

HOW STREAM OUT MEASURES AND COORDINATE FROM ROBOTIC TPS

In this document we see how use to configure XPAD Ultimate to stream out different data format (GSI, Pseudo NMEA GGA, etc...) using the serial cable or the Bluetooth connection from the Android tablet to an external device like a PC.

X-PAD ULTIMATE CONFIGURATION

- The configuration must be defined in the TPS profile page
- Open Settings -> GNSS & Total stations -> Modify or create a new TPS profile
- In the profile page select the data format and the communication mode

Output Measures & Coordinates

Data format

Pseudo NMEA GGA coordinates

Communication

USB-Serial adapter

- The communication can be done using a USB-SERIAL adaptor or using BLUETOOTH

USB-SERIAL configuration

In this configuration the PC is connected to the tablet using a serial cable. Normally it is necessary to use a USB-Serial RS232 converter cable, since on the tablet side only a USB port is available.

- In the communication settings you must configure the baud rate (normally recommended 115200)
- Connects the cables to the PC and verify in Device Manager in Windows what is the COM port that will be used, and verify the baud rate of the COM port
- If the connection is successful, when the tablet is connected to the PC by the cable, a message on the tablet should display asking to authorize the communication
- Connect the 3th party application to the COM port to read the data from the tablet

BLUETOOTH configuration

In this configuration the Android tablet is connected to the PC by Bluetooth, without the need of using cables and adapters. This is recommended when the PC has not a DB9 connector.



- For the Bluetooth connection the first step is to pair the PC on Android
- Open on XPAD profile page and click on ADD DEVICE

Output Measures & Coordinates

Data format
Pseudo NMEA GGA coordinates ▼

Communication
Bluetooth ▼

Device

◀
📶 Add device
✔ Accept

- Here you must search for the PC Bluetooth
- Check carefully the configuration, since here 2 BT devices must be entered: XPAD must connect to the Zoom90 device as instrument

Device

Communication
Bluetooth ▼

Device
ZRT82_954950 ▼

- But have selected the PC in the output measure and coordinate field

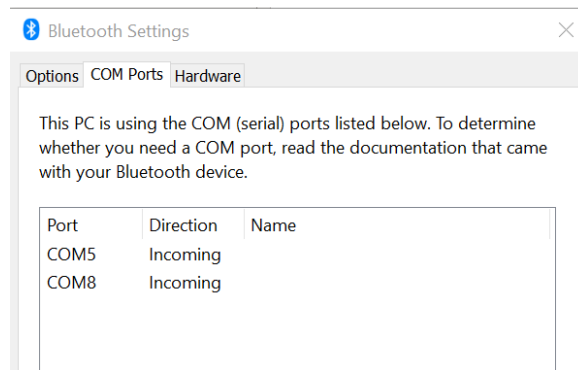
Output Measures & Coordinates

Data format
Pseudo NMEA GGA coordinates ▼

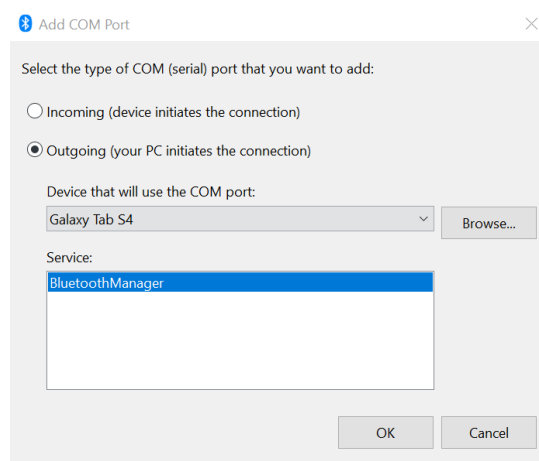
Communication
Bluetooth ▼

Device
AMILNOBCALB01 ▼

- The next step is to create a COM port on the PC. This COM port will be then used from the 3th party software to read the streaming
- On the PC select Bluetooth Options and click on COM PORT



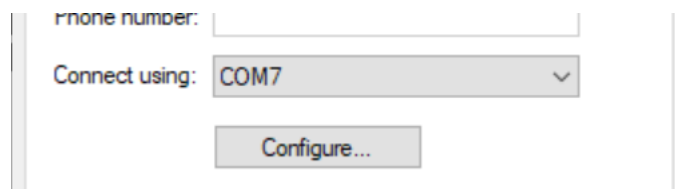
- Click on ADD to create a new COM
- Select the tablet Bluetooth (that was created before during the pairing) and create the connection like picture below



- This creates a COM port

Port	Direction	Name
COM5	Incoming	
COM7	Outgoing	Galaxy Tab S4 'BluetoothManager'
COM8	Incoming	

- Connect the 3th party app to the created COM port



- Then from XPAD start to measure in tracking mode and the coordinate will be streamed out correctly on the COM port

\$GPGGA,102539.02,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*54
\$GPGGA,102539.62,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*52
\$GPGGA,102540.22,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*58
\$GPGGA,102540.82,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*52
\$GPGGA,102541.42,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*5F
\$GPGGA,102542.02,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*58
\$GPGGA,102542.63,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*5F
\$GPGGA,102543.23,-0.62,N,-0.17,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*5A
\$GPGGA,102543.83,-0.65,N,-0.22,E,1.05,1.0,-0.02,M,0.0,M,0.0,0001*51
\$GPGGA,102544.43,-0.68,N,-0.27,E,1.05,1.0,-0.03,M,0.0,M,0.0,0001*53
\$GPGGA,102545.04,-0.69,N,-0.29,E,1.05,1.0,-0.03,M,0.0,M,0.0,0001*5E
\$GPGGA,102545.64,-0.72,N,-0.37,E,1.05,1.0,-0.03,M,0.0,M,0.0,0001*5D
\$GPGGA,102546.24,-0.68,N,-0.40,E,1.05,1.0,-0.03,M,0.0,M,0.0,0001*51
\$GPGGA,102546.84,-0.65,N,-0.42,E,1.05,1.0,-0.03,M,0.0,M,0.0,0001*54