AGRINOVO-MSA-100

MobileSense RS485 Field Reader Adapter

1. Overview

The AGRINOVO-MSA-100 MobileSense adapter turns an Android phone into a professional field reader for Agrinovo RS485 digital probes. It plugs into the phone's USB Type-C port on one side and connects to an Agrinovo probe on the other, so a worker can take a live measurement anywhere without a separate handheld meter, logger, or controller.

The probe side uses the same connector as the Genesis controller, so each supported Agrinovo probe connects directly, with no adapters and no rewiring. The same probe that runs on a fixed Agrinovo controller works as a handheld field reader through MobileSense. One probe, two roles. Readings appear on screen in real time and are recorded in OmniCloud with the worker, the time, and the GPS location of every measurement.

Features

- Turns an Android phone into a field reader
- USB Type-C, no separate meter
- Same probe connector as the Genesis controller
- Powered from the phone, no battery
- Read several probe types in one session
- Live on-screen readings
- Worker, time, and GPS on every reading
- Records flow into OmniCloud history

Applications

Multi-pond and multi-site aquaculture sampling

Routine water quality field checks

Soil and field spot measurements

Replacing paper logs with verified, located readings

2. Specifications

Parameter	Specification
Phone Connection	USB Type-C
Mobile Platform	Android (USB OTG)
Sensor Interface	RS485 / Modbus-RTU
Power	Powered from the phone via USB Type-C
Internal Battery	None
Software	OmniCloud app (MobileSense) + OmniCloud

The adapter draws power from the phone through the USB Type-C connection. There is no internal battery and no external power supply to manage.

3. Compatibility

Item	Requirement
Probes	pH (PH-100, PH-110), dissolved oxygen (DO-100, DO-110), conductivity (EC-100, EC-110, EC-120; TDS and salinity on EC-110), density and concentration (DEN-100), temperature and humidity (FTX-TH-485)
Phone	Android device with USB OTG support and a USB Type-C port
App	OmniCloud app for Android, MobileSense section
Account	OmniCloud account

The probe side carries the same connector as the Genesis controller, so each supported probe plugs straight in without adapters or rewiring. The same probe used on a fixed Agrinovo controller is read through MobileSense at the address registered for it in OmniCloud. Swap the probe to change what you measure.

An OmniCloud account and access to the OmniCloud app are provided upon purchase, enabling full use of the product.

4. How It Works

1. Connect the MobileSense adapter to the phone's USB Type-C port.
2. Connect an Agrinovo probe to the adapter's probe connector.
3. In the OmniCloud app, open Sensor Reader under MobileSense and select the probe, or several probes, to read.
4. Live values appear on screen for each selected probe.
5. Each reading is recorded with the worker, the time, and the GPS location, then synced to OmniCloud.

5. Connection

The adapter is a USB Type-C cable on the phone side and a keyed Agrinovo probe connector on the probe side. The probe connector is identical to the one on the Genesis controller, so each supported Agrinovo probe plugs in directly.

Probe Connector

Connector	Function
Agrinovo probe connector	Keyed connector, consistent with the Genesis probe connector

Pinout, consistent with the Genesis probe connector:

Pin	Function	Description
V+	Power	Probe Power
GND	Ground	Power Ground
A	RS485-A	Data+
B	RS485-B	Data-

Phone Connector

Connector	Function
USB Type-C	Power input and data to the phone

6. Communication Settings

Parameter	Value
Protocol	Modbus-RTU
Baud Rate	9600 bps
Data Bits	8
Parity	None
Stop Bits	1

The app reads each selected probe at its assigned Modbus address.

7. What Gets Recorded

Every measurement taken through MobileSense is stored as a complete, attributed record:

Field	Description
Value	The measured reading and its unit
Worker	The user who took the reading
Timestamp	The exact time of measurement
GPS Location	Coordinates captured at the moment of reading
Site	The named location the reading belongs to
Notes	Optional free text

Records sync to OmniCloud and sit in the same history as fixed-device data, on the same map and timeline. Readings can be exported for analysis. The record itself is the proof that the round was done.

8. Installation Notes

Field Use

- Confirm the connection indicator before reading
- Keep the probe tip wetted between sample points
- Select all probe types you plan to read before starting

Care

- No battery to charge; the phone powers the adapter
- Keep the USB Type-C and probe connectors clean and dry
- Store the adapter with the connector caps fitted

9. Ordering Information

Item	Model
MobileSense RS485 Field Reader Adapter	AGRINOVO-MSA-100

10. Revision History

Rev	Date	Changes
1.0	June 2026	Initial release
1.1	August 2026	Layout revision
1.2	October 2026	New layout
1.3	October 2026	Supported probe models listed; MobileSense is part of the OmniCloud app

Modular IoT sensors and controllers for agriculture and aquaculture. Specifications subject to change without notice.