



Singular XYZ SL100 GNSS Land Leveling System User Guide

[Home](#) » [Singular XYZ](#) » Singular XYZ SL100 GNSS Land Leveling System User Guide 

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SL100
GNSS LAND LEVELING SYSTEM



Contents

1 FEATURES

2 T10 GNSS Tablet

3 SA100 GNSS Antenna

4 Controller

5 D1-D External Radio (Optional)

6 External Camera (Optional)

7 Standard Package

8 Documents / Resources

8.1 References

9 Related Posts

FEATURES

- Easy to install
- Multi-constellations multi-frequency GNSS onboard
- No limits of working conditions
- High leveling accuracy
- As easy as the laser leveling system
- Long working radius

RUGGED ALL-IN-ONE DESIGN

The SL100 land leveling system combines the T10 GNSS tablet, solenoid valve controller, and GNSS antenna with user-friendly software, making the installation of the system on the tractor very convenient. Designed for harsh environment, the SL100 GNSS land leveling system is ready to give the best performance.

ALL-WEATHER WORK FOR HIGH EFFICIENCY

Compared with the traditional laser land leveling system method, the SL100 will no longer be limited to the weather, distance or terrain where the system is used, realizing 24/7 all-weather working. It works whenever and wherever you need it, greatly improving work efficiency. The SL100 creates the best value for your project.

STRONG COMPATIBILITY

By using the external D1-D radio modem, the T10 GNSS tablet can be used with most existing GNSS base stations on market. Feel free to configure the SL100 leveling system with the GNSS receiver you owned to save the investment and maximize the use of your existing property. The built-in dual SIM & dual standby 4G modem of T10 GNSS tablet makes it easy to connect to internet, which helps to connect to CORS or upload work files conveniently.

LEVELING PERFORMANCE

Elevation Control Accuracy $\pm 20\text{mm}$

T10 GNSS Tablet

GNSS	
GPS	L1, L2
GLONASS	L1, L2
BDS	B1, B2

Galileo	E1, E5b
QZSS	L1, L5
SBAS	WAAS, EGNOS, MSAS, GAGAN
RTK Accuracy	H: 10mm+1ppm V: 150mm+1ppm
Data Format	RTCM V2.3/3.0/3.2, NMEA0183
Data Output Rate	Maximum 20Hz
SYSTEM	
Operation System	Android 6.0
CPU	Quad Core 1.5GHZ
Memory	2GB RAM+16GB ROM
Flash	T flash, up to 64GB
LCD DISPLAY	
Screen	10.1" screens with sun readable capacitive touch screen
Resolution	1024×600 pixels
COMMUNICATIONS	
WIFI	2.4GHz IEEE 802.11 a/b/g/n
4G	FDD-LTE (Band 800 / 1800 / 2100 / 2600 MHz) TD-LTE (Band 1900 / 2300 / 2500 / 2600 MHz) WCDMA (Band 850 / 900 / 1900 / 2100 MHz) GSM/GPRS/EDGE (Band 850 / 900 / 1800 / 1900 MHz)
Bluetooth	V4.1
USB Port	1×USB2.0 (Host & Debug)
Serial Port	2×RS232, 1×RS485
CAN Port	2×CAN (J1939, CANOpen, ISO15765)
Ethernet	1×RJ45(100M Ethernet)
ELECTRICAL	
Input Voltage	9-36 VDC
Power Consumption	≤4.5W
PHYSICAL	

Size	281×181×42mm
Weight	1.5 Kg
ENVIRONMENTAL	
Environmentally Sealed Type	IP67, Waterproof and dustproof
Shock	Designed to survive a 2m drop onto concrete
Operating Temperature	-20 °C to + 70 °C (-4 °F to 158 °F)
Storage Temperature	-40 °C to + 85 °C (-40 °F to 185 °F)
Humidity	100% non-condensing

SA100 GNSS Antenna

Frequency Range	GPS: L1, L2, L5 GLONASS: L1, L2 BeiDou: B1, B2, B3 Galileo: E1, E5a/E5b, AltBoc L-Band SBAS
LNA Gain	40dB
Dimension	Φ152×62.2mm
Connector	TNC Female
Weight	374g
Mounting Configuration	5/8"x 11 Threaded
Operating Temperature	-40 °C to +85 °C (-40 °F to 185 °F)
Environmentally Sealed Type	IP67

Controller

Model	TC20
Environmentally Sealed Type	IP65, Waterproof and dustproof
Voltage	12 VDC
Operating Temperature	-20 °C to + 70 °C (-4 °F to 158 °F)

D1-D External Radio (Optional)

Working Mode	Tx&Rx
Frequency	410-470 MHz
Power	1W
Protocol	Transparent, TT450s
Channel Spacing	12.5Khz
Input Voltage	6-28 VDC
Power Consumption	≤4.5W
Operating Temperature	-40 °C to + 70 °C (-40 °F to 158 °F)
Humidity	100% non-condensing
Environmentally Sealed Type	IP67, Waterproof and Dustproof
Shock	Designed to survive a 2m drop onto concrete

External Camera (Optional)

Resolution	720×576 pixels
CMOS	1/3" CMOS
Input Voltage	12-24 VDC
Mode of Lighting	Infrared
Environmentally Sealed Type	IP67
Night Vision	Infrared night vision

Standard Package

T10 GNSS Tablet	x1
Controller	x1
T10 Tablet Bracket	x1
SA100 GNSS Antenna	x1

All specifications are subject to change without notice.



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Documents / Resources

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References

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Manuals+