

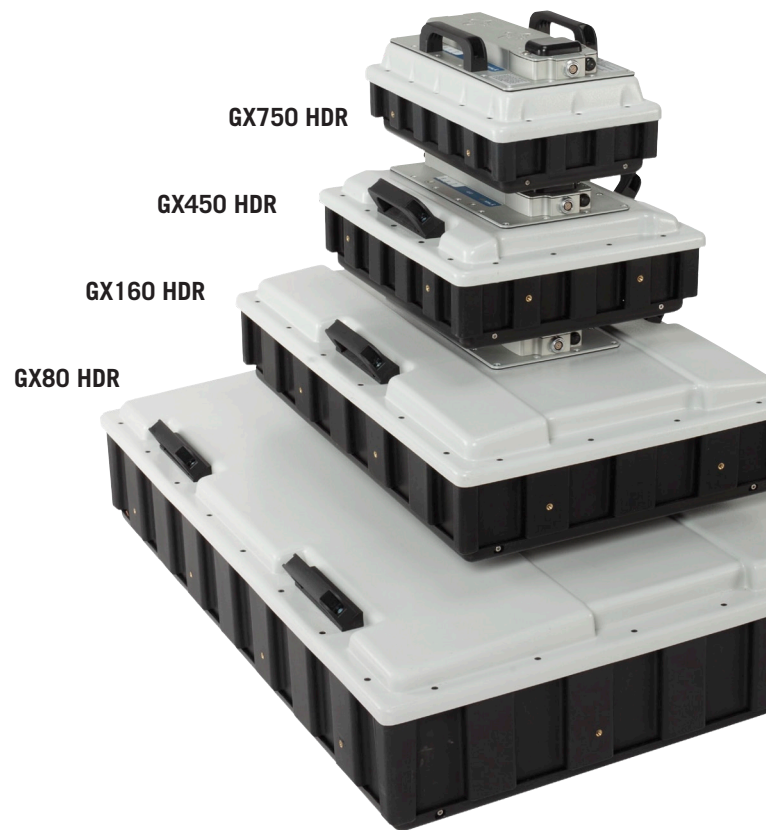




# GPR with exceptional range and resolution

The Ground Explorer (GX) is an integrated GPR solution with a wide range of antenna options. Through unique HDR technology, the GX offers significantly better data quality and faster acquisition rates. The GX series of antennas are fully integrated with the Controller App and MALÅ Vision.

**The Ground Explorer** is an easy-to-use and field proven GPR solution for a wide range of different applications. The antennas feature an integrated DGPS for positioning and they also support the use of external RTK GNSS GPS solutions. The Ground Explorer supports wireless data collection through WiFi. Normal working range varies between 25-100 meters depending on local conditions.



Data collection can be carried out using the high-resolution, field worthy, GX Controller, or using recommended Android tablets and the Controller App. The latter solution will only work with wireless data collection. If a wire connection is preferred, the GX Controller is your choice.



## Typical applications

- Archaeology
- Geological Exploration
- Infrastructure & Construction
- Geotechnical & Environmental
- Military & Police

GX Pulling Kit



# Facilitating field measurements

Every Ground Explorer solution contains two separate components: the GX Controller and the GX antenna. These are connected either through a single cable or WiFi. The system is typically configured as either a push- or pull-solution.

Configured as a push-solution, either the GX Controller or a tablet are mounted on a Rough Terrain Cart (RTC) or RTC Mini together with the antenna.

When configuring the Ground Explorer as a pull-solution your encoder wheel of choice is mounted on the antenna. The GX Controller or tablet is then carried with the shoulder harness and the antenna assembly can be pulled with a pulling handle or a strap.



## GPR antennas with 4 different frequencies

**The Ground Explorer can be optimized** for specific measurements and applications by adding different antennas. For the GX-series of antennas, there are four options to choose from using center-frequencies of 80, 160, 450 or 750MHz.

The choice of antenna frequency will be governed by your application and the desired depth penetration and resolution. All new Ground Explorer antennas are app-enabled and come with WiFi connection per default. This enables full integration with the Controller App and MALÅ Vision.



Rough Terrain Cart (RTC)



GX Controller

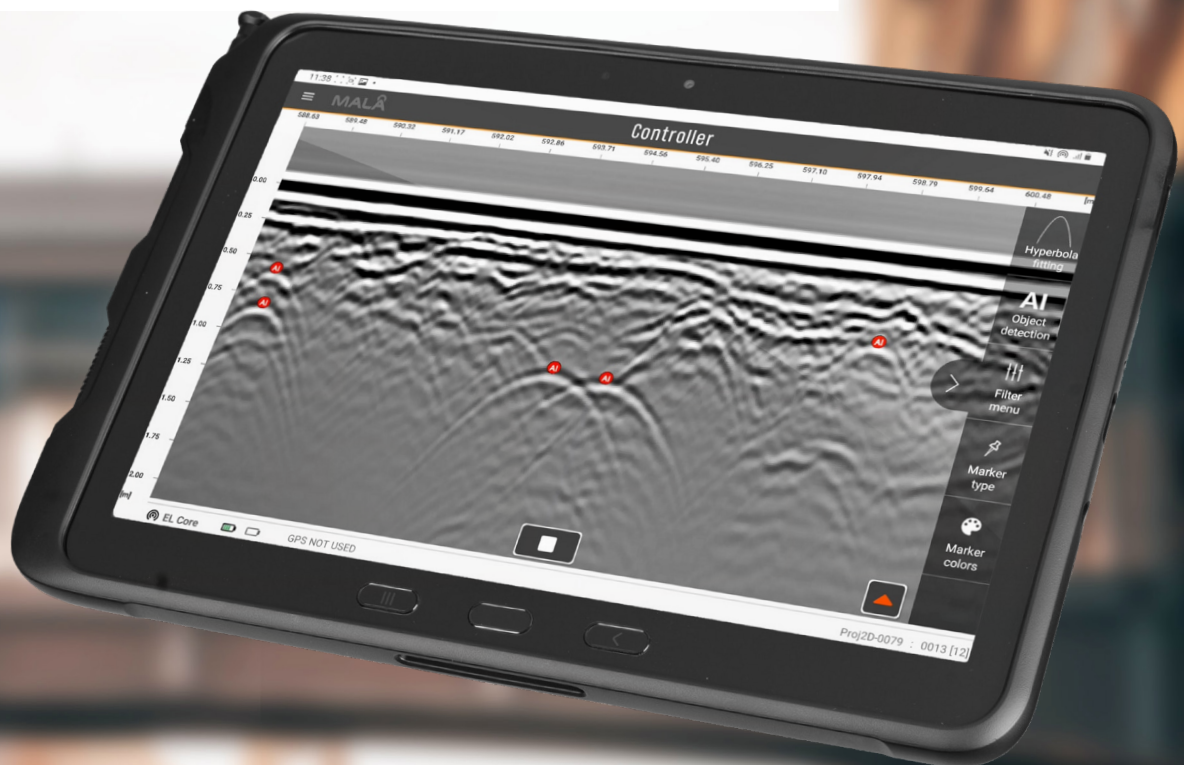
# CONTROLLER APP

## GPR DATA ACQUISITION ON YOUR MOBILE DEVICE

The Controller App is an easy-to-use acquisition software to help you go as fast as possible from data collection to delivering results. The intuitive user interface lets you view and interpret while data is being collected.

**Set gain and contrast,** remove background noise and set object and surface markers. The touch-based interface speeds up your survey, letting you deliver results quicker.

After acquiring your GPR data, upload it to MALÅ Vision with markers and metadata. Instantly share and present the data to anyone, anywhere.

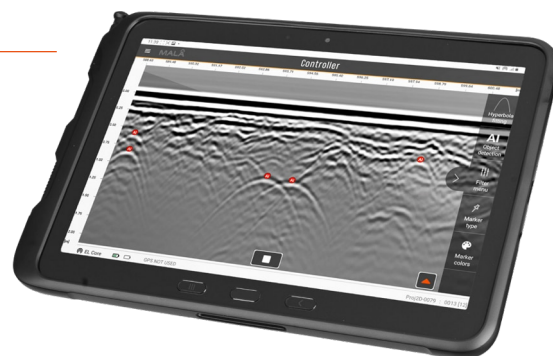




# Technical Specification

## Tablet

Acquisition platform	Controller App
Processing platform	MALÅ Vision
Recommended tablet	Samsung Galaxy Tab Active Pro 4G



## GX Controller

Processor	1.6 GHz Intel Atom
Display	1024 x 768 mm
OS	Linux
Memory	8 GB compact Flash memory
Data output	32 bit
Comms	Ethernet, WiFi (optional), USB 3.0, RS232 (serial)
GPS	Integrated support for built-in GPS, or external GPS via USB/serial port (NMEA 0183 protocol)
Power supply	Internal 12 V/20.8 Ah Li-Ion battery, or any external 10-15 V DC source
Charger	Internal. Unit can also be charged from any external 12 - 15 V DC source
Power consumption	1.3 – 2.0 A
Operating time	8 – 10 h
Dimensions	326 x 216 x 92 mm including handles 326 x 216 x 52 mm excluding handles
Weight	3.23 kg
Operating temp	- 20° to + 50° C or 0° to 120° F
Environmental	IP 65

### GX WIFI OPTION

Wireless standard:	IEEE802.11 g
Power consumption:	0,3 A



## GX Antennas

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### MALÅ GX750 HDR

<b>Technology</b>	MALÅ Semi-Real-Time
<b>Antenna center freq</b>	750 MHz
<b>SNR</b>	97 dB
<b>Scans/second</b>	> 1290, time window 75 ns
<b>Survey speed</b>	460 [km/h] point distance 10 cm
<b>Bandwidth</b>	120 %, fractional, -10 dB
<b>Time window</b>	75 ns
<b>Positioning</b>	Built-in DGPS, external GPS (NMEA 0183 protocol), wheel encoder
<b>Operating time</b>	5 h
<b>Power supply</b>	Interchangeable 12 V Li-Ion batt. or ext. 12 V DC source
<b>Power consumption</b>	1.3 A
<b>Acq. Mode</b>	Wheel, time or manual
<b>Dimensions</b>	375 x 235 x 170 mm
<b>Weight</b>	3.6 kg
<b>Operating temp</b>	- 20° to + 50° C or 0° to 120° F
<b>ADC Clock Frequency</b>	160 MHz
<b>Environmental</b>	IP 65

### MALÅ GX450 HDR

<b>Technology</b>	MALÅ Semi-Real-Time
<b>Antenna center freq</b>	450 MHz
<b>SNR</b>	101 dB
<b>Scans/second</b>	> 770, time window 300 ns
<b>Survey speed</b>	275 [km/h] point distance 10 cm
<b>Bandwidth</b>	>120 %, fractional, -10 dB
<b>Time window</b>	300 ns
<b>Positioning</b>	Inbuilt DGPS, external GPS (NMEA 0183 protocol), wheel encoder
<b>Operating time</b>	5 h
<b>Power supply</b>	Interchangeable 12 V Li-Ion batt. or ext. 12 V DC source
<b>Power consumption</b>	1.3 A
<b>Acq. Mode</b>	Wheel, time or manual
<b>Dimensions</b>	430 x 360 x 180 mm
<b>Weight</b>	5.5 kg
<b>Operating temp</b>	- 20° to + 50° C or 0° to 120° F
<b>ADC Clock Frequency</b>	160 MHz
<b>Environmental</b>	IP 65

### MALÅ GX160 HDR

<b>Technology</b>	MALÅ Semi-Real-Time
<b>Antenna center freq</b>	160 MHz
<b>SNR</b>	> 107 dB
<b>Scans/second</b>	> 880, time window 625 ns
<b>Survey speed</b>	320 [km/h] point distance 10 cm
<b>Time window</b>	625 ns
<b>Bandwidth</b>	> 120 %, fractional, -10 dB
<b>Positioning</b>	Inbuilt DGPS, external GPS (NMEA 0183 protocol), wheel encoder
<b>Operating time</b>	5 h
<b>Power supply</b>	Interchangeable 12 V Li-Ion batt. or ext. 12 V DC source
<b>Power consumption</b>	1.3 A
<b>Acq. Mode</b>	Wheel, time or manual
<b>Dimensions</b>	720 x 480 x 190 mm
<b>Weight</b>	10.7 kg
<b>Operating temp</b>	- 20° to + 50° C or 0° to 120° F
<b>ADC Clock Frequency</b>	160 MHz
<b>Environmental</b>	IP 65

### MALÅ GX80 HDR

<b>Technology</b>	MALÅ Semi-Real-Time
<b>Antenna center freq</b>	80 MHz
<b>SNR</b>	> 114.4 dB
<b>Scans/second</b>	> 1200, time window 812 ns
<b>Survey speed</b>	430 [km/h] point distance 10 cm
<b>Time window</b>	812 ns
<b>Bandwidth</b>	> 120 %, fractional, -10 dB
<b>Positioning</b>	Built-in DGPS, external GPS (NMEA 0183 protocol), wheel encoder
<b>Operating time</b>	5 h
<b>Power supply</b>	Interchangeable 12 V Li-Ion batt. or ext. 12 V DC source
<b>Power consumption</b>	1.3 A
<b>Acq. Mode</b>	Wheel, time or manual
<b>Dimensions</b>	1010 x 780 x 220 mm
<b>Weight</b>	24,6 kg
<b>Operating temp</b>	- 20° to + 50° C or 0° to 120° F
<b>ADC Clock Frequency</b>	160 MHz
<b>Environmental</b>	IP 65



Terraplug Inc.  
120 West Beaver Creek Rd, Unit #15  
Richmond Hill, ON, Canada, L4B 1L2

terraplug.ca  
1.905.764.5505  
sales@terraplug.ca