

# TECHNICAL SPECIFICATIONS

Machine Guidance System

Ver.2024.03.14

## SIGNAL TRACKING

GPS	L1, L2
BDS	B1I, B3I
BDS Global	B1C, B2b
GLONASS	L1, L2
Galileo	E1, E5b
QZSS	L1, L2

## ENVIRONMENT

Water-proof and dust-proof	IP67
Shock and vibration	Designed to meet MIL-STD-810H
Humidity	100% no condensation
Working temperature	-20 C ~60 C
Storage temperature	-40 C ~85 C

## SYSTEM SPECIFICATION

Operating System	Android 7.1
Processor	Qualcomm™ octa-core 64-bit ARM Cortex-A53™ processor 2.0GHZ
RAM	2GB(4G is optional)
ROM	16GB eMMC, support external USB storage (64G is optional)
Radio Module	U70 module, 410-470MHz full band(optional)
Bluetooth	Bluetooth 5.0
Audio	Built-in dual speakers and microphone
Camera	8 megapixels front camera, 16 megapixels rear camera(optional)

## DISPLAY

Size	10.1" touchscreen
Resolution Rate	1280*720
Brightness	500cd/cm²

## CONNECTION

1*Type C port
3*USB port
1*TF card slot
1*Dual-SIM card slot
2*GNSS Antenna port
1*UHF Antenna port
1*4G antenna port
3*Lemo port(including RS232/RJ45/PPS/EVENT/CAN/USB)

## ACCURACY

Time accuracy	20ns
RTK	8mm+1pmm Horizontal 15mm+1pmm Vertical
Standalone	1.5m Horizontal 3.0m Vertical
Post processing	2.5mm+1ppm 5.0mm+1ppm
Velocity Accuracy	<0.02m/s
Azimuth	(0.2/R)°
Roll or pitch	(0.4/R)°

## PHYSICAL OF TABLET

Size	268*182*36mm
weight	1022g
Indicator light	1*power light, 2* satellite light, 1* data light
Panel buttons	1*power button, 2*Backlight adjustment button, 1*function button
Audio	Built-in dual speakers and microphone
Camera	Front 8 million pixels, rear 16 million pixels (optional)

## DATA FORMAT

NMEA-0183	GPRMC, GPVTG, GPZDA etc.
CNB	ComNav Binary
CMR(GPS only)	CMROBS, CMRREF
RTCM2.X	RTCM1, RTCM3, RTCM9, RTCM1819, RTCM31, RTCM41, RTCM42
RTCM3.X	1004-1008, 1012, 1019, 1020, 1033, 1042, 1045/1046, 1230, 4078
MSM3-MSM7	1073-1077, 1083-1087, 1123-1127, 1093-1097
Data update rate	Up to 20 Hz

## AT360 ANTENNA

Dimension	Φ147×67.7mm
Connector	TNC Female
Weight	≤500 g
Operating Temperature	-40 °C to + 70 °C
Humidity	95% No-condensing

ComNavTech

# XT100

## HIGH-PRECISION GUIDANCE SYSTEM FOR BULLDOZERS

10.1"  
High-resolution Display

67  
IP67

Android OS

Easy Operation

Reliable Anytime

Input Saving

WORK WITH TWO ANTENNAS

AUTHORIZED DISTRIBUTION PARTNER

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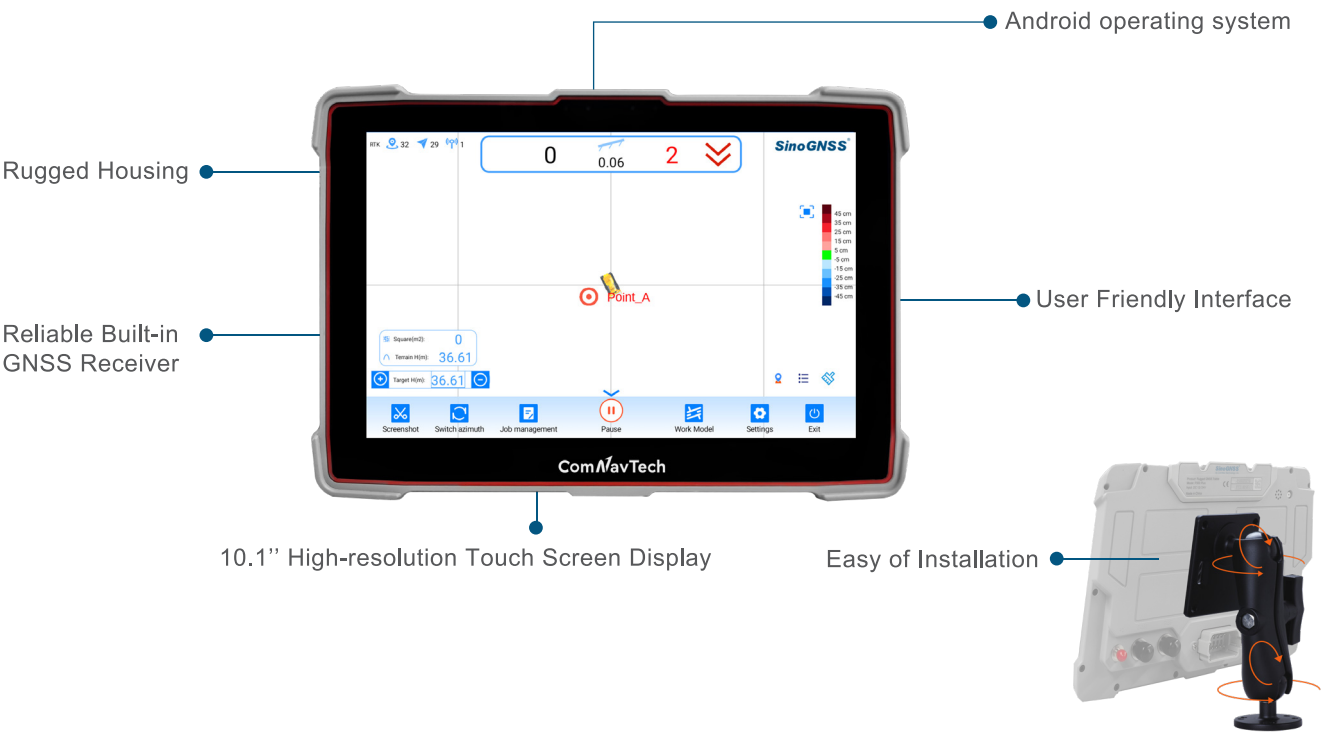
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The XT100 High-precision Guidance System is a professional guidance system for bulldozer leveling operations which independently developed and produced by ComNav Technology Ltd. The system adopts technologies such as GNSS high-precision positioning and integrated navigation to obtain the vertical and horizontal angle of the blade in real time and guide the driver to achieve precise bulldozing. Compared with the traditional operation mode of construction-inspection-rework-acceptance, simultaneous construction and acceptance can be achieved; the operation efficiency is greatly improved, and the operation quality is more guaranteed.



## SYSTEM COMPONENTS

The working principle of the XT100 system is to obtain centimeter-level ( $\pm 3\text{cm}$ ) positioning precision through satellite positioning technology and high-precision real-time differential technology. The base calculates the realtime differential data and sends the data to the P300PLUS GNSS tablet via the 4G network or radio. After receiving the differential data, the P300PLUS obtain a centimeter-level high-precision position combines satellite positioning technology. The location data is uploaded to software, so as to guide the operator to carry out construction work in real time.



### EFFICIENT AND CONVENIENT

The XT100 supports independent measurement and document design, and can pass acceptance at the same time as construction work is completed, which reduces the invalid operation, shorten the construction period, reduces the cost and increase the benefit.



### PRECISE GUIDANCE

The positioning module supports Beidou/GPS/-GLONASS/Galileo signals and adopts integrated navigation algorithm. The vertical precision of the operation can reach  $\pm 3\text{cm}$ , which can meet most construction needs.



### HIGH QUALITY CONSTRUCTION

It supports accurate digital and graphical guidance of the operation process; realize the graphical display of the operation results, and the terrain fluctuations are clear at a glance.



### SIMPLE OPERATION

The friendly and intuitive graphical interface and the configuration of the pole cylinder reduce the dependence and requirements on the operator.



### EASY TO EXPAND

The system adopts a low-coupling modular structure design and provides a standard development interface, which can realize multi-sensor and controller expansion and be easily applied to other construction machinery, opening up more infinite possibilities.



### HIGH RELIABILITY

The industrial grade GNSS tablet with rugged design, excellent seismic performance and IP67 waterproof and dustproof can adapt to a variety of harsh environment.

## APPLICATIONS

The guidance system is suitable for farmland, highway, railway, airport, stadium, parking lot and other projects.

