a single Logger. The bus limit is 32 units or 64 Channels. Refer to the Model 8960 data sheet for more information.

TILT LOGGER SPECIFICATIONS

Range[1]	±90°
Resolution (99% Confidence Interval[2])	±0.00025° (±0.004 mm/m)
Precision (99% Confidence Interval[3])	±0.0075° (±0.13 mm/m)
Nonlinearity	±0.005° across ±30° range (±0.09 mm/m)
Temperature Dependent Uncertainty	±0.019°/°C (±0.33 mm/m/°C)
Axis	2
Data Memory	32 MB
Storage Capacity	500,000 readings
Thermistor Accuracy	1% (0.5° C thermistor point match)
Thermistor Resolution	0.032° C
Scan Interval	Min: 10 minutes; Max: 1 day
Power Supply	Mains power or solar
Operating Temperature	−40° C to +85° C (range varies by power source)
Enclosure	Die-cast aluminum 120 × 122 × 91 mm

[1] Calibrated Range: ±30°
[2] 99% confidence interval (i.e. 99 out of 100 individual readings fall within this tolerance).
[3] Includes random walk (changes between consecutive readings that have no discernible cause) and seismic noise during testing.

ADDRESSABLE LOGGER SPECIFICATIONS

Data memory	32 MB
Storage Capacity	Varies by sensor sting connected
Communication Protocol	RS-485 Modbus
Thermistor Accuracy	1% (0.5° C thermistor point match)
Thermistor Resolution	0.032° C
Scan Interval	Min: 10 minutes; Max: 1 day
Power Supply	Mains power or solar
Operating Temperature	−40° C to +85° C (range varies by power source)
Enclosure	Die-cast aluminum 120 × 122 × 91 mm

TRUSTED MEASUREMENTS™

VW LOGGER SPECIFICATIONS

Trueness	0.082 Hz
Frequency Precision²	±0.146 Hz
Frequency Resolution	±0.002 Hz
Thermistor Accuracy	1% (0.5° C thermistor point match)
Thermistor Resolution	0.032° C
Scan Interval	10-1440 Minutes
Power Supply	Mains power or solar
Operating Temperature	−40° C to +85° C (range varies by power source)
VW Frequency Range	400–6,500 Hz
Dimensions (L × W × H)	120 × 122 × 91 mm (single-channel, addressable, tilt) 160 × 260 × 91 mm (four-channel) 180 × 280 × 101 mm (eight-channel)

ORDERING INFORMATION

Example Part Number: 8920-LTM-01C-CBL

MODEL:
8920: Cellular
8930: Wi-Fi

CELLULAR NETWORK (Omit for 8930 Models):
LTM: LTE-M
03G: 3G

LOGGER TYPE:
01C: Vibrating Wire
04C: 4-Channel Vibrating Wire
08C: 8-Channel Vibrating Wire
ADR: Addressable
TLT: Tilt

SENSOR CONNECTION:
CBL: Cable Gland
NAP: Not Applicable