

## GEO-DATALINK MOBILE APP - DATASHEET -

GEO-DATALINK ALLOWS THE LATEST GENERATION OF WEATHER STATIONS, METEODATA/HYDRODATA-4000, TO BE MANAGED VIA AN iOS OR ANDROID TERMINAL FROM ANYWHERE WITH AN INTERNET CONNECTION.



- Data is collected by the remote stations in real time.
- Access to historical data that can be downloaded in files and viewed graphically.
- Transfer of data files to an FTP or cloud (Drive or iCloud).
- Functionality designed to simplify start up and maintenance tasks.
- Secure, password protected communication with METEODATA/HYDRODATA-4000 to ensure that only authorised users can access the data.
- Completely autonomous tool: does not require any type of program to be run on the client's or supplier's servers since it establishes a direct communication link with the station.
- It is based on TCP/IP communications: fast, secure and reliable.
- Efficient data transfer.
- Available through the main app distribution platforms: Google Play and Apple Store.

GEO-DATALINK is an application for mobile terminals included in Geo-DataView software package supplied by GEONICA. This powerful tool offers to the user the possibility of accessing a wide variety of functions to interact with the METEODATA/HYDRODATA-4000 station. The application simplifies maintenance,

verification and data download tasks either in-person or remotely. GEO-DATALINK, which has been developed entirely by GEONICA, addresses the main requirements related to data acquisition platforms that have been collected during the company's forty plus years of experience.

### MAIN FEATURES

Geo-DataLink connection assistant with METEODATA/HYDRODATA-4000 stations



Download of data stored in the station's internal memory and upload to FTP or the cloud



Graphical display of historical data downloaded from the station



Specific option for water quality projects



Real-time, instantaneous graphical display of data



Check the station's internal element status in real time



Change the basic configuration of the METEODATA/HYDRODATA-4000 station



Direct link between station and Geonica's technical support



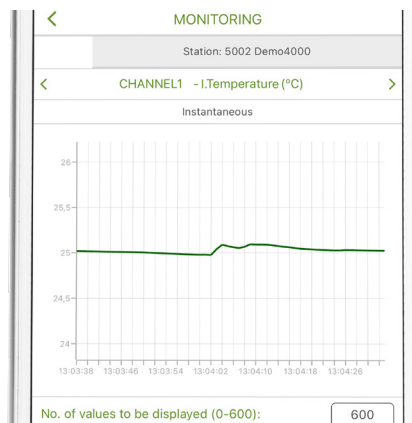




## MONITORING

Module that provides real-time access to the data collected by the sensors connected to the weather station.

- Graphical view of the evolution of instantaneous samples.
- Table of numerical values that is periodically updated with the latest statistical data processed by the station.
- Access the evolution of historical statistical data downloaded from the station by clicking on any processed data in the chart (maximum, average, standard deviation, etc.).
- Customised on-screen graph management: number of samples included in the graph, 'double-tap' gesture to enlarge the on-screen graph, etc.



## DIAGNOSTIC

This module allows the user to see the internal status of the station.

- Access to the remote station self-diagnostic test result in real time:
  - Internal voltage levels.
  - Status of internal batteries and lithium battery for RTC.
  - Status of solar panel charging system.
  - Percentage of used memory in the station (integrated eMMC memory and removable micro-SD memory for data backup)
- Alarms in sensors.
- 4G connection status.
- Micro-SD card for data backup secure removal button.
- Micro-SD card for data backup format button.
- Access to station version information: firmware, configuration, etc.

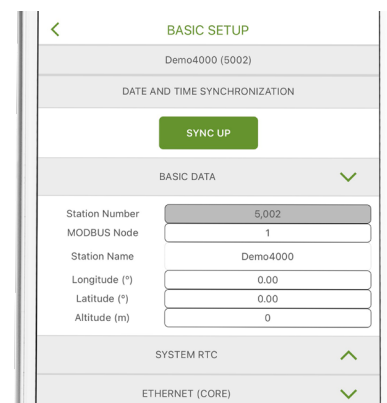
SELF-DIAGNOSTICS TEST	
Demo4000 (5002)	
Supply statuses	
5VAC	✓
3V3D	✓
3V3AP	✓
25VAC	✓
Power5VLL	✓
SUPPLY1	✓
VBCCK	✓
2V5REF	✓
5VOUT	✓
12VEX	✓
4V	✓
Power5V3AETH	✓
3V3A	✓
5VA	✓
5VB	✓
VBAT	✓
12V	✓
5VGOOD	✓
LL_WAKE	✓



## CONFIGURATION

Access to the configuration of the METEODATA/HYDRODATA-4000 remote station to make on-site station maintenance and start up easier:

- Name: character string that identifies the station-the site name is often used.
- Time zone associated with the station.
- Geolocation of the remote station: geographic coordinates of the site.
- Modbus node configuration for SCADA applications.
- Configuration of the remote station's internal modem: APN, user and password associated with the operator in use, power management, etc.
- Configuration of the remote station's Ethernet1 port: IP address, netmask, gateway, DNS, etc.
- Management of activation/deactivation of other communication interfaces: Wi-Fi, redundant Ethernet, etc.
- Storage period setting for each of the remote station channels.
- Configuration of the calibration constants for each of the sensors connected to the remote station.  
*Example: pyranometers, pyrhelimeters, etc.*
- Remote station date/time synchronisation.



## WATERQUAL

Specific module for water quality projects.

The 'WATERQUAL' module is disabled by default for the rest of the METEODATA/HYDRODATA-4000 station applications.

Check availability with GEONICA.



## REMOTE ACCESS

- Direct link between the station and the GEONICA technical department via the mobile terminal's 3G/4G network to make remote assistance tasks easier.
- On one hand, the mobile terminal connects to the station using its WiFi interface. On the other hand, the mobile terminal connects to GEONICA's cloud using the mobile data interface. In this way, all the information that the mobile receives from the station is sent to the cloud and vice versa.
- This functionality indicates the bytes exchanged between GEONICA and the station.
- The 'REMOTE ACCESS' is automatically switched off after an idle period.

## TECHNICAL SPECIFICATIONS

### Architecture and Programming

<b>PROGRAMMING</b>	<ul style="list-style-type: none"> <li>Integrated cross-platform development</li> <li>Microsoft Xamarin</li> </ul>
<b>DATABASE</b>	<ul style="list-style-type: none"> <li>SQLite</li> </ul>
<b>SECURITY</b>	<ul style="list-style-type: none"> <li>Password protected access to each station</li> </ul>

### Compatibilities

<b>ANDROID</b>	<ul style="list-style-type: none"> <li>Android 7.0 - 7.1.2 (Nougat)</li> <li>Android 8.0 - 8.1 (Oreo)</li> <li>Android 9.0 (Pie)</li> <li>Android 10</li> <li>Android 11 or later</li> </ul>
<b>iOS</b>	<ul style="list-style-type: none"> <li>iOS 10.x 11.x 12.x 13.x 14.x or later</li> </ul>
<b>DEVICES/ TERMINALS</b>	<ul style="list-style-type: none"> <li>SmartPhone</li> <li>Tablet</li> </ul>
<b>REMOTE STATIONS</b>	<ul style="list-style-type: none"> <li>METEODATA/HYDRODATA-4000 Series</li> </ul>

### Installation

<b>DOWNLOAD</b>	<ul style="list-style-type: none"> <li>Google Play Store</li> <li>Apple Store</li> <li>Direct download of installer from link</li> </ul>
<b>FILES</b>	<ul style="list-style-type: none"> <li>Extension 'apk' (Android)</li> <li>Extension 'ipa' (iOS)</li> </ul>
<b>MANAGEMENT OF UPDATES</b>	<ul style="list-style-type: none"> <li>OTA (Over The Air)</li> </ul>

### Communications

<b>LOCAL</b>	<ul style="list-style-type: none"> <li>Wi-Fi (mobile terminal acts as client)</li> <li>Remote station acts as access point (VAP)</li> </ul>
<b>REMOTE</b>	<ul style="list-style-type: none"> <li>Ethernet - LAN local access and remote access (with NAT) (The mobile device can be connected to a Wi-Fi or a 3G/4G network, considering that the remote communication with the station must be enabled by the administrator of the network where the station is connected to)</li> <li>3G/4G Modem (Mobile device can be connected to a Wi-Fi or 3G/4G data network)</li> </ul>
<b>PROTOCOLS</b>	<ul style="list-style-type: none"> <li>METEODATA/HYDRODATA-4000 protocol (GDCP): Direct exchange of info. between station and app</li> <li>TCP/IP</li> <li>FTP</li> </ul>

### Fundamental aspects

<b>REMOTE STATION INFORMATION</b>	<ul style="list-style-type: none"> <li>Real time instantaneous data</li> <li>Stored data (statistics)</li> <li>Real time self-diagnostic data</li> </ul>
<b>DATA VISUALIZATION</b>	<ul style="list-style-type: none"> <li>Instantaneous/historical data graph</li> <li>Numerical values</li> </ul>
<b>DATA DOWNLOAD</b>	<ul style="list-style-type: none"> <li>Local folder</li> <li>Remote FTP</li> </ul>
<b>EXPORT FORMATS</b>	<ul style="list-style-type: none"> <li>CSV (Comma-separated values)</li> </ul>
<b>AVAILABLE LANGUAGES</b>	<ul style="list-style-type: none"> <li>Spanish</li> <li>English</li> </ul>

### Software editions

	Geo-DataView BASIC	Geo-DataView ADVANCED	Geo-DataView PREMIUM	Geo-DataView PRO	Geo-DataView ENTERPRISE
WEBTRANS-4K Cloud Service		✓	✓		
Distributable WEBTRANS-4K Web Server					✓

REVISION	EDITED	REVIEWED	DATE	AFFECTED SECTIONS	VERSIONS
2	P.V.	L.L.	8/10/2021	Initial document	Geo-DataLink v2.0.0



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