Mobile App

GEO-DATALINK

INTRODUCTION

Geo-DataLink is a mobile app (iOS / Android) that allows weather and hydrological stations to be managed from anywhere with an internet connection. It is part of the GEO-DataView software package and gives users real-time access to station data and key functions for maintenance, verification and data download, either on site or remotely.

Developed entirely by Senseca, the app is based on TCP/IP communications and the proprietary binary protocol, providing fast, secure and password-protected links directly between the mobile device and the remote station, without requiring extra software on customer or supplier servers. Data can be viewed graphically, downloaded and then transferred to FTP servers or main cloud storage platforms.

FEATURES

Access to Senseca stations from the mobile terminal.
Manage METEODATA-4000 stations from iOS and Android devices, both locally and remotely, through Wi-Fi, Ethernet, or 3G/4G connections.

Real-time and historical data on the phone
It shows current real-time measurements and historical statistical data in tables and graphs directly on the mobile device.

Flexible data download and export
Downloads data from station memory in selected time ranges and exports it in CSV format for local storage, FTP servers or cloud services.

Tools for commissioning and maintenance
Supports station start-up, configuration and routine checks, reducing on-site visits and maintenance time.

Secure, direct communication
Uses password-protected TCP/IP links and the proprietary binary protocol, with no intermediate server software required.

CONFIGURATION & OPERATION

Connection setup
Geo-DataLink uses proprietary binary protocol over TCP/IP and includes a connection assistant that guides the user in configuring the link through any enabled interface on the station (4G modem, Ethernet, Wi-Fi access point, etc.).

Data handling (DOWNLOAD & LOGS)
The DOWNLOAD function retrieves all or part of the station's historical memory and saves the data on the device so it can later be exported as CSV files. The LOGS view lets the user explore downloaded data with graphs over time windows.

Monitoring in real time
The MONITORING module displays instantaneous values and recent statistics, providing a quick check of station behaviour and data quality.

Station setup and diagnostics
CONFIGURATION and DIAGNOSTIC screens allow adjustment of key parameters (time, communications, logging periods, sensor constants) and real-time checking of voltages, batteries, memory, alarms and communication status. An additional REMOTE ACCESS mode can be enabled for technical support, and a WATERQUAL module is available for water-quality projects.
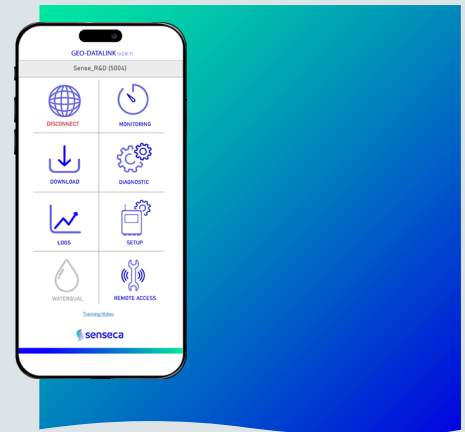
- **REAL-TIME ACCESS TO DATA COLLECTED BY REMOTE STATIONS**

- **DOWNLOADABLE HISTORICAL DATA, VIEWABLE IN GRAPHICAL OR TABULAR FORM**

- **TRANSFER OF DATA FILES TO FTP SERVERS OR CLOUD STORAGE (DRIVE, ICLOUD, ETC.)**

- **FUNCTIONS DESIGNED TO SIMPLIFY STATION START-UP AND MAINTENANCE TASKS**

- **SECURE, PASSWORD-PROTECTED COMMUNICATION WITH METEODATA-4000 SO ONLY AUTHORISED USERS ACCESS THE DATA**

- **FULLY AUTONOMOUS TOOL THAT CONNECTS DIRECTLY TO THE STATION WITHOUT REQUIRING SOFTWARE ON CLIENT OR SUPPLIER SERVERS**

- **BASED ON FAST, SECURE AND RELIABLE TCP/IP COMMUNICATIONS FOR EFFICIENT DATA TRANSFER**

- **AVAILABLE THROUGH THE MAIN APP STORES: GOOGLE PLAY AND APPLE APP STORE**

Making the unknown, known

Technical Specifications

ARCHITECTURE AND PROGRAMMING

Programming	Integrated cross-platform development
Database	SQLite
Security	Password protected access to each station

COMPATIBILITIES

Android	Android 7.0 – 7.1.2 (Nougat)
	Android 8.0 – 8.1 (Oreo)
	Android 9.0 (Pie)
	Android 10
	Android 11 or later
iOS	iOS 10.x 11.x 12.x 13.x 14.x or later
Devices / Terminals	SmartPhone
	Tablet
Remote Stations	METEODATA-4000 Series

INSTALLATION

Download	Google Play Store
	Apple Store
	Direct download of installer from link
Files	Extension ´apk´ (Android)
	Extension ´ipa´ (iOS)
Management of updates	OTA (Over The Air)

COMMUNICATIONS

Local	Wi-Fi (mobile terminal acts as client)
	Remote station acts as access point (VAP)
Remote	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) 3G/4G Modem (Mobile device can be connected to a Wi-Fi or 3G/4G data network)
Protocols	METEODATA-4000 proprietary binary protocol: direct exchange of info between station and app
	TCP/IP
	FTP

FUNDAMENTAL ASPECTS

Remote station information	Real time instantaneous data
	Stored data (statistics)
	Real time self-diagnostic data
Data Visualization	Instantaneous/historical data graph
	Numerical values
Data Download	Local folder
	Remote FTP
Export formats	CSV (Comma-separated values)
Available languages	Spanish
	English

1 - COMMUNICATION   5 - MONITORING
2 - DOWNLOAD   6 - DIAGNOSTIC
3 - LOGS   7 - CONFIGURATION
4 - WATERQUAL   8 - REMOTE ACCESS

1. Uses the proprietary binary protocol and a connection assistant to link with METEODATA-4000 via any available interface (modem, Ethernet, Wi-Fi, etc.), using the connection details shown inside the station cabinet.

2. Downloads the station's historical data (full memory or date range), exports it in CSV and stores it locally or on FTP/cloud, with download and upload as separate actions.

3. Lets you review previously downloaded data at any time, with optimised 2-day graphs.

4. Optional module dedicated to water-quality projects, disabled by default and enabled on request.

5. Provides real-time access to sensor data with graphs and numeric tables, plus quick access to historical statistics by tapping on any processed value.

6. Shows the station's internal status in real time (voltages, batteries, charger, sensor alarms, 4G link) and manages the backup micro-SD card and firmware/configuration information.

7. Allows editing of key station settings (name, time zone, location, communications, storage periods, Modbus node and sensor calibration), including date/time synchronisation.

8. Creates a temporary data tunnel between station and the technical support (Wi-Fi to station, 3G/4G to cloud) for remote assistance, automatically closing after an idle period.

GEO-DataView packages

Geo-DataLink is part of the GEO-DataView software family used to manage and display data from METEODATA-4000 stations.

GEO-DataView is offered in several versions (BASIC, ADVANCED, PREMIUM, PRO and ENTERPRISE) that combine the mobile app with Webtrans-4K cloud services, optional SIM data contracts, Teletrans-W4K desktop software and/or a distributable Webtrans-4K server. This allows each project to choose the level of functionality and services best suited to its data access and visualisation needs.

vs1.0

senseca