F50, 1cm+1ppm RTK without external antenna

From May, Suzhou FOIF has launched a new GNSS/GIS handhelds F50. It is developed as a custom-designed product for some special geographic applications, e.g. Geometric Networks, topological surveying, cartographic, geostatistics and so on. It is the first one in China who have such higher accuracy without external antenna.

Hardware specification

The Further Development depend on rugged mobile controller PS236 equipped with 128MB and 4G iNAND enables F50 achieve the majority users' requirements from all over the world.

The operating system is Windows Mobile 6.1/6.5 Professional; the 3.5-inch color touchscreen is visible under sunshine.

Built-in 3.5G WWAN for HSDPA/WCDMA/EDGE/GPRS/GSM satisfies your telephone transmissions; also it is a very important solution for F50 capability.

This controller features a very high sensitivity GPS receiver, E-compass and altimeter, making it perfect for GIS applications and a built-in auto-focus camera has been neatly integrated to provide an all-in-one solution.

F50 allows your real-time using in any harsh conditions because it passed an IP67 ruggedness rating and a MIL-STD rating of 810G.

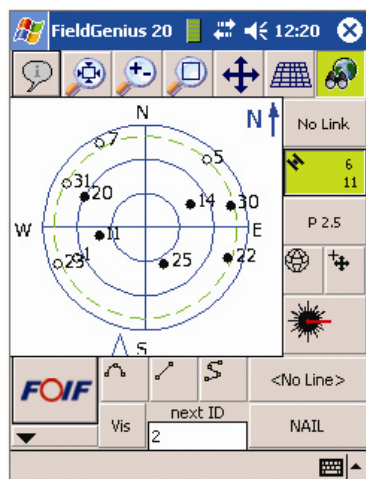## Software available

1. FOIFSurvey

FOIFSurvey is a graphical field software programs for topography and construction, fully re-designed to optimize the functionality and performance of GNSS system. Rich attributing, full editing in the field saves both time and effort.

Furthermore, the map-view screen displayed can relieve the stress when he is trying hard to look for a right direction inisde the desert and forest.

FOIFSurvey is likely to be an integral part of any future solutions, as it enables the simplification of data collection, allowing field crews to stay productive.

2. FOIF FieldGenius

Every GIS field needs special software to comply with it. F50 could install and run other software such as FieldGenius, SurCE, ArcGIS etc.

For example, as the left picture, this is software FOIF FieldGenius for F50.

FOIF FieldGenius is designed for Land Surveying, Civil Engineering, Seismic Surveying, and

Construction Staking to provide unequaled data collection simplicity and field calculating performance.

Accuracy

As professional handheld with excellent and durable performance, we apply four models as following:

H-accuracy	F50-B1（Basic）GPS/SBAS	F50-E1（Enhanced）GPS/Glonass/SBAS	F50-P1（Professional）GPS/SBAS	F50-A1(Advanced) GPS/Glonass/SBAS
Single point L1	2.5m	1.5m	1.5m	1.5m
Single point L1/L2	/	/	1.2m	1.2m
SBAS	<1m	0.7m	0.6m	0.6m
DGPS	0.6m	0.5m	0.4m	0.4m
RTK	/	/	1cm+1ppm	1cm+1ppm

F50-B1 and F50-E1 supply the precision around 0.5 meters in horizontal.

F50-P1 and F50-A1 are high professional RTK handhelds. You can use a pole and external antenna for RTK measuring to get the accuracy of 1cm+1ppm.

You can also get the accuracy of 1cm+1ppm even **without external antenna** only uses the plummet. **This is the first one in China who have such higher accuracy without external antenna**.