Datasheet

Nilamtec T5F

Multi-Band High Precision GNSS 5G Tablet

WHAT IS NEW IN T5F?

T5F HAS AI EDGE COMPUTING POWER AND SIGNIFICANT UPGRADE IN COMPUTER POWER. IT RUNS COMPLICATED SOFTWARE EASY. WITH CM LEVEL GNSS POSTIONING. NILAMTEC T5F IS YOUR NEW GENERATION TOOL FOR YOUR CONSTRUCTION /SURVEYING/GIS APPLICATONS.

The Nilamtec T5F is a rugged designed for Construction, Surveying, GIS, Environmental Management, Public and Utility Field applications. T5F can be used as a handheld with centimeter 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, T5F provides up to 14 TOPS (Tera Operation Per Second) AI computing power to process complicated engineering software for purpose-oriented applications.

Basic Functions

T5F supports Android 13 AOSP OS.

GNSS Positioning

With built-in high precision multi-band GNSS receiver, T5F supports 1408-channel concurrent multi-band reception of GPS, GLONASS, Galileo and BeiDou, and multi-band RTK with fast convergence times and reliable performance. T5F can deliver centimeter level accuracy in seconds. With high update rate, T5F is capable to support highly dynamic applications in the field.

T5F also provide interface for professional GNSS antenna connection for high precision GNSS applications.

Reliability and Efficiency in The Field and Office

You can take T5F 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.

- T5F provides IP68 rated protection from dust and water ingress
- The operating temperature of T5F is from -20°C to +60°C. T5F 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 T5F is not a normal rugged tablet, it allows you make quality data in and quality AI analysis result out. T5F helps you to improve your field operation efficiency in BIM management, GIS, stock tracking, E-work flow, GIS data collection and more.

Nilamtec

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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:
1408 channels
GPS (L1C/A, L1C, L2P(Y), L2C, L5)
GLO (L1, L2, L3)
BDS (B1I, B1C, B2I, B2a, B2b, B3I)
GAL (E1, E5a, E5b, E6)
QZSS (L1, L2, L5, L6)
SBAS (L1, L2, L5)

Data Format
RTCM3.X

Nav. update rate:
RTK up to 50 Hz[1]

Position accuracy[2]:
RTK
H: 0.008 m + 1 ppm
V: 0.015 m + 1 ppm

Cold Start[2]:
< 12 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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