



## GNSS receivers validated

### Contents

- [1 GNSS devices already validated/certified](#)
  - [1.1 GNSS devices validated by Member States](#)
  - [1.2 GNSS devices validated by Member States with the buffer width exceeding the maximum value imposed by EU Regulation](#)
  - [1.3 GNSS devices validated by Reference Laboratories](#)
  - [1.4 GNSS devices validated by Reference Laboratories with the buffer width exceeding the maximum value imposed by EU Regulation](#)
  - [1.5 GNSS devices certified by NavCert](#)

## GNSS devices already validated/certified

### GNSS devices validated by Member States

No	Device	Member State	Antenna	Software/Firmware	Measurement method	Differential correction	DOP	Measurement interval	Elevation mask	Minimum number of satellites	Buffer width, m	Year
1	Asus PDA	DK	External Haicom	n/a	continuous	no	n/a	n/a	n/a	n/a	0,75	2009
2	Garmin 60	GR	Internal	n/a	continuous	no	n/a	n/a	n/a	n/a	1,25	2009
3	Globalsat BC337 - standalone	FR	Internal	ArpentGIS v. 4.7	continuous	no	n/a	2s	n/a	n/a	1,25	2010
4	Leica GS50 with Beacon correction	DK	n/a	n/a	vertex	yes	n/a	n/a	n/a	n/a	0,50	2009
5	Leica SR530 with Leica Smart Net correction	DK	n/a	n/a	vertex	yes	n/a	n/a	n/a	n/a	0,50	2009
6	Leica GS20 - standalone mode	LV	Internal	Application version FW 4.50.00	continuous	no	Max PDOP:10	5s	10°	4	1,50	2010
7	Leica GS20 with LATPOS correction	LV	Internal	Application version FW 4.50.00	continuous	post processing	Max PDOP:10	5s	10°	4	1,25	2010
8	Leica GS20 with SKPOS correction in real time	SK	Internal	Leica GIS DataPRO	continuous/vertex	yes	n/a	5s in continuous mode/1s per point in vertex mode	n/a	n/a	0,75	2010
9	Leica Zeno 10 with SKPOS correction in real time	SK	Internal	Leica Zeno office basic	continuous/vertex	yes	n/a	2s in continuous mode/1s per point in vertex mode	n/a	n/a	0,50	2011
10	Magellan Mobile Mapper CX + voice application	BG	Internal	Voice application	vertex/continuous	n/a	Max HDOP:4	1s	15°	n/a	0,75	2009
11	Magellan Mobile Mapper CX - standalone	BG	Internal	Locally developed Field Software	vertex/continuous	n/a	Max HDOP:5	1s	n/a	n/a	1,00	2009
12	Magellan Mobile Mapper CE - standalone	BG	Internal	Locally developed Field Software	vertex/continuous	n/a	Max HDOP:5	1s	n/a	n/a	1,00	2009
13	Magellan Mobile Mapper 6 - standalone	LT	Internal	ArcPad 7.1.1	continuous	no	Max DOP:6	1s	10°	n/a	1,50	2010
14	Thales ProMark3 with differential correction	EE	L1 Antenna NAP 100	Surveying Rev 2.14	continuous	post processing	Max HDOP:4	1s	10°	n/a	0,50	2010
15	Thales ProMark3 - standalone	LT	n/a	Promark3EUV214	continuous	no	Max DOP:6	1s	10°	n/a	0,75	2010
16	Topcon DGPS receiver Legacy H	CZ	MG A1	Microsoft Windows CE, GPS Explorer created by Geodis Brno, Ltd	continuous	EGNOS on (but no EGNOS corrections available)	Not adjustable	n/a	5°	n/a	0,75	2007
17	Topcon GMS-2 with CZEPOS correction	CZ	Internal	GPS Explorer	continuous	yes	n/a	3s	n/a	n/a	0,75	2009
	Topcon GMS-2 with TOPNET											

18	TOPCON GMS-2 with TOPNET correction	CZ	Internal	GPS Explorer	continuous	yes	n/a	3s	n/a	n/a	0,75	2009
19	TOPCON GMS-2 with Beacon correction	DE (Rheinlandpfalz)	n/a	n/a	vertex	yes	n/a	n/a	n/a	n/a	0,75	2009
20	TOPCON GMS-2 - standalone	LT	Internal	ArcPad 7.1.1	continuous	no	Max DOP:6	1s	10°	n/a	1,00	2010
21	TOPCON GMS-2 with Topnet VRS DGPS real time correction	FI	Internal	Topsurv 7.2.2	vertex	yes	n/a	3s per each vertex	10°	4	1,00	2010
22	TOPCON GRS-1 with Trimble VRS DGPS real time correction	FI	Internal	Topsurv 7.2.2	vertex	yes	n/a	3s per each vertex	13°	4	0,50	2010
23	Trimble GeoXT - standalone	JRC (PL)	Internal	Terrasync version 2.53 Professional edition	continuous	no	Max PDOP:10	1s	10°	n/a	0,75	2009
24	Trimble GeoXH - standalone	JRC (PL)	Internal	Terrasync version 3.30 Professional edition	continuous	no	Max PDOP:10	1s	10°	n/a	0,75	2009
25	Trimble GeoXT + EGNOS correction	SI	Hurricane external	ArcPAD version 7.0 with GPS CORRECT 2.20	vertex/continuous	EGNOS	Max PDOP:5	8s per each vertex	n/a	4	0,75	2009
26	Trimble GeoXT - standalone	LV	Internal	Trimble TerraSync v. 3.21	continuous	no	Max PDOP:12	5s	10°	n/a	0,75	2010
27	Trimble GeoXT with LATPOS correction	LV	Internal	Trimble TerraSync v. 3.21	continuous	post processing	Max PDOP:12	5s	10°	n/a	0,50	2010
28	Trimble GeoXT - standalone	FR	Internal	ArpentGIS v. 4.7	continuous	no	n/a	2s	n/a	n/a	0,50	2010
29	Trimble GeoXT with EGNOS correction	FR	Internal	ArpentGIS v. 4.7	continuous	EGNOS	n/a	2s	n/a	n/a	0,50	2010
30	Trimble GeoXT with Trimble VRS DGPS real time correction	FI	Internal	Terrasync	vertex	yes	Max PDOP:6	3s per each vertex	15°	4	0,50	2010
31	Trimble GeoXH Trimble VRS DGPS real time correction	FI	Internal	Terrasync	vertex	yes	Max PDOP:6	3s per each vertex	15°	4	0,50	2010
32	Trimble XC - standalone	FR	Internal	ArpentGIS v. 4.7	continuous	no	n/a	2s	n/a	n/a	1,25	2010
33	Trimble Juno - standalone	FR	Internal	ArpentGIS v. 4.7	continuous	no	n/a	2s	n/a	n/a	1,25	2010
34	Trimble Juno with EGNOS correction	EN	Internal	FastMap	vertex	EGNOS	n/a	n/a	n/a	n/a	1,50	2010
35	Trimble Pro XRS with Beacon correction	EN	n/a	Korec Fastmap software on a Panasonic Toughbook Tablet, Trimble GPS Firmware Version 1.96	vertex	yes	Max PDOP:6	n/a	15°	n/a	0,50	2009
36	Trimble Pro XRS with Omnistar correction	EN	n/a	Korec Fastmap software on a Panasonic Toughbook Tablet, Trimble GPS Firmware Version 1.96	vertex	yes	Max PDOP:6	n/a	15°	n/a	0,50	2009
37	Trimble Pro XRS - standalone	CY	external	Arc Pad 7.0	continuous - 2s	no	Max PDOP:6	n/a	n/a	n/a	0,50	2010

These results were obtained in the following way: the measurements were carried out by the Member States (MS) in accordance with the [JRC guidelines](#) on test parcels selected by the MS. The statistical analysis of the measurements was made by JRC, or checked by JRC when the MS did the analysis by themselves (for the data to be provided for the statistical analysis or its verification, see step 7 of the [guidelines](#)).

More information on the device settings, measurement method (number of positions per vertex) and protocol used during the validation test could be requested directly to the MS concerned.

## GNSS devices validated by Member States with the buffer width exceeding the maximum value imposed by EU Regulation

No	Device	Member State	Antenna	Software/Firmware	Measurement method	Differential correction	DOP	Measurement interval	Elevation mask	Minimum number of satellites	Buffer width, m	Year
1	Holux GM270 - standalone	FR	Internal	ArpentGIS v. 3.6	continuous	no	n/a	2s	n/a	n/a	>1,50	2010
2	Magellan Mobile Mapper - standalone	LT	Internal	Mobile Mapper software version 6.52 and 6.57	continuous	no	Max DOP:6	1s	10°	n/a	>1,50	2010

## GNSS devices validated by Reference Laboratories

Please note that the name of **Geo Explorer 2008 series** (GeoXT) has changed to **Geo Explorer 3000 series**; the software and the hardware remain the same.

No	Device	Reference lab	Antenna	Software/Firmware	Measurement method	Differential correction	DOP	Measurement interval	Elevation mask	Other settings	Mean reproducibility limit (95% confidence level), m	Buffer width, m	Year
1	Garmin GPS Map60 with EGNOS correction	UWM, Olzstyn - PL test site	Internal	Garmin	continuous	EGNOS	n/a	1s	n/a	n/a	0,88	1,00	2010
2	Garmin GPS Map60 - standalone	UWM, Olzstyn - PL test site	Internal	Garmin	continuous	no	n/a	1s	n/a	n/a	1,08	1,25	2010
3	Garmin GPS Map60CX - standalone	UWM, Olzstyn - PL test site	External	Garmin	continuous	no	n/a	1s	n/a	n/a	0,67	0,75	2010
4	HP IPAQ hx 2110 - standalone	UWM, Olzstyn - PL test site	External	FarmWorksMate 9.3	continuous	no	n/a	1s	n/a	n/a	1,46	1,50	2010
5	Leica Zeno - standalone	UWM, Olzstyn - PL test site	Internal	Zeno Field v.8.0 SP3	continuous	no	n/a	1s	n/a	n/a	0,44	0,50	2010

6	Magellan Mobile Mapper 6 with EGNOS correction	UWM, Olzstyn - PL test site	Internal	MobileMapping 2.00	continuous	EGNOS	n/a	1s	n/a	n/a	0,98	1,00	2010
7	Magellan Mobile Mapper 6 - standalone	UWM, Olzstyn - PL test site	Internal	MobileMapping 2.00	continuous	no	n/a	1s	n/a	n/a	0,71	1,00	2010
8	Magellan Mobile Mapper 6 - standalone	UWM, Olzstyn - PL test site	Internal	MobileMapping 1.00	continuous	no	n/a	1s	n/a	n/a	0,72	1,00	2010
9	Magellan Mobile Mapper 6 - standalone	UWM, Olzstyn - PL test site	Internal	Tracklab v.1.x	continuous	no	n/a	5s	n/a	n/a	1,31	1,50	2010
10	Magellan Mobile Mapper 6 with post-processing	UWM, Olzstyn - PL test site	Internal	MobileMapping 2.00	continuous	post processing	n/a	1s	n/a	n/a	0,26	0,50	2010
11	Trimble GeoXM - standalone	UWM, Olzstyn - PL test site	Internal	C-GeoZasiewy v.2.x	continuous	no	Max PDOP=12	1s	10 deg	Min SNR = 12.0, No velocity filter	1,05	1,25	2010
12	Trimble GeoXM with EGNOS correction	UWM, Olzstyn - PL test site	Internal	C-GeoZasiewy v.2.x	continuous	EGNOS	Max PDOP=12	1s	10 deg	Min SNR = 12.0, No velocity filter	1,26	1,50	2010
13	Trimble GeoExplorer 2008 series(now GeoExplorer 3000 Series) with EGNOS correction	SSSA - UK test site	n/a	GeoExplorer 2008 series (a new name is Geo Explorer 3000 series)	vertex	EGNOS (1 mn age limit)	6 (max PDOP)	5s	15 deg	Min SNR = 39.0, No velocity filter	0,44	0,50	2010
14	Trimble GeoXT (GeoExplorer® 6000 series) with EGNOS correction	SSSA - PL test site	Internal	TerraSync v5.10	vertex	EGNOS	99 (max PDOP)	5 records per each vertex	5 deg	Min SNR = 12	0,23	0,50	2011
15	Trimble Juno with EGNOS correction	SSSA - UK test site	Internal	TerraSync Professional	continuous	EGNOS	99 (max PDOP)	1s	5 deg	Min SNR = 12.0, No velocity filter	1,14	1,25	2010
16	Trimble JUNO-SB with EGNOS correction	UWM, Olzstyn - PL test site	Internal	C-GeoZasiewy v.2.x	continuous	EGNOS	Max PDOP=12	5s	10 deg	Min SNR = 12.0, No velocity filter	1,32	1,50	2010
17	Trimble JUNO-ST with EGNOS correction	UWM, Olzstyn - PL test site	Internal	TerraSync PL 4.01	continuous	EGNOS	Max PDOP=12	5s	10 deg	Min SNR = 12.0, No velocity filter	0,96	1,00	2010
18	Trimble ProXT with Beacon correction	SSSA - DE test site	Internal	n/a	vertex	yes	6 (max PDOP)	5s per each vertex	20 deg	n/a	0,21	0,50	2010

### GNSS devices validated by Reference Laboratories with the buffer width exceeding the maximum value imposed by EU Regulation

No	Device	Reference lab	Antenna	Software/Firmware	Measurement method	Differential correction	DOP	Measurement interval	Elevation mask	Other settings	Mean reproducibility limit (95% confidence level), m	Buffer width, m	Year
1	ASUS P527 with GPS receiver Haicom HI-408 BT	UWM, Olzstyn - PL test site	External	Surveyomat v.0.85	continuous	no	n/a	n/a	n/a	n/a	1,59	>1,50	2010

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