

# CHCN<sup>AV</sup>

# TX63

## 3D MACHINE GUIDANCE FOR EXCAVATOR



## MACHINE CONTROL & CONSTRUCTION



# HIGH ACCURACY 3D EXCAVATOR GUIDANCE SYSTEM

The CHCNAV TX63 excavator guidance system increases the precision and efficiency of excavation work. By integrating high accuracy dual-GNSS, an IMU sensor and the power of EX-Tech's mechanical model algorithm, it provides reliable 3D positioning and heading information to accurately indicate the bucket's position.

With real-time guidance, operators can quickly and accurately steer the bucket to the design surface in less time and with greater accuracy. By eliminating the need for manual staking, the system maximizes operational efficiency and productivity. The industrial touchscreen places the system's controls within easy reach of the operator. The MCNAV software provides comprehensive and easy-to-use guidance with detailed displays of job information, including project setup, cut and fill data and geo-fencing zones - all accessible at a glance.

## HIGH ACCURACY

### Dual GNSS + high frequency IMU and EX-Tech model algorithm

- Precision better than  $\pm 3$  cm ensures consistent accuracy on both sides of the bucket tip
- EX-Tech's dynamic model algorithm guarantees optimal bucket accuracy in all positions
- High-performance receiver to deliver high-precision positioning in all terrain conditions

## EASY TO USE

### Fast installation and calibration

- Built-in GNSS module in the display for easy setup
- Complete installation in less than 2 hours
- Calibration in 2 hours for minimal downtime
- Dual 2D/3D mode for added versatility (optional)

## EXCELLENT COMPATIBILITY

### Effortless integration without additional labor

- Suitable for all excavator models, with support for tilt bucket functionality
- Compatibility with TT450S, Transparent and Satel\_3AS radio protocols
- Built-in and editable global coordinate systems for more flexibility
- Support for multiple coordinate calibration files including crd, dc, cal, lok, jxl, loc
- Professional-grade options for fixed or mobile base stations, with radio and network data transmission
- Full constellation support: GPS, GLONASS, Galileo, Beidou, and QZSS
- Design file support for .rodx, .dxf and .landxml files
- Quickly design surfaces in the field, streamlining operational workflow

## OPTIMIZED GUIDANCE INTERFACE

### Most realistic guidance screen

- Fully synchronized mechanical attitude, model attitude, and cut-and-fill data
- 4 different views tailored to different jobsites and work practices
- 10" widescreen display for at-a-glance information

## SAFE AND RUGGED DESIGN

### Ensure durability in harsh environments

- IP68 and 50 G shock resistant gauge class IMU sensor
- Industrial grade antenna with IP68 rating, metal shell and anti-interference design
- Rugged cables designed for wear resistance and adaptability to high and low temperature environments
- External protective components for sensors and cable harnesses to provide shock protection
- Clear visualization of cut and fill data



# 3D GUIDANCE SYSTEM FOR EXCAVATORS



## Tilt Sensor

- CAN-bus communication protocol
- 10 Hz update rate
- IP67 dust and waterproof



## Display

- 10.1" color touch screen
- Sunlight readable
- IP65 dust- and waterproof
- CAN Bus + RS232
- McNav software
- EX-Tech technology



## GNSS Antenna

- IP68 & MIL-STD 810E
- Quick release mount

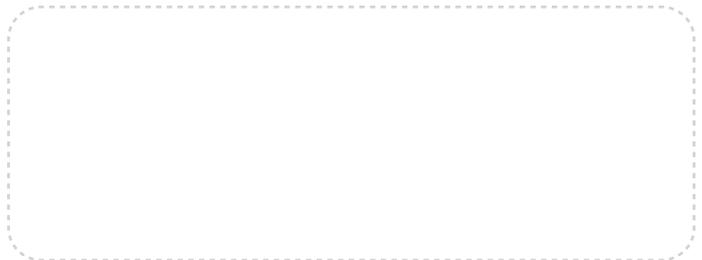
# SPECIFICATIONS

Display	
Size (W*L*H)	281*181*42 mm
Weight	1.5 kg
Screen	10.1", 1024*600 pixel, 750 cd/m <sup>2</sup>
System	4 Cores 1.5 GHz RAM: 2 G ROM: 16 G Android: V6.0.1
Operation temperature	-30°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Ingress protection	IP65

Sensor	
Size (W*L*H)	98*47*22.5 mm
Weight	166 g
External power input	9~36 V DC
Static accuracy (RMS)	± 0.05°
Dynamic accuracy (RMS)	± 0.1°
Shock	100 g/11 ms
Vibration	10 grms, 10~1000 Hz
Operation temperature	-40°C ~ +85°C
Storage temperature	-50°C ~ +85°C
Ingress protection	IP67

Antenna	
Size (W*L*H)	140*140*55 mm
Weight	700 g
External power input	3 ~ 6 V DC
Gain	40±2 dB
Noise coefficient	≤2 dB
Shock	50 g/6 ms
Vibration	5 grms, 4 ~ 250 Hz, 0.5 H/axis
Operation temperature	-40°C ~ +85°C
Storage temperature	-50°C ~ +85°C
Ingress protection	IP68

\*Specifications are subject to change without notice.



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