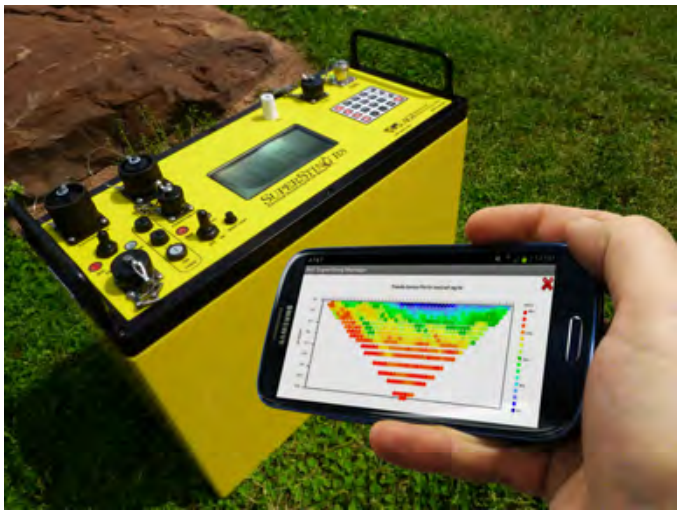
AGI Advanced Geosciences, Inc.

SUPERSTING™

Electrical Imaging System with Wi-Fi®



The New SuperSting™ with Wi-Fi® Electrical Imaging System Brings Greater Mobility, Versatility & Efficiency to Surveys

Available as a Single or Eight Channel Instrument

Why Wi-Fi?

Enjoy new mobility that frees you from monitoring imaging surveys at the instrument in the field and send data immediately to your processing center. You'll no longer be tied down to your instrument during electrical surveys and can work from the comfort of your vehicle up to 100 meters away (depending on terrain and atmospheric conditions). Using **Android™ mobile 7-inch or 10-inch tablets or phones**, you can check the electrodes for contact resistance and at the same time control the **SuperSting**, review data in real time, and display pseudosections in stunning colors on Android tablets and phones with AMOLED screens.

It also enables you to upload command files from your App to the **SuperSting** and download data from the instrument and email data files directly from the App to your office or processing center. Plus it comes with the accuracy, reliability and ruggedness that all **Advanced Geosciences** instruments are known for.

Accessories

- The SuperSting comes with a built in 200 W transmitter. A series of external high power, 5-15 kW, transmitters are available for deep IP surveys.
- AGI's **EarthImager** inversion software for 1D, 2D and 3D data processing.
- **SuperSting Remote** for resistivity, IP and SP time monitoring in remote & hard-to-acess areas.
- Cables for land, borehole and underwater surveys.
- Electrode streamers for towed marine surveys.
- Stainless steel electrodes, non-polarisable electrodes.
- Manual single conductor cables on reel.

The SuperSting with Wi-Fi Is Ideal For a Variety of Applications

- The 8-channel instrument is designed for large surveys when time is of the essence.
- The singel channel unit is designed for smaller surveys where speed of survey is less important.
- Used for resistivity and IP imaging in 2D, 3D and 4D.
- Borehole to borehole, and borehole to surface measurements.
- Underwater measurements in fresh and salt water.
- Deep IP mineral exploration using the external power transmitter **PowerSting** (5 - 15 kW).
- Ground water exploration.
- Geotechnical investigation for depth to bedrock, cavity detection, stratigraphy and more.

SuperSting with Wi-Fi

AVAILABLE AS EIGHT OR SINGLE CHANNEL MEMORY EARTH RESISTIVITY, SP & IP METER

TECHNICAL SPECIFICATION

SuperSting:

Measurement modes	Apparent resistivity, resistance, induced polarization (IP), SP & battery voltage.
Measurement range	+/- 10Vp-p.
Measuring resolution	Max 30 nV, depends on voltage level.
Screen resolution	4 digits in engineering notation.
Transmitter	200 W internal transmitter; external 5 kW, 10 kW and 15 kW transmitters are also available (see separate brochure for specifications).
Output current	1 – 2,000 mA continuous, measured to high accuracy.
Output voltage	800 Vp-p, actual electrode voltage depends on transmitted current & ground resistivity.
Input channels	Two models are available; 8 channel & single channel.
Input gain ranging	Automatic, always uses full dynamic range of receiver.
Input impedance	>150 MΩ
SP compensation	Automatic cancellation of SP voltages during resistivity measurement. Constant & linearly varying SP cancels completely.
Type of IP measurement	Time domain chargeability (M), six time slots measured & stored in memory.
IP current transmission	ON+/OFF/ON-/OFF.
IP time cycles	0.5 s/1 s/2 s/4 s/8 s.
Measure cycles	Running average of measurement displayed after each cycle. Automatic cycle stop when reading errors fall below user-set limit or user-set max cycles are done.
Resistivity time cycles	Basic measure time is 0.2/0.4/0.8/1.2/3.6/7.2 or 14.4 s as selected by user via keyboard. Auto-ranging & commutation adds about 1.4 s.
Signal processing	Continuous averaging after each complete cycle. Noise errors calculated & displayed as percentage of reading. Reading displayed as resistance (ΔV/I) & apparent resistivity (Ωm). Apparent resistivity is calculated using user entered electrode array coordinates.
Noise suppression	Better than 100 dB at f>20 Hz. Better than 120 dB at power line frequencies (16 2/3, 20, 50 and 60 Hz) for measurement cycles of 1.2 s & above.
Total accuracy	Better than 1% of reading in most cases (lab measurements). Field measurement accuracy depends on ground noise & resistivity. The instrument will calculate & display running estimate of measuring accuracy.
System calibration	Calibration is done digitally by the microprocessor based on correction values stored in memory.
Supported configurations	In manual mode; resistance, Schlumberger, Wenner, dipole-dipole, pole-dipole, pole-pole. In automatic mode; any configuration can be programmed.
Operating system	Stored in re-programmable flash memory. New version can be downloaded from the AGI web site & stored in the flash memory.
Data storage	Full resolution reading average & error are stored along with user entered coordinates & time of day for each measurement. Data is automatically stored in a job oriented file system.
Data display	Apparent resistivity (Ωm), current intensity (mA), & measured voltage (mV) are displayed & stored in memory for each measurement. Data can also be displayed on an Android device in real time as bright color pseudosections, IP curves, transmitter/receiver plot, contact resistance measurements & more.
Memory capacity	Virtually unlimited data storage in real time on controlling Android device. The internal SuperSting memory can store more than 79,000 measurements (resistivity mode) & more than 26,000 measurements in combined resistivity/IP mode.
Data transmission	Data can be instantaneously transferred from the Android device by email or by file transfer from the Android device USB port. RS-232C channel available to dump data from the instrument to a Windows type computer on user command.
Automatic multi-electrodes	The SuperSting is designed to run dipole-dipole, pole-dipole, pole-pole, gradient, Wenner and Schlumberger surveys including roll-along surveys completely automatically with the patented (Pat.# 6,404,203) Dual Mode Automatic Multi-electrode system or a passive electrode cable system. The SuperSting can run any other electrode array by using user programmed command files. These are ASCII files that can be created using a regular text editor. The command files are uploaded to the SuperSting RAM memory & can at any time be recalled & run as a survey.
User controls	20 key tactile, weatherproof keyboard with numeric entry keys & function keys. On/off switch. Measure button, integrated within main keyboard. LCD night light switch (push to light). Keyboard and LCD are mirrored to an Android™ device using Wi-Fi® technology for easy remote control of the SuperSting.
Display	Graphics LCD display (16 lines x 30 characters) with nightlight. Android mobile phone screen & 7" or 10" Android tablet bright color AMOLED display.
Power supply, field	12V or 2x12V DC external power, connector on front panel. Optional AC/DC power supply & motor generator.
Power supply, office	DC power supply.
Operating time	Depends on survey conditions & size of battery used. Internal circuitry in auto mode adjusts current to save energy.
Operating temperature	-5 to +50°C
Weight	10.9 kg (24 lb.)
Dimensions	Width 184 mm (7.25"); length 406 mm (16") & height 273 mm (10.75").

SuperSting Manager App:

Device	Used with various Wi-Fi capable Android devices such as mobile phones, 7-inch & 10-inch tablets. Recommended for tablets; the App may not render properly on all handset devices.
Minimum Android™ version	API 9, Gingerbread 2.3 or above.
Functions	All functions performed using the SuperSting's keypad can be performed using the App's GUI with the exception of baud rate setting.
Real time quality assurance	Color pseudo-section plot, transmitter/receiver pair plot, IP curve plot, contact resistance test results, real time data review.
Data storage	Data storage on Android devices is typically in Gigabyte range, meaning essentially unlimited storage space is available.
Data transfer	Data transfer by email or by file transfer from the Android device USB port.
Wi-Fi range	Up to 100 m, depending on terrain & atmospheric conditions.

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