ER-4100 Navigation Communication Simulator

Product introduction:

ER-4100 navigation communications simulator to generate high fidelity, high resolution, high precision and high stability of satellite navigation analog signals. It can perform accurate testing and performance evaluation of Beidou satellite navigation receiving equipment in research, production, qualification examination, certification, integration, inspection or acceptance.

Features:

- Transmit and receive of inbound and outbound signals capable of simulating the BeiDou system;
- Outstanding short message communication capabilities, with positioning and timing functions;
- Flexible, easy-to-use control software;
- Have evaluation software to evaluate user machine performance;
- Clear, real-time, content-rich display interface
- Compact and easy to carry.

Function:

- Simultaneous inbound and outbound signals for 10 beams of 5 satellites;
- Support for multi-user wireless / wired short message communications;
- Control software for signal interruption, signal recovery, switching of each visible star signal, modulation mode selection and power control of the satellite navigation signal simulator output;
- With evaluation software to test the receiver's bit error rate, communication success rate and sensitivity indicators, at the same time can test receiver timing, positioning and other functions;
- LCD display shows satellite is visible, simulation time and satellite power and other information;
- Signal output via cable or via antenna.

Application field:

- Beidou satellite navigation chip development, production, testing
- Compass satellite navigation receiver development, production, testing
- Beidou satellite navigation product maintenance and repair

Performance index

Signal frequency

In and out of station signal

Outbound signal power

Output range:：-60dBm～-150dBm

Resolution ratio：0.3dB

Accuracy in calibration：±0.7dB

Outbound signal quality
Clutter power (maximum)： -55dBc
Harmonic power (Maximum)：-35dBc
Phase Noise：-75dBc/Hz@100Hz
-80dBc/Hz@1kHz
-85dBc/Hz@10kHz
-90dBc/Hz@100kHz
Frequency Stability：±5×10-10/s
Receiving signal power
Input range：-60dBm～-30dBm
Power measurement accuracy：0.5dB(RMS)
Signal generator **unit**
Cable output or through antenna output
External interface
Radio Frequency Output：N-type head
Radio Frequency Input：N-type head
External control port：Ethernet interface
Power Supply Properties：AC 220V，50Hz
Physical Characteristics
Size (width x height x depth)：350mm×132mm×450mm
Weight：≤15kg
Environmental requirements
Working humidity：≤75%（23℃）
Working temperature：0℃～+50℃
Storage temperature：-30℃～+70℃
Vibration：≤0.2g/100Hz（max）
Reliability
Mean Time Between Failures（MTBF）：≥3000 hours
Mean time to repair（MTTR）：≤2 hours
A continuous working time：≥24hours
Computer workstation recommendation configuration
Operating system：Windows XP/Window 7 32bit
Processor：intel @2GHz Or higher
External interface：RS232 and Gigabit Ethernet ports