TersusPNW Software
## Tersus PreciseNetWork RTK System Management and Positioning Service Software

Overview

The TersusPNW software is a high accurate CORS Network management and positioning service software with optimized algorithms independently developed by Tersus GNSS Inc. The software can effectively model errors caused by ionosphere, troposphere and satellite orbit, and precisely estimate correction at the rover. It enables the rovers to achieve fast real-time positioning with centimeter accuracy. The stability and reliability of TersusPNW software has been approved by maintaining large-scale CORS network.

Key Features

- ✓ User-friendly interface
- ✓ Supports virtual grid
- ✓ Supports data stream forwarding
- ✓ Supports multi-method integrity monitoring
- ✓ Supports user and mount point configuration
- ✓ Supports adding, deleting, modification, status checking and data storage for different bases
- ✓ Supports adding, deleting, modification, status checking and virtual point for subnet
- ✓ Supports 7X24 hours operation with 99.9% output reliability
- ✓ Supports up to 20000 users and 5000 concurrent transmission
- ✓ Supports up to 1000 bases
- ✓ Supports processing 8 subnets simultaneously
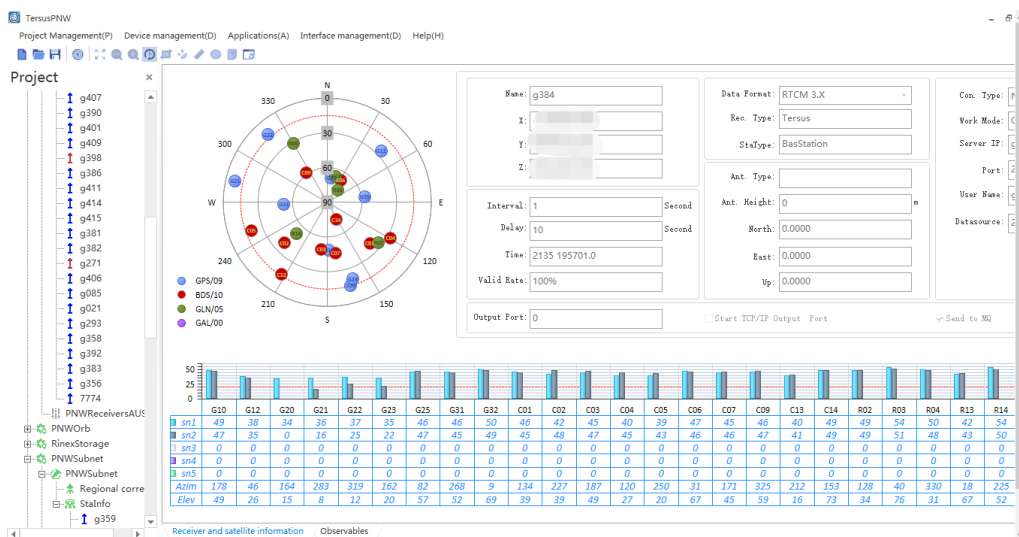
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Technical Specifications

System Requirements

Operating System:
Microsoft Windows 7, 8, 10 or later version
Windows Server 2019 operating systems (64 bit)

Processor
- Minimum: Intel Core i3
- Recommended: Intel Core i5

RAM
- Minimum: 4GB
- Recommended: 8GB

Hard Disk
- Minimum: 10GB
- Recommended: 1TB

Graphics Card
- Minimum: Direct X9 compatible integrated graphics
- Recommended: Direct X9 compatible 2GB discrete graphics

Internet Connection:
Ability to originate both http and https (SSL) connections

Language Supported

English

Chinese simplified

Reliability

Long time run with an output reliability of 99.9%

Software License

Software activation code

Different brands and models of receivers can be included in
the software as reference stations without requiring a license
fee

Software Capability

Reference Station Quantity[1]:
Up to 1000 bases(at the same time)

Virtual Servers Using Virtual Cores[2]:   Support Run

RTK Correction Information: Support Calculate

Signal Processing: GPS, GLONASS, GALILEO, BEIDOU

Differential Data Format[3]:   RTCM 2.x/3.x, CMR+ and
current international standard formats

User Volume: Up to 20000 users
Up to 5000 concurrent transmission

Techniques[4]:   VRS, DGPS, MAC, FKP

Communication Protocols:
TCP/IP, NTRIP, COM (serial port) and UDP

Database Application:
Define subscription information, password and account

Interface
- Enter the receiver and antenna properties, connection
information, reference station coordinates and speed
information of the reference stations
- Graphical display the coordinate changes of the stations[5]
- Display the instant and historical locations, and historical
usages will be queried and reported according to time and
location[5]

Module
- Monitor the quality of the data coming from the reference
stations
- Monitor the quatity of the satellites that can be instantly
received

Download: satellite ephemeris, DCB, clock corrections etc.
automatically downloaded from the internet[5]

Raw Observation Data
- Interval :   1 second, 30 seconds
- Frequency :   Hourly, Daily
- Format: RINEX 2x and RINEX 3x
- Store: In a directory to be defined on the server
- Send: Via FTP server

TEC(Total Electron Content) & PW(Precipitable Water
Vapor)
Advanced metrology module calculation[5]
- Frequency :   Hourly, Daily
- Format: BUFR or GRIB
- Store: In a directory on the current server
- Send: to another presentation with an IP address defined

Geoid Height Information
 - Position: In the grid structure and defined datum
conversion parameters
- Send: The correction information in the RTCM standard
- Geodetic Datasets :   Tectonic Velocity file, Geoid file etc.

Web-based Online Post Process Module[5]
- Automatically determine the reference stations to be used
in coordinate calculation
- Report the result in user-defined coordinate system
- Download retrospective 30-second daily observation data
of the existing reference stations

Technical Specifications

Sub-regional Networks (Subnets)
- Definition: User-defined
- Send: Real-time correction information that automatically determines which sub-region to send to the user according to the user's location[5]
- Ability: Process 8 subnets simultaneously
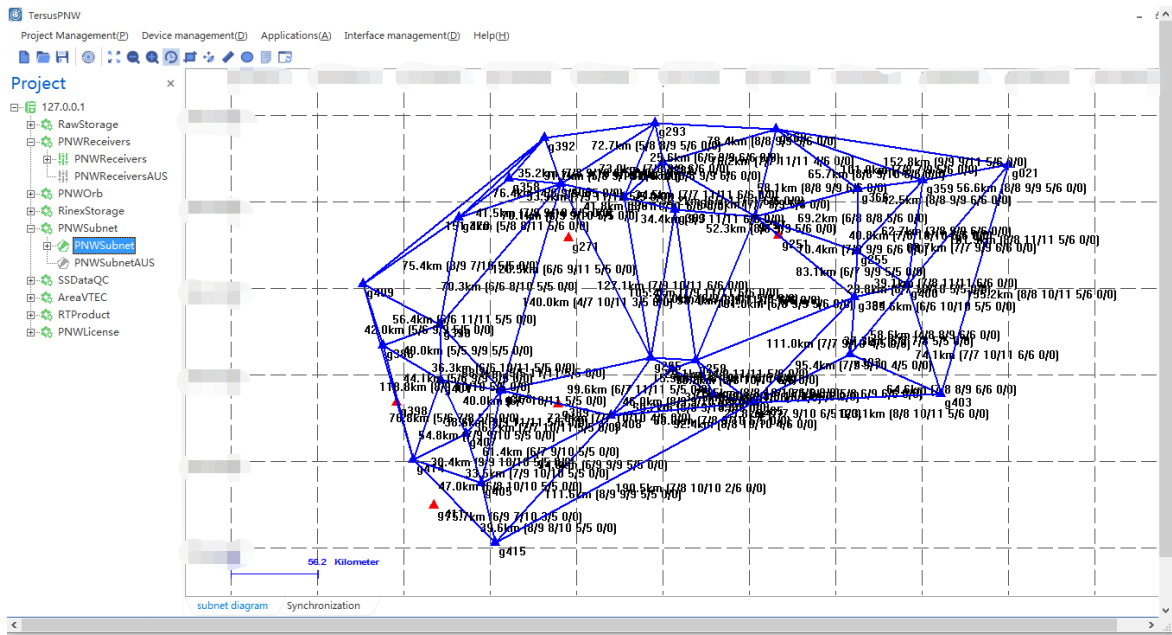
Note:
(1) The more reference stations, the greater the performance requirements of the server.
(2) It is supported if the virtual servers using virtual cores means "Cloud server".
(3) The user will be able to choose what they want from this correction information.
(4) Optional for MAC and FKP.
(5) Optional.

Website: www.tersus-gnss.com
Sales Inquiry: sales@tersus-gnss.com
Technical Support: support@tersus-gnss.com

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