

# Leica GS20 PDM



*The Mapping Tool of Tomorrow Is Here Today.*

**Leica**  
Geosystems

# Feel The Power

The GS20 Professional Data Mapper (PDM) from Leica Geosystems is the most advanced handheld GPS for GIS and mapping.

## Powerful Features

Now there's an even better way to collect and maintain data in the field. Leica's GS20 PDM puts an entire GPS data collection system in the palm of your hand. For field personnel, this rugged and highly portable device offers all the features needed to collect on-the-spot GIS data anywhere, anytime, accurately:

- Powerful GPS technology offering unmatched accuracy
- User-friendly interface and ergonomic design
- Cable-free operation with Bluetooth® wireless technology
- DGPS and High Precision upgradability
- Satellite-based augmentation systems (SBAS) like WAAS and EGNOS

## Powerful Functionality

The GS20 PDM combines the all-in-one simplicity of a recreational GPS handheld with the power and flexibility of a professional grade mapping system.

Providing you with a true turn-key GPS mapping solution, the GS20 PDM is a GPS receiver, antenna, and data collector, all in an ergonomic handheld.

With the GS20 PDM, powerful functionality doesn't mean difficult to use. The menu-driven interface and graphical map display make it easy to learn so field crews can start collecting data right away.

Add to this the wireless connectivity to PCs, and mobile accessories provided by Bluetooth® technology, and you begin to understand what we mean when we say the GS20 PDM is the mapping tool of tomorrow.

## And A Powerful Promise

You know you are getting an industry-leading technology solution because the GS20 PDM comes from Leica Geosystems. Known throughout the world for precision and accuracy, the people at Leica Geosystems have been delivering on the promise of technology excellence for more than a century.

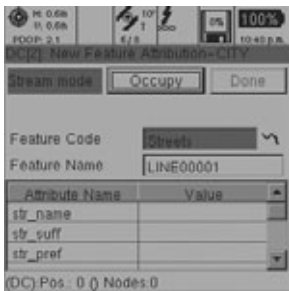
### An Abbreviated Innovation Timeline

1914	1921	1968	1991	1992	1996	1999	2002
Leitz invents the world's first 35mm camera, the LEICA (LEITZ CAmera).	Wild Heerbrugg is founded. The Swiss company revolutionizes with its innovative surveying instruments.	Leica introduces the first commercial satellite navigator, the MX702 CA.	Leica develops the first commercial DGPS systems using marine radio beacons to transmit error corrections.	Leica System 200 is used for the first GPS survey of Mt. Everest (height 8846.10 meters).	Leica designs the first high precision real-time reference station network for the Øresund project.	Leica Geosystems introduces System 500 becoming the first company to offer survey quality GPS for collecting GIS data.	Leica Geosystems develops the GS20 PDM, the first wireless sub-meter DGPS handheld.

# Enjoy the freedom

## GIS Data Collection Just Got Easier

The GS20 PDM handheld GPS mapping device features an intuitive interface with a familiar look and feel. Driven by intelligent context menus, the interface also provides easy-to-read graphical map displays and even allows for multi-tasking using innovative PowerPage functionality.



Intuitive menus speed data collection



Edit feature geometry while on site with data management tools



Find field assets easily with the GS20 PDM's navigation functions



### Quality Monitor

Use the Coordinate Quality Monitor to measure GPS precision in the field and ensure data quality before you get back to the office.

### Geo Clipboard

The Geo Clipboard makes it possible to easily copy, cut and paste features and nodes, allowing separate features to share common nodes and multiple offsets from a single location.

### Screen

High-resolution high-contrast screen ensures outdoor readability under any conditions.

### PowerPage

Streamline fieldwork using the PowerPage functionality to switch instantly between user-selected applications and menus.

# Do it all

## Create Your Own Flexible System

---

Don't let the small size fool you. The GS20 PDM represents a technologically advanced GPS platform for GIS and mapping. Depending on your needs and applications, you can expand your functionality anytime by simply connecting the GS20 PDM to a variety of external devices via Bluetooth® or serial interface.

Connect your Bluetooth® cellphone with the GS20 PDM and dial into a reference net to get submeter accurate positions.

## Use Your GS20 PDM With The "WoRCS"

---



With your GS20 PDM in hand, consider adding the WoRCS, Wireless Real-time Corrections System, for the ultimate in productivity.

A belt-mounted communication hub, "smart" power supply and differential beacon radio, the WoRCS gives you everything you need for DGPS data collection.

With built-in Bluetooth® communications technology, you'll have the ability to make wireless connections to other external devices such as cellular phones, Laser Rangefinders and PDAs.

The WoRCS belt and accessory items are made of lightweight and comfortable materials with the quality and durability that have been the standard for law enforcement and military special forces.

The WoRCS includes:

- Beacon receiver (satellite correction module or custom RTCM solutions also available)
- Bluetooth® communication hub
- "Smart" power supply



## Increase Your Capabilities With A High Precision Upgrade

---



Do you require the utmost in precision? Do you need to collect data in harsh GPS environments like dense foliage or urban canyons? Do you need centimeter level post-processing? The High Precision external package provides demanding users a premium grade external antenna for increased reception and greater multi-path rejection.

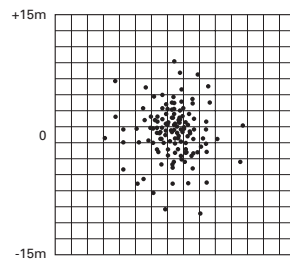
The High Precision kit includes:

- Leica Survey grade L1 C/A code and phase antenna
- Leica Antenna Sash: Backpack free, light weight, breathable antenna mount
- Leica Telescopic Rod: Three sectioned, twist tightened, sash mounted antenna pole

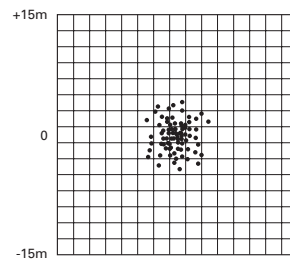
# The Leica GS20 PDM

## Unparalleled Accuracy From A GPS Handheld

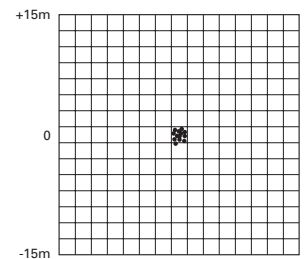
Leica Geosystems' revolutionary GS20 PDM is the first and only GPS handheld using proven correction technologies to provide sub-meter accuracy. Using either real-time corrections or post-processing, the GS20 PDM makes it possible to collect sub-meter data without a backpack.



Recreational GPS



Competitive handheld devices



Leica GS20 PDM

## Unexpectedly Simple To Use

Effortless data collection and asset management. The GS20 PDM puts it all in the palm of your hand. No complicated set-up, no special training; the GS20 PDM is a true out-of-the-box GPS solution. Just add sky!



### Wireless

Built-in Bluetooth® links with DGPS sources and external devices. In the office, use the USB Bluetooth® module to download to your PC.

### Superior GPS

Leica Geosystems' advanced GPS technology offers unmatched GPS reception in a handheld device.

### All-in-one

All-in-one handheld design for professional data collection with zero setup.

### Keypad

Cell phone style keypad for easy data entry.

## Specifications

## GS20 PDM

Size	21.5cm L x 9cm W x 5cm D: 8.46" x 3.54" x 1.97"
Weight (With Battery)	0.652kg or 1lb 7oz
Power	2.1 Watt (typical) at 20°C, 7.2V internal, 12V external
Receiver	12 channel parallel automatic selection. L1 Code / Phase
Antenna	Internal: Leica AT575 microstrip, built-in groundplane External: Leica AT501 microstrip, built-in groundplane (optional)
Casing	Sealed polycarbonate housing; protection against wind driven rain and dust. Sealed battery compartment and sealed compact flash. IP 54 Rating
Display	240 x 240 pixel graphical LCD, 16 grayscale with backlight
Internal Radio	Bluetooth <sup>®</sup> **
Keypad	Front: Metal dome with high tactile feedback, protected on/off Side: Duplicate up, down and enter keys
Memory	ATA compact flash: Standard 32MB; Max 2GB
Data Transfer	Triple redundancy: Bluetooth <sup>®</sup> cable-free transfer, RS232 lemo, ATA compact flash
Internal Ports	RS232 Serial: 7 pin Lemo; Antenna Coaxial Lemo
Operating Temperature	-20°C to 55°C / -4°F to 122°F
Storage Temperature	-40°C to 75°C / -40°F to 167°F
Humidity	99% non-condensing
Shock	1.2m drop
Baseline rms (Post-processing)*	L1 Code only: Typically 30cm (rms) L1 Code and Phase typically 5 to 10mm + 2ppm (rms)
DGPS/RTCM/SBAS	RTCM version 2.1, 2.2, 2.3 (9,2 & 1,2 & 18,19 & 20,21), CMR, Leica Standard support for Coast Guard Beacon and Satellite Based Augmentation Systems like WAAS and EGNOS
Baseline rms (DGPS/RTCM)*	L1 Code only: Typically 40cm (rms)
Data Recording Rate and Capacity	At 1Hz measurement; 1 hour runtime = 2MB, 16 hours continuous measurement per 32MB standard compact flash
Desktop Software	GIS DataPRO™; Native shapefile format, L1 code / phase post-processing, ASCII export, import and export to dwg, dxf, dgn and mif
Application	Data Collection, Data Management, Navigation, File Browser
Battery	Lithium-Ion 7.2 Volt 2100mAh w/ Dallas microprocessor
Charger	Battery Charger

\*Baseline rms refers to accuracy in position. Accuracy in height is 2x accuracy in position. Figures are for normal to favorable conditions.

\*\*Bluetooth<sup>®</sup> is a trademark owned by Bluetooth<sup>®</sup> SIG, Inc.

## Standard Configurations

Each GS20 PDM is packaged in it's industrial-strength storage and travel case, and delivered assembled and ready for use.

### GS20 PDM Stand-Alone

Small storage and travel case  
GS20 PDM handheld GPS receiver  
GS20 PDM holster case  
Li-Ion batteries, 7.2V (1 spare)  
Battery Charger  
PC USB Bluetooth<sup>®</sup> module  
Data transfer cable, GS20 PDM to RS232  
GIS DataPRO™ software CD  
Set of documentation

### WoRCS

When bundling the GS20 PDM with the WoRCS,\* add the following:

Large storage and travel case (replaces small case)  
WoRCS belt  
WoRCS power supply module and jacket  
WoRCS Bluetooth<sup>®</sup> module and jacket  
WoRCS RTB module (Real-Time Beacon)\* and jacket  
Li-Ion batteries, 7.2V (total of 4)

\*This parts list is for the WoRCS-RTB. Parts will differ somewhat for WoRCS-Satellite and other WoRCS configurations. See your Leica Geosystems Dealer for details.

### High Precision

When bundling the GS20 PDM with the High Precision package add the following:

Large storage and travel case (replaces small case)  
High precision GPS antenna  
Telescopic rod with 5/8" adapter  
WoRCS belt (1 belt in total when bundled with the WoRCS)  
Backpack-free antenna sash  
Antenna cable, GS20 PDM to external antenna



GS20 PDM Stand-Alone



GS20 PDM WoRCS and High Precision

Dealer's Stamp

**Leica**  
Geosystems

Leica Geosystems AG  
CH-9435 Heerbrugg  
(Switzerland)

Phone +41 71 727 31 31

Fax +41 71 727 46 73

www.leica-geosystems.com