



Welcome to the world of GNSS Sensor


P3E


Quick Tour




Connection


LED Definition

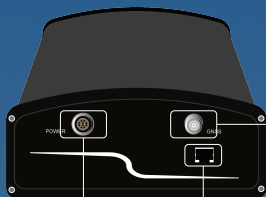
 Satellite LED: Flashing while searching satellites.

 Static LED: Flashing while collecting static data.



 Status LED: Lighting while sending CORS data.

 Power LED: Lighting while power supply is on.

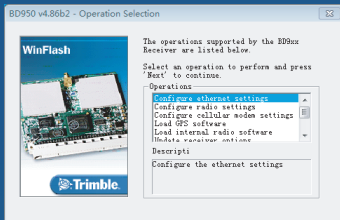


Antenna Port

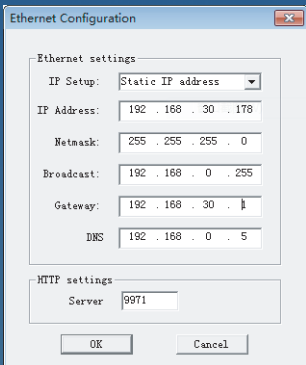
Ethernet Port

Serial Port (use to connect external radio or power)

IP Configuration



Users can use WinFlash software to config IP address. Click [Configure ethernet settings].



Choose [Static IP address], and then input IP address as you need.

Tracking

The screenshot shows a web-based configuration interface for a tracking system. On the left is a sidebar menu with the following items: Receiver Status, Satellites, Receiver Configuration, Summary, Antenna, Reference Station, Tracking, Correction Controls, Position, General, Application Files, Reset, Default Language, I/O Configuration, Network Configuration, Security, Firmware, and Help. The 'Tracking' item is selected. The main area is titled 'Tracking?' and contains the following settings:

- Elevation Mask: 0
- Everest™: Enable
- Clock Steering: Disable

Below these settings is a table with the following columns: Type, Signal, Enable, and Options.

Type	Signal	Enable	Options
GPS	L1 - C/A	<input checked="" type="checkbox"/>	
GPS	L2E	<input checked="" type="checkbox"/>	L2C and L2E
GPS	L2C	<input checked="" type="checkbox"/>	CM + CL
GPS	L5	<input checked="" type="checkbox"/>	I + Q
SBAS	L1 - C/A	<input checked="" type="checkbox"/>	
SBAS	L5	<input type="checkbox"/>	
GLONASS	L1 - C/A	<input checked="" type="checkbox"/>	
GLONASS	L1P	<input type="checkbox"/>	
GLONASS	L2 - C/A	<input checked="" type="checkbox"/>	L2 - C/A(M) Only
GLONASS	L3	<input type="checkbox"/>	
Galileo	E1	<input checked="" type="checkbox"/>	
Galileo	E5 - A	<input checked="" type="checkbox"/>	
Galileo	E5 - B	<input checked="" type="checkbox"/>	

Users can customize satellite systems, frequencies, and combination of different frequencies.

Reference Station

Reference Station

CMR ID:

RTCM 2.x ID:

RTCM 3.x ID:

Station Name: GREF001

Station Code:

Cartesian Geographical

Reference Latitude: 31° 0' 58.64814" N S

Reference Longitude: 121° 17' 19.07044" E W

Reference Height: 39.695 [m]

Load Current Position

Load Average Position

Position Averaging

Current Position:

Lat 0° 0' 0.00000" N

Lon 0° 0' 0.00000" E

Hgt 0.000 [m]

Average Position:

Time 0s

Users can set reference station coordinates, there are three ways:

- Input reference station coordinates directly, if you know it exactly.
- Click [Here] to get reference station coordinates.
- Survey hundreds of points and then click [Average] to get reference station coordinates.

Antenna

The screenshot shows the 'Antenna Configuration' window of a software application. On the left is a vertical navigation menu with the following items: Receiver Status, Satellites, Receiver Configuration (highlighted), Summary, Antenna, Reference Station, Tracking, Correction Controls, Position, General, Application Files, Reset, and Default Language. Below these are IO Configuration, Network Configuration, Security, Firmware, and Help. The main area is titled 'Antenna Configuration' and contains the following fields and controls:

- Antenna Type: Unknown External (dropdown)
- RINEX Name: Unknown External (dropdown)
- Antenna Serial Number: [text input]
- Radome Serial Number: [text input]
- Antenna Measurement Method: Antenna Phase Center (dropdown)
- Antenna Height [m]: 0.000 (text input)

Below the fields is a diagram of an antenna mounted on a pole. The diagram shows a horizontal line representing the antenna, with a vertical line representing the pole. A right-angled triangle is formed by the pole, a horizontal line from the pole to the antenna, and a hypotenuse labeled 'Slope'. The vertical distance from the top of the pole to the antenna is labeled 'Antenna Height'. The horizontal distance from the pole to the antenna is labeled 'Antenna Phase Center'. The total height from the base of the pole to the antenna is labeled 'Antenna Height [m]'.

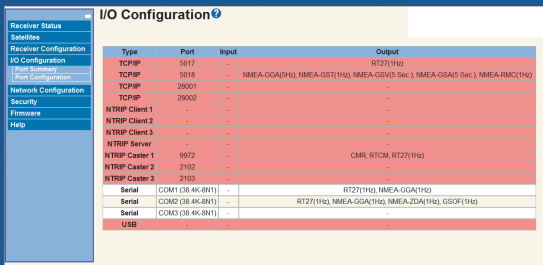
Apply Antenna Correction to:
RTCM V3

At the bottom left of the main area are 'OK' and 'Cancel' buttons.

Users will config antenna parameters.

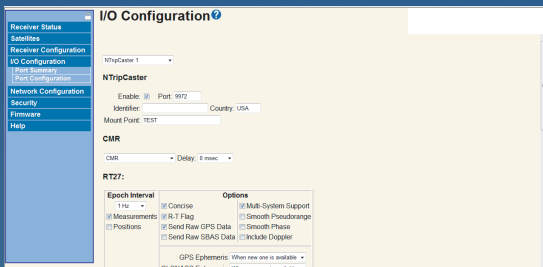
- Antenna type/RINEX Name: CHC A220GR GNSS Geodetic antenna or CHC C220GR GNSS Choke Ring antenna preferred (Both of them are included in [Unknown External], and users can not change it, cause it is defined by Trimble).
- Antenna Measurement Method: Choose the way to measure antenna.
- Antenna Height: Input antenna height users measured. When you choose [Unknown External], the default antenna phase center height is zero, you need to modify it. For example, CHC A220GR: 0.1493m, CHC C220GR: 0.2084m.

Data Output



Type	Port	Input	Output
TCPIP	5017	-	RTZ?(1Hz)
TCPIP	5018	-	NMEA-GGA(1Hz), NMEA-GST(1Hz), NMEA-GSV(5 Sec), NMEA-GSA(5 Sec), NMEA-RMC(1Hz)
TCPIP	28001	-	-
TCPIP	28002	-	-
NTRIP Client 1	-	-	-
NTRIP Client 2	-	-	-
NTRIP Client 3	-	-	-
NTRIP Server	-	-	-
NTRIP Caster 1	9972	-	CMR, RTCM, RTZ?(1Hz)
NTRIP Caster 2	2102	-	-
NTRIP Caster 3	2103	-	-
Serial	COM1 (38.4K-8N1)	-	RTZ?(1Hz), NMEA-GGA(1Hz)
Serial	COM2 (38.4K-8N1)	-	RTZ?(1Hz), NMEA-GGA(1Hz), NMEA-ZDA(1Hz), GSO(1Hz)
Serial	COM3 (38.4K-8N1)	-	-
USB	-	-	-

Users can click I/O Configuration to achieve data output.



I/O Configuration

NtripCaster 1

NTRIP Caster

Enable: Port: 9972

Identifier: _____ Country: USA

Mount Point: TEST

CMR

CMR: _____ Delay: 0 msec

RTZ?:

Epoch Interval	Options
1 Hz	<input checked="" type="checkbox"/> Concise <input checked="" type="checkbox"/> Multi-System Support
<input checked="" type="checkbox"/> Measurements	<input checked="" type="checkbox"/> R-T Flag <input type="checkbox"/> Smooth-Pseudorange
<input type="checkbox"/> Positions	<input checked="" type="checkbox"/> Send Raw GPS Data <input type="checkbox"/> Smooth-Phase
	<input type="checkbox"/> Send Raw SBAS Data <input type="checkbox"/> Include Doppler
	GPS Ephemeris: When new one is available
	<input type="checkbox"/> ICA/SBAS Ephemeris: When new one is available

For example:

Click [NTRIP Caster 1], and then you will enter the interface of detailed configuration.

Click [Enable] to make NTRIP Caster be available to use.

Port: Input the port number to export data.

Identifier/Country will be default.

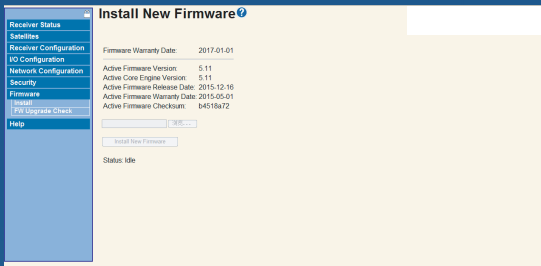
Mount Point: Input TEXT as source table.

CMR: Switch difference scheme as you need, and set delay time.

Receiver Status			
Subsites			
Receiver Configuration			
I/O Configuration			
Port Swayway			
Port Configuration			
Network Configuration			
Security			
Firmware			
Help			
I/O Configuration			
Type	Port	Input	Output
TCPIP	5017	-	RT27(1Hz)
TCPIP	5018	NMEA-GGA(5Hz), NMEA-GST(1Hz), NMEA-GSV(5 Sec.), NMEA-GSA(5 Sec.), NMEA-RMC(1Hz)	-
TCPIP	28001	-	-
TCPIP	28002	-	-
NTRIP Client 1	-	-	-
NTRIP Client 2	-	-	-
NTRIP Client 3	-	-	-
NTRIP Server	-	-	-
NTRIP Caster 1	9972	-	RTCM_V3
NTRIP Caster 2	2102	-	-
NTRIP Caster 3	2103	-	-
Serial	COM1 (38.4K.BN1)	-	RT27(1Hz), NMEA-GGA(1Hz)
Serial	COM2 (38.4K.BN1)	-	RT27(1Hz), NMEA-GGA(1Hz), NMEA-ZDA(1Hz), GSO(1Hz)
Serial	COM3 (38.4K.BN1)	-	-
USB	-	-	-

If data output succeeds, then NTRIP Caster 1 will turn green.

Remote upgrading

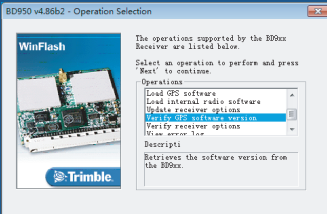


Users can get remote upgrading in [Firmware] (Both [Install] and [FW Upgrade Check]).

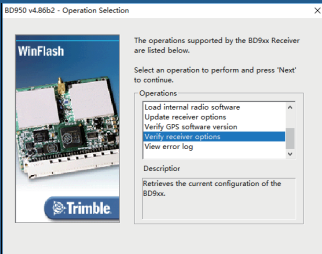
Install: You will install latest firmware in the interface.



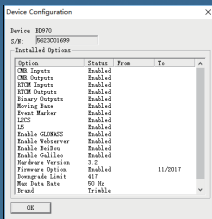
FW Upgrade Check: You will click [Check for new firmware now] to input firmware file, and then get remote upgrading.



Users can click [Verify GPS software version] to check OEM board firmware version.



Users can click [Verify receiver options] to check OEM board function.



This interface shows whether OEM board function is enabled.

External Radio



Users can connect P3E with an external radio. Then, users will click [I/O Configuration] to switch [Serial/COM1]. You can switch difference scheme, baud, parity as you need.



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