Datasheet

# Nilamtec T5G

## Multi-Band Precision GNSS 5G Tablet

**WHAT IS NEW IN T5G?**

**T5G IS A NEW GENERATION METER LEVEL GNSS 5G RUGGED TABLET WITH AI EDGE COMPUTING POWER AND SIGNIFICANT UPGRADE IN COMPUTER POWER, COMMUNICATION CAPABILITY AND USEABILITY. IT IS YOUR RELIABLE HANDHELD IN TOUCH ENVIRONMENT**

The Nilamtec T5G is a rugged designed for Construction, Surveying, GIS, Environmental Management, Public and Utility Field applications. T5G can be used as a handheld with meter level GNSS positioning capability, and connected to professional external GNSS antenna to provide further high precision GNSS positioning function.

To fulfill the special requirements of professional applications, powered by Qualcomm QCM6490, T5G provides up to 14 TOPS (Tera Operation Per Second) AI computing power to process complicated engineering software for purpose-oriented applications.

**Basic Functions**

T5G supports Android 13 AOSP OS .

**GNSS Positioning**

With built-in precision multi-band GNSS receiver, T5G supports multi-band reception of GPS, Galileo and BeiDou with up to 10 Hz update rate. It can deliver meter level accuracy in different navigation mode. With proper navigation mode, T5G is capable to support highly dynamic applications in the field.

T5G also provide interface for professional GNSS antenna connection for task specific GNSS applications.

**Reliability and Efficiency in The Field and Office**

You can take T5G as a tablet to the field without worry about dust, water, damage caused by dropping the tablet, high or low temperature, and long operation hour.

- T5G provides IP68 rated protection from dust and water ingress
- The operating temperature of T5G is from -20°C to +60°C. T5G supports you in both cool winter and hot summer.
- 7000 mAh user replaceable battery allows you to replace battery in the field.
- Integrated 20M pixel rear camera and 8M pixel front camera allow you take sharp photos for your information sharing.
- 8” LCD screen provides bright and easy to read display
- USB ports are available which make your office work easy.

**Not Just a Rugged Tablet. It Is a Tool to Improve Your Productivity**

Nilamtec T5G is not a normal rugged tablet, it allows you make quality data in and quality AI analysis result out. T5G helps you to improve your field operation efficiency in BIM management, GIS, stock tracking, E-work flow, GIS data collection and more.

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**STANDARD FEATURES**

**SYSTEM**

- Integrated 5G/LTE cellar data, voice, and text capability
- 13MP rear camera, 8MP front camera
- High sensitivity GNSS receiver and antenna
- Bluetooth 5.2
- WIFI IEEE802.11 /b/g/n/ac/ax, 2.4GHz and 5GHz, 2x2 MIMO
- Capacitive multi-touch 8" LCD 1920 x 1200 Gorilla Glass Screen, 700cd/m² Brightness
- Qualcomm QCM6490 Octa core 1xA78 2.7GHz, 3xA78 2.4GHz, 4x A55 1.9GHz
- 8GB RAM, 128GB/256GB UFS Flash Memory
- SIM and Micro SD card slots

**OPERATING SYSTEM**

- Android 13 AOSP OS

**COMMUNICATIONS NETWORK**

- GSM: B2/B3/B5/B8,
- WCDMA: B1/B3/B5/B8,
- TD-WCDMA: B34/B39
- TDD-LTE: B38/B39/B40/B41,
- FDD-LTE: B1/B2/B3/B5/B7/B8/B20/B26/B28
- 5G-NR: N1/N3/N7/N8/N28/N38/N41/N77/N78/N79
- WIFI: IEEE 802.11 a/b/g/n/ac/ax, 2.4GHz and 5GHz, 2x2 MIMO
- Bluetooth: Bluetooth 5.2
- USB: Type C x1 support display port, USB 2.0 Type A x2
- NFC
- Extended Pogo Pin Interface: Back (12-pin): USB/UART/GPIO/DCIN
  Bottom (10-pin): USB2.0/DCIN/GPIO

**POWER MANAGEMENT**

- Battery: 7000 mAh user replaceable board temperature range, Li-ion battery
- Fast Charging: Support Qualcomm QC 4+ (need to work with QC 4+ charger)

**SENSORS**

G Sensor, Temperature Sensors, Gyroscope, Light Sensor, E-Compass, Fingerprint, Vibrator

**TECHNICAL SPECIFICATIONS**

**PHYSICAL**

- Size: 209x130x13.9mm (excluding external GNSS antenna)
- Weight: approx. 562g (including battery, excluding external GNSS antenna)
- User Interface: Hard Keys Power, Volume up/down, F1, F2, F3, F4

**ENVIRONMENTAL**

Temperature:

- Operating: -20 °C to +60 °C
- Storage: -30 °C to +70°C

Humidity:

- 95% non-condensing

Dust and Water Proof:

- IP68

Drop Resistance:

- 1.22 m as per MIL-STD-810H (excluding external antenna)

**INPUT/OUTPUT**

Extended Memory:
Micro SD card (T card)

Display:
Damage-Resistant Gorilla Glass
8" LCD Capacitive Multi-touch screen
1280 x 800 Pixel resolution
700 cd/m² brightness

Audio:
Built-in speaker and microphone
Support USB-C type corded microphone

Camera:
Rear Camera: 20 MP with flash light
Front Camera: 8 MP

**GNSS SYSTEM**

Receiver type:

GPS L1C/A, L5
QZSS L1C/A, L1S, L1Sb, L5
GAL E1B/C, E5a
BDS B1C, B2a
NavIC L5
SBAS L1C/A, BDSBAS B1C

Protocols:
NMEA

Nav. update rate:
up to 10 Hz[1]

Position accuracy[2] (CEP with SBAS):
Horizontal: 1.0m
Vertical: 1.5m

Cold Start[2]:
< 28 sec

Hot Start:
2 sec

GNSS Antenna Interface:
SMA, 50 Ohms

1: The highest navigation rate can be limited by the number of supported constellations
2: Depends on atmospheric conditions, baseline length, GNSS antenna, multipath conditions, satellite visibility, geometry and antenna phase center offset errors.

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