GEOMAX

Works when you do

GNSS Receiver

Zenith40

Zenith40 is the true flagship of the GeoMax GNSS receivers. Equipped with NovAtel`s latest, cutting-edge measurement engine and supporting fast converging Precise Point Positioning (PPP) this antenna provides a highest level of technology and meets the toughest MIL standards. Zenith40 asures a workflow tailored to your needs thanks to the user-centred X-PAD Ultimate field software or the flexibility to run your own software on any field controller. The combination of all this in a GNSS smart-antenna creates a solution that is second to none.

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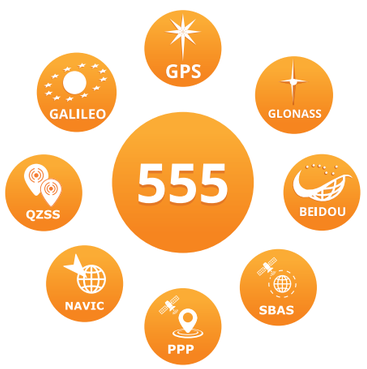
Right on point

Experience the full GeoMax technology

Quality

Same as NovAtel and TerraStar, GeoMax is a full member of the renowned Swedish Hexagon group. Using synergies, sharing components combined with the power to partner with premium suppliers such as SATEL and bundled with Hexagons extensive manufacturing know-how enables GeoMax to offer products at highest performance and quality level.

Zenith40 with its remarkable operating temperature from -40°C up to +65°C is fully dust-tight, withstands powerful water jets and even temporarily immersion under water and complies to the international IP68- as well as to the tough US MIL standards.



Excellent Positioning

Take advantage of NovAtel's latest fully-featured OEM 719 measurement engine. It enables you to receive multi-frequency signals form all existing satellite systems worldwide. Struggles with canopy - like working under trees, or inaccurate results because of multipath signals are significantly improved due to the enhanced GeoMax Q-Lock Pro RTK which also reduces the time-to-fix.

Also on board of the Zenith40, Hexagon's TerraStar Precise Point Positioning (PPP) service that provides C-Pro correction data at centimetre level quality all around the globe. This service significantly enhances your productivity, as it eliminates the need of a network connection and reference from a data base station. Furthermore, no need to worry about reference frames anymore. The PPP position is provided within the coordinate system.

The GeoMax Q-Lock Pro algorithm automatically detects available correction services and selects the one providing the highest accuracy.

X-PAD

Whether in the field or in the office, GeoMax X-PAD software streamlines the workflow for maximum efficiency. GeoMax X-PAD field software is available in two tailored versions: one for surveyors and one for construction professionals, supporting both Windows and Android operating systems. Working closely with key-users around the world, X-PAD is continuously updated to maintain a perfect combination of clear structure, straightforward workflows and high functionality.

The GeoMax software offering is enhanced by X-PAD Fusion, a desktop software integrating geospatial data from TPS, GNSS, Scanners and other sensors in a single environment. Different to other software solutions in the market X-PAD Fusion manages measurements, coordinates, drawings, point clouds and other types of data in ONE platform in a simple and intuitive way.

Open & Flexible Configuration

The Zenith40 provides greatest flexibility. No matter if you want to run GeoMax X-PAD Ultimate on a dedicted GeoMax field controller or your preferred software on your own devices, this GNSS antenna allows you to work in the way that best fits your needs. Zenith40 can either be fully configured within the field software or with the Zenith Manager, a stand-alone application available for Windows and Android operating systems. This enables you to configure your antenna without using the field controller.

Being freely available on the Google Play store the latest version of Zenith Manager can be downloaded at any time and used on any Android based device, such as mobile phones or tablets.

The innovative and unique QR-iConnect functionality speeds up your connection process. Forget the times of tedious sensor search and selection by toggling through extensive device lists. Simply scan and go!

Receiver specifications

Q-Lock Pro™ functionality	Lowest noise and advanced mutipath mitigation for highest reliability
Reliabiliy	99.99%
Measurement Engine	NovAtel OEM7, 555 channels, multi-frequency / -constellation
GPS tracking	L1, L2, L2C, L5
GLONASS tracking	L1, L2, L2C, L3*
BeiDou tracking	B1, B2, B3* (opt)
Galileo tracking	E1, E5a, E5b, AltBOC, E6* (opt)
QZSS tracking	L1, L2C, L5, L6* (opt)
NavIC	L5*
Positioning rate	5 Hz, 20 Hz (opt)
SBAS	EGNOS, WAAS, MSAS, GAGAN
Precise Point Positioning (PPP)	TerraStar C Pro ; GPS/ GLONASS/ BeiDou/ Galileo/ QZSS (opt); Reconvergence < 1 min

Receiver accuracy and performance **

RTK	Hz	8 mm ± 1 ppm
	V	15 mm ± 1 ppm
Network RTK	Hz	8 mm ± 0.5 ppm
	V	15 mm ± 0.5 ppm
Static	Hz	3 mm ± 0.5 ppm
	V	5 mm ± 0.5 ppm
Static - long	Hz	3 mm ± 0.1 ppm
	V	3.5 mm ± 0.4 ppm
TerraStar C Pro PPP	Hz	< 2.5 cm
	V	< 5 cm
Time for initialisation		typically 4s

Interfaces

Keyboard	On/off and function key
LED status indicators	Position, battery, Bluetooth®, RTK receive, RTK transmit, data storage
LED mode indicators	Rover, base, static
Data recording	Removable microSD card
GSM/TCP/IP	Removable SIM card

* Glonass L3, BeiDou B3, Galileo E6, QZSS L6 and NavIC L5 are foreseen to be provided through future firmware upgrade.
** Measurement precision, accuracy, reliability and time for initialisation are dependent upon various factors including number of satellites, observation time, atmospheric conditions, multipath etc. Figures quoted assume normal to favourable conditions. A full BeiDou and Galileo constellation will further increase measurement performance and accuracy.
*** Depending on device configuration; w/o battery

Communication

GSM/GPRS module	Quad-Band GSM & Penta-Band UMTS 800/ 850/ 900/ 1900/ 2100 MHz
UHF radio module	SATEL, 500mW, 1000 mW transceiver, 403 – 473 MHz; (opt)
Bluetooth®	Device class II QR-iConnect functionality
TNC connector	High sensitivity, UHF antenna
Communication port	USB, serial & power
RTK data protocols	CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSM
NMEA output	NMEA 0183
Network RTK	VRS, FKP, iMAX, MAC (RTCM SC 104)

Physical specifications

Dimensions	Height 95 mm, ø 198 mm
Weight	1.14 - 1.18 kg ***
Operating temp.	– 40°C to 65°C
Environmental protection	IP68/ MIL
Water protection	IPx8 & MIL IPx8: Withstands powerful water jets and temporarily immersion under water MIL-STD-810G 1 506.5 Procedure I MIL-STD-810G 1 512.5 Procedure I
Sand/Dust protection	IP6x & MIL IP6x; Fully dust tight MIL-STD-810G 1 510.5 procedure I
Humidity	100%, condensing
Vibration	Mechanical stress resistant according to ISO 9022-36-05
Shock	Withstands 2 m drop onto hard surface

Power supply

Internal battery	Removable, Li-Ion 2.6 Ah / 7.4 V
Operating time	9 h in static / 6 h in rover mode
External power	10.5 V to 28 V, LEMO® plug

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Learn more at:
geomax-positioning.com