TS20 & TS21 Firmware V1.1.4 Release

December 2, 2025

Overview

This release is V1.1.4, and the model targeted for the release is TS20 & TS21. This firmware supports the wired upgrade. Please upgrade the firmware according to the upgrade guide.

Features

➢ Supports multiple constellations &frequencies:

GPS L1 C/A, L1C, L2C, L2P, L5C

BDS B1I, B2I, B3I, B1C, B2a, B2b

GLONASS L1OF, L2OF, L3OC

Galileo E1, E5a, E5b, E5AltBOC, E6

QZSS L1 C/A, L1C, L2C, L5C

SBAS L1 C/A, L5

IRNSS L5

L-Band

➢ Supports 1792 channels

➢ Point cloud visual positioning and visual stakeout

➢ 410-470MHz UHF radio, 4G network, Wi-Fi, Bluetooth, NFC

➢ Various working modes

➢ Up to 9 hours working in 4G/3G/2G network and Rover radio mode

Change from Previous Versions

Issue	Type	FW
Added USB switching function to support copying GNSS board logs	New function	20251201 _V1.1.4
Optimized camera calibration	New function	
Modified IMU output axis in tilt computation	New function	20251117 _V1.1.3
Update GNSS board firmware version	New function	
Optimized camera calibration and resolved occasional errors	Bug fix	
Fix the tilt calibration issue in tilt library	Bug fix	
Fixed issues in point clouds computation	Bug fix	20251104 _V1.0.48
Fixed issues in resetting SIM cards	Bug fix	
Update tilt library with TAP service	New function	20251021 _V1.0.47
Improved WiFi connection and stability	New function	20251016 _V1.0.46
Updated battery level reading logic	New function	
Optimized camera switching during stakeout	New function	
Bug fixes in visual processing library	Bug fix	
Initial release	New function	20250928 _V1.0.36