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

нрр		
Data Source Type		Serial
Data Source Settings		ttyMT3:38400>
IP Address		180.166.8.227:2101>
MountPoint		Update SourceTable>
Connect		$\bigcirc \bigcirc$
Status		
Network	N/A	N/A
Solution	N/A	N/A

3. "HPP" Set up

нрр			нрр		Console
Data Source Type		Serial	Data Source Type		About
Data Source Settings		ttyMT3:38400>	Data Source Settings		
IP Address		180.166.8.227:2101>	IP Address		180.166.8.227:21
MountPoint	U	pdate SourceTable>	MountPoint	Upc	late SourceTable>
Connect			Connect		
Otatua			Status Network	N/A	N/A
Network	N/A	N/A	Solution	N/A	N/A
Solution	N/A	N/A			

Setting	
DeviceType	P78,
Protocol Type	Ntrip>
NtripAutoStart	(C
AppAutoStart	
Location Share	

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.

IPP			
Data Source Type			Serial >
Data Source Settings		tty	MT3:38400>
IP Address		180.166	8.227:2101
MountPoint		Update SourceTable>	0
Connect			
Status			
Network Solution	N/A N/A	N/A N/A	

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

Ntrip Site Manager			
Site Name		IP Address	Port
т		180.166.8.227	2101
Add	Edit	Delete	Select
	⊲ (

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

нрр		:	нрр	:
Data Source Type		Serial	Data Source Type	Serial
Data Source Settings		ttyMT3:38400>	Data Source Settings	ttyMT3:38400>
IP Address		180.166.8.227:2101>	IP Address	180.166.8.227:2101>
MountPoint	Up	date SourceTable	MountPoint MountPoint List	
Connect			Connect Update SourceTable RTCM2.X	
Status Network Solution	N/A N/A	N/A N/A	15:36:00 Startto Update sourceTable, pis wait 15:36:00 Try to connect server, attempts : 1 15:36:00 Update SourceTable succestuly!	

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

:			НРР
Serial>			Data Source Type
ttyMT3:38400>	t		Data Source Settings
.166.8.227:2101>	180.16		IP Address
» Q	TEST>		MountPoint
			Connect
			Status
N/A	N/	N/A	Network
0/0.00	0.00/	None	Solution
N/A 0/0.00	N/. 0.00//	N/A None ble, pls wait empts : 1 essfully	Status Network Solution 15:36:00) Start to Update source1 15:36:00) Try to connect server, a 15:36:001 Undate SourceTable suc

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.

Setting		НРР		Console
DeviceType	P78>	Data Source Type		Setting About
Protocol Type	Ntrip	Data Source Settings		Exit
		IP Address		180.166.8.227:2101>
NtripAutoStart		MountPoint	Upo	late SourceTable>
AppAutoStart		Connect		
Location Share		Status Network	N/A	N/A
		Solution	N/A	N/A

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'.

Setti	ngs Q
-	177 MB of 11.28 GB used
	Battery 14% - Charging
	Memory Avg 0.99 GB of 2.8 GB memory used
÷	Users Signed in as Owner
Pers	onal
۰	Location ON / High accuracy
â	Security
8	Accounts
•	Languages & input English (United States) and Simplified Chinese (China)
٥	Backup & reset Back up disabled
Syste	im .
0	Date & time GMT+08:00 China Standard Time
*	Accessibility
٠	Printing 0 print jobs
	Developer options
ф	Schedule power on & off Off
0	About phone Android 7.0

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.

Setting	
DeviceType	P78>
Protocol Type	Ntrip>
NtripAutoStart	
AppAutoStart	$\bigcirc \bigcirc$
Location Share	

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.