How the third party get high precision position information from P78P

The Embedded professional GNSS module in P78P can output center meter level position information with CORS corrections. P78P installed OS driver and an app named HPP can provide many ways to the third-party software to get access to the high precision position information.

1. 3 ways to get access

i) Directly from the embedded module

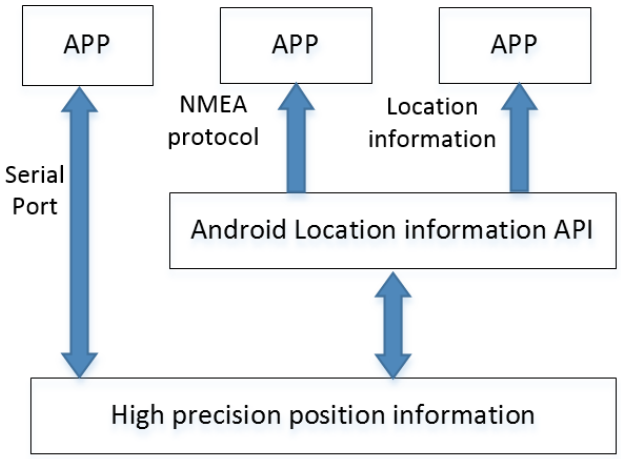
Refer to section 5.

ii) Call the APIs for NMEA

Refer to section 6.

iii) Call the APIs for the position information

Refer to section 7.

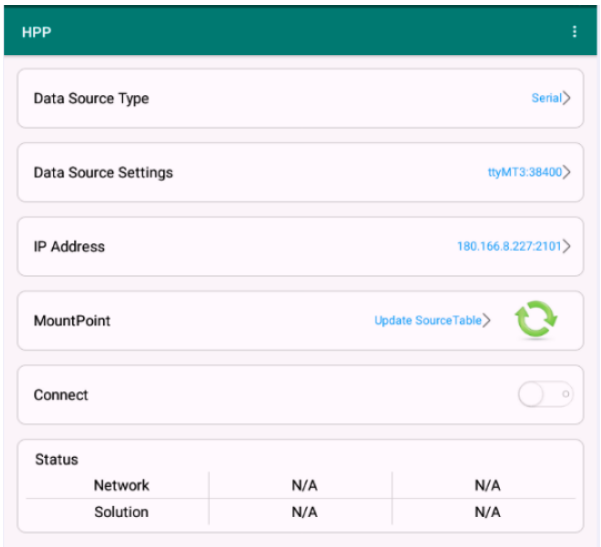


2. Run the "HPP" high precision service application

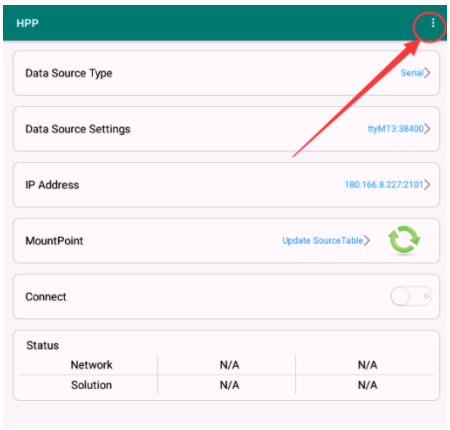
Configure the GNSS module parameters:

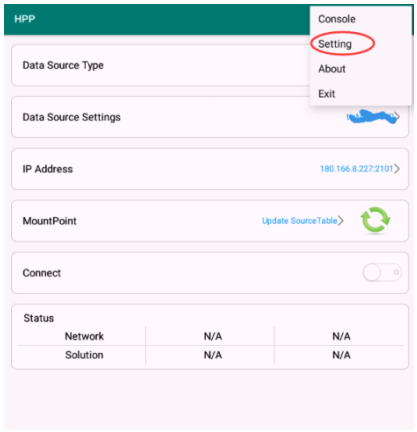
Data Source Type: Serial port

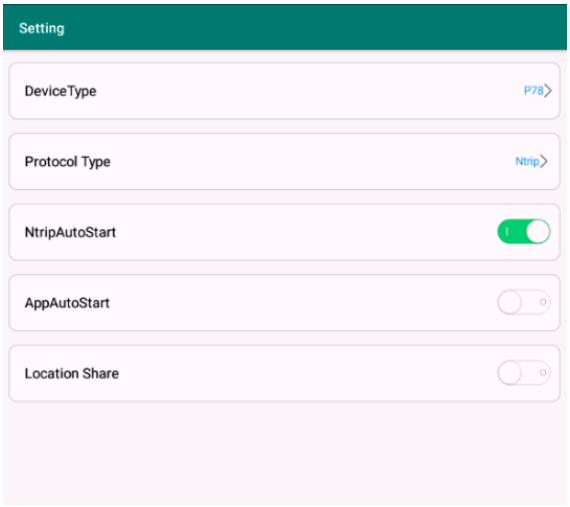
Data Source Settings: ttyMT3, 38400



3. “HPP” Set up







Configuration of the software as shown above.

Device Type: Choose P78.

Protocol Type: The protocol type refers to the data protocol type for the device to access CORS. The software supports two protocols, TCP/IP and Ntrip. It is recommended to choose Ntrip.

NtripAutoStart：

Set to ‘**ON**’: When the HPP software is running and the high-precision data service is activated, it will automatically connect to the CORS system according to the differential account and provide the high-precision positioning data fixed to the Android location service.

Set to ‘**OFF**’: When the high-precision data service is activated, the differential account will not be automatically connected, and only the positioning data of the built-in high-precision GNSS module will be provided.

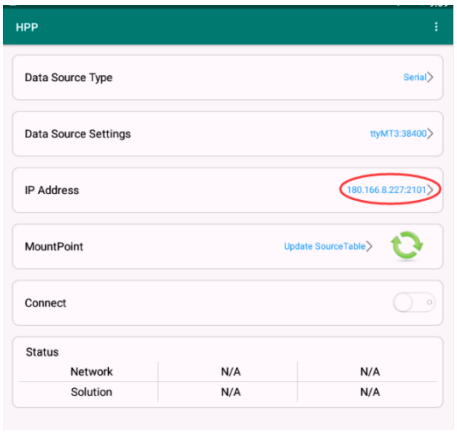
AppAutoStart：

Set to ‘ON’: After the device is turned on, it will automatically load the HPP application and start the high-precision data service.

Set to ‘OFF’: You need to run manually the HPP application, and then to start the high-precision data service.

4. NTRIP parameters setup

First step clicks as shown below to enter the CORS system account configuration interface.



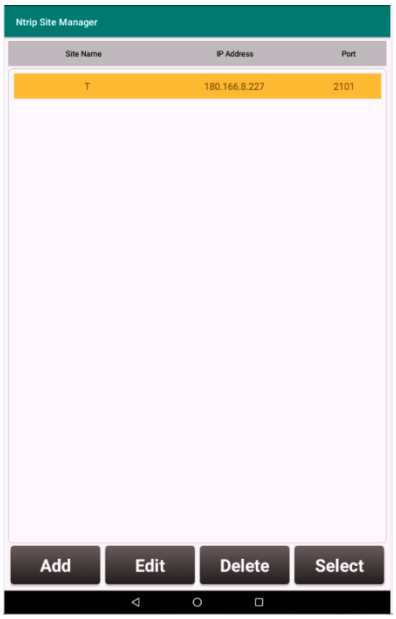
Second step configure CORS account information as shown below.

'Add': Add new CORS account

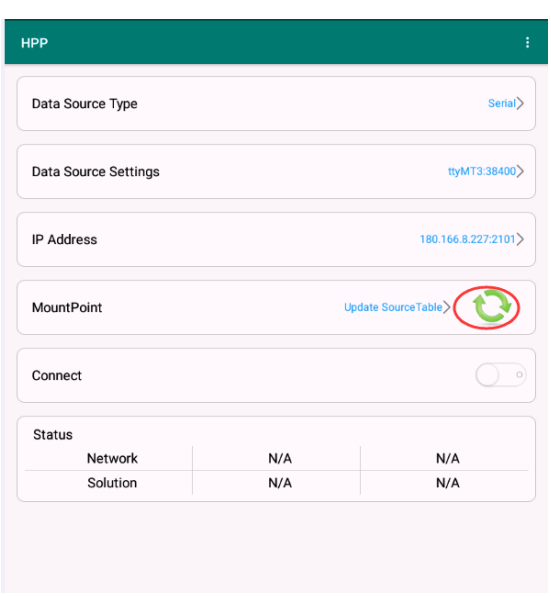
'Edit': Edit existing account information

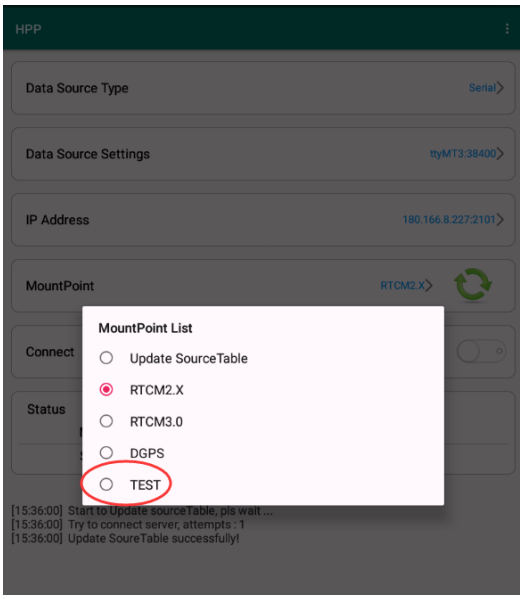
'Delete': Delete existing account information

'Select': Select existing account information and return to the previous interface

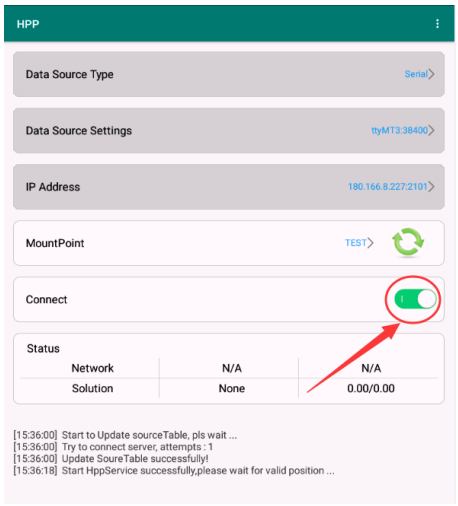


Third step is to update the "MountPoint" as shown below, and select the right "MountPoint" to use.





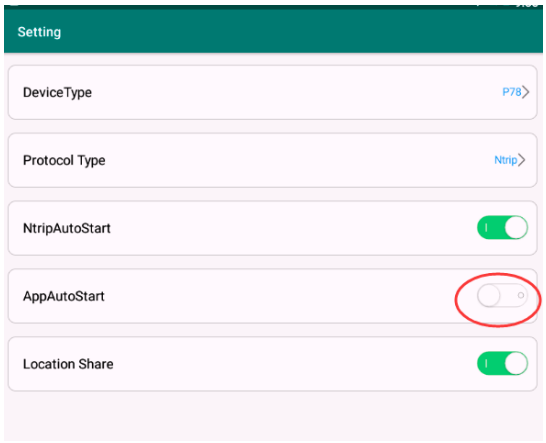
Fourth step, after the setting is completed, set ‘Connect’ to ‘ON’ to start the high-precision location service.

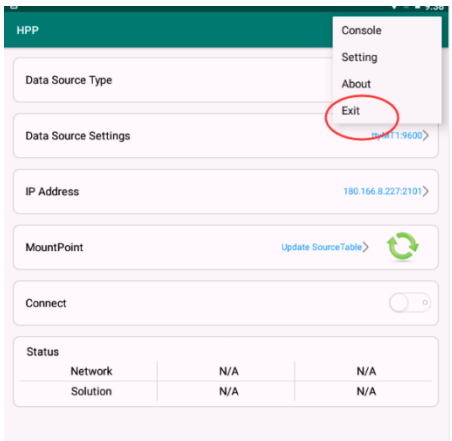


Note: When ‘NtripAutoStart’ is set to ‘OFF’, HPP will not connect to the CORS service and only provide the positioning data from the built-in high-precision GNSS module to the Android location service interface.

5. Get positioning data directly from the P78P built-in GNSS module

The first step is to confirm that the HPP service software is turned off and the HPP software has exited.

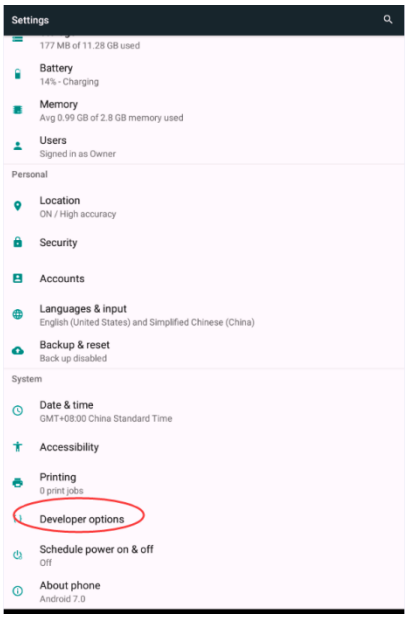




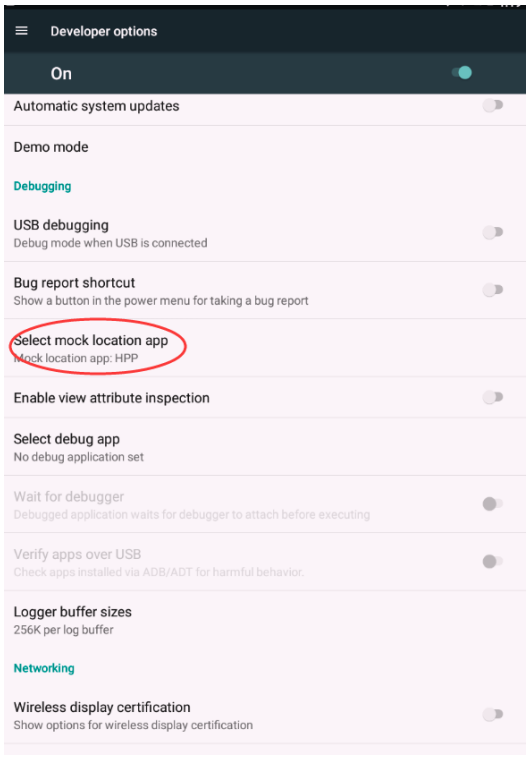
The second step is to set the built-in high-precision data acquisition parameters as follows:
GNSS Data Source Type: Serial port
The number of serial port: ttyMT3
Baud rate: 38400
Note: When using this method, the third-party software needs to obtain the location information of the GNSS module directly from the serial port. If you need to access the CORS system, you need to develop some relevant software yourself to obtain high-precision data.

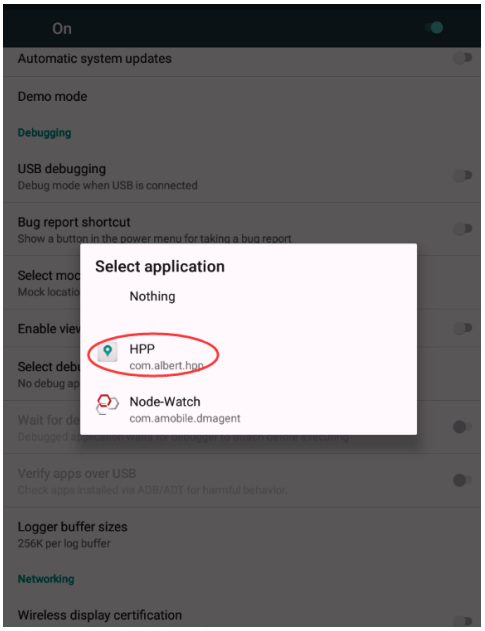
6. Call the Android location service interface to analyze and use high-precision NMEA data
The first step is to run HPP as described in section 2 and configure the device parameters of the built-in high-precision GNSS module
The second step is to configure CORS account parameters as described in section 4, and set the 'Connect' status to ON
The third step is to run third-party software, call the Android location service interface, read and parse the NMEA data by itself to obtain high-precision location data.
Note: If sample codes deeded, please contact the supplier.

7. Call the Android location service interface to directly read high-precision location information
The first step is to change the system's built-in location service provider to HPP
Open the 'settings' interface and click on 'Developer options'.



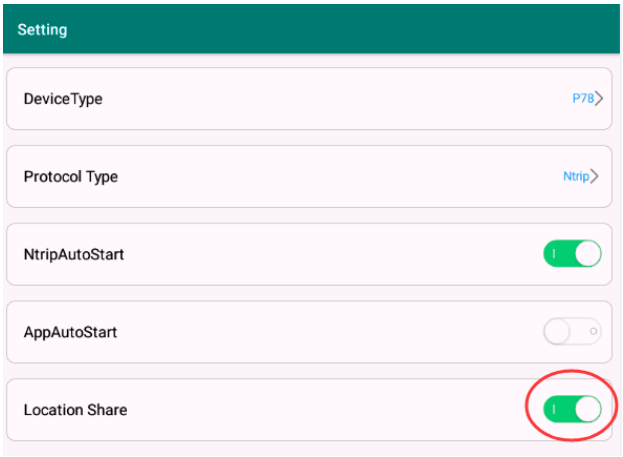
Set the ‘Select mock location app’ as the ‘HPP’ software as shown in the figure below.





The second step is to run HPP as described in section 2 and configure the device parameters of the built-in high-precision GNSS module

The third step is to configure the general HPP parameters according to actual needs according to the instructions in Section 3, and confirm that the ‘Location Share’ is set to ‘ON’ as shown.



The fourth step is to configure CORS account parameters as described in Section 4 and set the 'Connect' status to ON.

The fifth step, run third-party software, call the Android location service interface, and directly read high-precision location information

Note: If sample codes deeded, please contact the supplier.