#### Creating new instrument profile for GNSS Rover

 Notebook:
 Xpad

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#### Creating new instrument profile for GNSS Rover

Updated: 20200510\_DL - update to the RTK section Updated: 20200416\_DL - updated tables content Created: 20200129\_DL

How to create new profile for your GNSS Rover (Zenith35Pro example)

X-Pad Ultimate allows to use different channels to stream the corrections to the GNSS Rover. It is good to have two different profiles for your rover: one for internal GSM (GPRS) module in the rover and another for tablet internet (the source of the internet in the second case is not important, it can be WiFi or WWAN).

To create the profile for internal GPRS (Rover with SIM card): Run X-PAD > Open any/new job > Follow screenshots below



<b>_</b>		* 💎 🖹 📋 18:36			* 💎 🖹 📋 18:36
🔀   Instru			🔀 New profile		
Zoo	m70		Profile		_
TPS BT: Z	Instruments	· ·	Profile name		
	GNSS Receiver (GNSS)				
	Total station (TPS)		Mode	GNSS Rover	~
	CANCE		Brand	GeoMax	~
			Model	GNSS Zenith 15	<b>~</b>
<	1 B Scan QR + Add		$\bigtriangledown$	▷ Next	

Name your profile.

		* 🗘 🖹 🖹 18:37
🔀 New profile		
Profile		
Profile name		
Zonith25Pro TAC CPPS		
Zennuisspilo TAG GPRS		
Mode	GNSS Rover	
P I		
Brand	GeoMax	
Model	GNSS Zenith 15	
$\triangleleft$	▷ Ne	xt

Note the model is **Zenith35PRO** not ordinary Zenith35

		*	マ 🖹 📋 18:37	<u>1</u> 🗖		* マ 🖹 💼 19:36
🔀 🛛 New p	Model			🔀 Modify pr	ofile	
Profile	Model			Profile		
Profile na	GNSS Zenith 25	0		Profile name		
Zenith35	GNSS Zenith 35	0		Zenith35Pro	TAG wifi	
Mode	CNSS Zonith 25000		× 1	Mode	GNSS Rover	<b>~</b>
Brand	GN35 Zehith 35FK0		~	Brand	GeoMax	
	CNSS Zonith 40			brand		
Model	GN35 Zelliti 40	$\bigcirc$	×	Model	GNSS Zenith 35PRO	<b>~</b>
<		CANCEL		$\bigtriangledown$		▷ Next

If your rover is not on the list (it appears as a serial number of your rover) search for new device. Your rover has to be switched on.



<u>.</u>		* マ 🖹 📋 18:42
🔏 New profile		
RTK GPRS		
Provider	VODAFONE.IE	<b>~</b>
Server	VRSNOW	×
Mountpoint		>
Format	RTCM3	<b>V</b>
Add prefix to refere	ence station	0
$\triangleleft$		▷ Next

Skip this section if your X-PAD has been already configured for other rover and already has proper Provider and Server configuration. In this case you can go to the NTRIP configuration part (starting with Mountpoint).

Follow the steps below to set up RTK settings. Prepare: your SIM card provider APN name, APN user name, APN password, your RTK corrections provider: IP/URL, port, user name and password. If possible try to not use PIN code for SIM card.

Most usual settings (please confirm with your mobile internet service provider):

Provider	VRSnow	SmartNET	Carlson	TopNET Live
IP	82.135.20.213 52.58.139.127 (alternative emergency server, use only when Trimble main server is down) vrsnow.ie	69.64.185.110 ie.nrtk.eu	79.125.126.100	88.86.116.1 <u>rtk.topnetlive.com</u>
Port	2101	7801	2204	2101
Source	15_TVN_RTCM_31	VRS-RTCM3	IRELAND_NET_RTK	NET_RTCM3 AUTO RTK_RTCM3

Settings for selected Mobile Internet providers

Provider	APN	user	password	Service type	Balance check no.
Vodafone.ie PAYG	isp.vodafone.ie	vodafone	vodafone	PAYG	1850 204020
Vodafone.ie Contract	hs.vodafone.ie	vodafone	vodafone	Contract	-
Vodafone.ie VSIM	ciot.vodafone.ie	vodafone	vodafone	Contract / VSIM	-
Vodafone.co.uk	pp.vodafone.co.uk	blank	blank	PAYG	+44 3333 048 048
MOS1 (Obsolete)	EM or em	blank	blank	Contract	-
MOS2 (Hitechniques)	<u>NXT17.NET</u>	blank	blank	Contract	-
MOS2 NXT17C.NET	NXT17C.NET	blank	blank	Contract	
Three	internet	blank	blank	Contract / PAYG	
Eir	data.myeirmobile.ie	blank	blank	Contract / PAYG	

	* 💎 🖹 🗎 18:42	<u>†</u>		*	20:03
🔀 New profile		Modify			
RTK GPRS		RTK GPR	Provider		
Provider	VODAFONE.IE	Provider	VODAFONE.IE		~
Server	VRSNOW	Server			~
Mountpoint		Mountpoi	MOS2	0	>
Format	RTCM3	Format	Providers	0	~
Add prefix to reference	station	Add prefix		CANCEL	0
$\bigtriangledown$	⊳ Next	$\triangleleft$		⊳ Next	
Add prefix to reference	station O Next	Format Add prefix	Providers	CANCEL	0

If your provider is not on the list choose **providers** and follow screenshots

<u>1</u>	*	💎 🖹 📋 20:03	<u>1</u>		* √	💎 🖹 📋 20:03
🔀 Providers			🔀 🛛 New pr	ovider		
VODAFONE.IE APN:hs.vodafone.ie		>	Name			
MOS2 APN:NXT17.NET		>	APN Server			
~			UserID			
			Password			
			PIN			
$\triangleleft$	# Tools + Add		$\triangleleft$		🗸 Accept	
<u>†</u> 🗷	*	💎 🖹 盲 20:03	<u>†</u> 🖬		*	💎 🖹 🧰 20:03
Modify VODAFO	NE.IE		🔀 Provide	ers		
Name	VODAFONE.IE		K VODAFO APN:hs.voo	NE.IE Jafone.ie		>
APN Server	hs.vodafone.ie		MOS2	7.NET		>
UserID	vodafone					
Password	vodafone					
PIN						
Ø	✓ Accept		$\bigtriangledown$	Tools	+ Add	
	*	💎 🖹 🗎 18:42		c)	* •	💎 🖹 盲 20:04
				profile		
Provider	VODAFONE.IE		Provider	Server		~
Server	VRSNOW		Server	VRSNOW	۲	~
Mountpoint		>	Mountpoir	NTRIP servers	0	>
Format	RTCM3	<b>~</b>	Format			~
Add prefix to reference	e station	0	Add prefix		CANCEL	0
Q	▷ Next		$\triangleleft$		⊳ Next	

If your server is not on the list choose **NTRIP servers...** and follow screenshots

			* 💎 🖹 盲 20:04		* -	💎 🖹 盲 20:04
<u>ح</u>	VRSNOW		>	Name		
				Mode	NTRIP	
				IP		
				Port		0
		$\sim$		UserID		
				Password		
	$\bigtriangledown$	Tools + Add		Q	✓ Accept	
	Modify VRSNOW		¥ 💎 🖹 🛢 20:04			
	Name	VRSNOW				
	Mode	NTRIP	~			
	IP	vrsnow.ie				
	Port		2101			
	UserID					
	Password					
	<	✓ Accept				

After configuring the Provider and the Server follow the steps below to configure NTRIP.

<u> </u>		* 💎 🖹 📋 18:42			
🔀 New profile					
RTK GPRS					
Provider	VODAFONE.IE				
Server	VRSNOW	~			
Mountpoint		<b>&gt;</b> >			
Format	RTCM3	<b>~</b>			
Add prefix to reference	station	0			
$\triangleleft$	▷ Next				
		* 💎 🖹 🗎 18:42		- into	*
			<b>∡</b> ∎   Wountp	oomts	
				Mountpoints	
				<mark>Mountpoints</mark> Download mountpoin	ts list
				Mountpoints Download mountpoin	ts list
			I	Mountpoints Download mountpoin 40%	ts list
				Mountpoints Download mountpoin 40% Receiver connecte	ts list d: GNSS Zenith 35PR0



## Use **15\_TVN\_RTCM\_31** for GPS/GLONASS corrections (Format **RTCM3**)

## Use 15\_TVN\_RTCM\_32 for GPS/GLONASS/GALILEO/BEIDOU corrections (FORMAT RTCM32MSM)

-		* マ 🖹 📋 18:46		* 💎 🖹 🗎 18:46
🔀 Mount	points		🔀 New profile	
15_TVN RTCM3.1 RTK L1 & L	2 <b>_RTCM_31</b>	GPS+GLONASS Network of stations	RTK GPRS Provider	MOS2
15_TVN RTCM3.1 RTK L1 & L	RTCM_31_GPS_Only	GPS Network of stations	Server	VRSNOW
., 15_TVN	_CMR_X		Mountpoint	15_ <u>TVN_RTCM_</u> 32 →
CMRx RTK L1 & L	2	GPS+GLO+GAL+BDS+QZS Network of stations	Format	RTCM3
* <b>15_TVN</b> RTCM3.2 RTK L1 & L	2	GPS+GLO+GAL+BDS+QZS Network of stations	Add prefix to referer	nce station
<	◯, Search	Refresh	$\bigtriangledown$	▷ Next
<u> </u>		米 マ 🖹 🖥 18:46	<b>—</b>	∦ 🗸 🐨 📓 18:47
New p	Format	∦ 🐨 🖹 🗎 18:46	■ Mew profile	* - 🐨 📓 🗎 18:47
Mew p	Format RTCM3	∦ ♥ 🖹 🗎 18:46	New profile	* •♥ ڲ ■ 18:47 MOS2
RTK GPR	Format RTCM3	★ ▼ ▲ 18:46	New profile      Provider      Server	* • • 🖹 🗎 18:47 MOS2 VRSNOW
RTK GPR Provider Server	Format RTCM3 RTCM2	* • • • • • • • • • • • • • • • • • • •	New profile Provider Server Mountpoint	* • • 2 18:47 MOS2 • • VRSNOW • • 15_ <u>TVN_RTCM_32</u> •
RTK GPR Provider Server Mountpoin	Format RTCM3 RTCM2 RTCM32MSM	* • 18:46	New profile      Provider      Server      Mountpoint      Format	* • • • • • • • • • • • • • • • • • • •
RTK GPR Provider Server Mountpoin Format	Format RTCM3 RTCM2 RTCM32MSM	<ul> <li>18:46</li> <li>•</li> <l< th=""><th>Provider Server Mountpoint Format Add prefix to referer</th><th>* • • • • • • • • • • • • • • • • • • •</th></l<></ul>	Provider Server Mountpoint Format Add prefix to referer	* • • • • • • • • • • • • • • • • • • •
RTK GPR Provider Server Mountpoin Format Add prefix	Format RTCM3 RTCM2 RTCM32MSM CMR+	<ul> <li>18:46</li> <li>18:46</li> <li>18:46</li> <li>18:46</li> </ul>	New profile      Provider      Server      Mountpoint      Format      Add prefix to referer      RTCM3.1 messages	* • • 18:47       MOS2       VRSNOW       15_TVN_RTCM_32       RTCM32MSM       •       •

### Turn off Beidou and Galileo for **15\_TVN\_RTCM\_31** Turn on Beidou and Galileo for **15\_TVN\_RTCM\_32**

	* 💎 💐 菌 18:48	<b>—</b>	* 💎 🖹 🗎 18:47
🔀 New profile		🔀 New profile	
RTK Extra-Safe	0	Antenna	
Satellites Cut-off angle(°)	10	Model	Integrated
Use GLONASS		Height	1.800m
Use BEIDOU			~
Use GALILEO			
Position update freq.			
$\bigtriangledown$	⊳ Next	$\triangleleft$	✓ Accept

# You are going to create the second profile for wifi, so select $\ensuremath{\mathbf{NO}}$

-			* 🔻	8 🖹 📋 18:47	<u> </u>			* 💎 🖹 📋 18:36
Instruments				🔀 Instrume	nts			
TPS	GeoMax - BT: ZRT8	<b>0</b> Zoom 70/90 2_957458		>	TPS	<b>)</b> Zoom 70/90 2_957458		>
Rove	GeoW BT: Z:	Configure receiver Do you want to configure receiver 3	o yes	>				
	$\bigtriangledown$	BB Scan QR	+ Add		$\triangleleft$	a Scan QR	+ Add	
			*.√	7 🖹 📋 18:36				* 💎 🖹 📋 18:36
X					🔀 New prof	île		
8	Zoom7	Zoom70			Profile			
TPS	TPS BT. Z Instruments GNSS Receiver (GNSS) T Total station (TPS)				Profile name			
					Mode	GNSS Rover		
			CANCEL		Brand	GeoMax		<b>~</b>
					Model	GNSS Zenith	15	~
	$\bigtriangledown$	a Scan QR	+ Add		$\bigtriangledown$		▷ Next	
<u>1</u>	⊡ Modifv p	rofile	* •	🖻 🖹 📋 19:36				
P	rofile							
	Profile name							
Zenith35Pro TAG wifi								
1	Mode	GNSS Rover		<b>×</b>				
	Brand	GeoMax		<b>~</b>				
	Model	GNSS Zenith 35PRO		×				
	$\triangleleft$		▷ Next					

# Note the model is **Zenith35PRO** not ordinary Zenith35

<b></b>		*	💎 🖹 📋 18:37	1	* 💎 🖹 盲 19:36	
🔀 🛛 New p	Model			Modify pro	ofile	
Profile				Profile		
Profile na	GNSS Zenith 25	0		Profile name		
Zenith35	GNSS Zenith 35	0		Zenith35Pro T		
Mode	GNSS Zenith 35PRO		×	Mode	GNSS Rover	~
Brand			~	Brand	GeoMax	<b>~</b>
Model	GNSS Zenith 40	0	~	Model	GNSS Zenith 35PRO	<b>~</b>
<		CANCEL		$\bigtriangledown$	⊃ Next	



#### Choose the profile you want to work with and select Configure from the pop up menu

			՝ 🕈 💌 📋 18։50	1			* 💎 🖹 盲 13:31	
🛛 🔀 🛛 İn	struments			🔀 Ir	nstruments			
TPS	<b>Zoom70</b> GeoMax - Zoom 70/90 BT: ZRT82_957458		>	TPS	<b>Zoom70</b> GeoMax - Zoom 70/90 BT: ZRT82_957458		>	
Rover	Zenith35Pro TAG GP GeoMax - GNSS Zenith 35P BT: Z35190601001	RS	· · ·	Rover	Zenith35Pro TAG GeoMax - GNSC Zenitl BT: Z35190601013	GPRS h 35PRO	>	
CeoMax - GNSS Zenith 35PRO					Zenith35Pro TAG	) wifi	Current	
			>	Rover	GeoMax - GNSS Zenith 35PRO BT: Z35190601001		Modify	
Rover	51.23319001001			-	_		👖 Delete	
				Demo gnss     NMEA - NMEA Simulation     Rover		on	🔅 Configure	
		can QR	+ Add		$\bigtriangledown$	an Scan QR	🔀 Zenith 35 WebServer	



Your equipment is ready to work now.

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