Kraków 26.11.2013

INVITATION TO TENDERS

ORDERER:

TRIMTECH Sp. z o. o.
ul. Konecznego 4/10U
31-216 Kraków
Poland

TRIMTECH Sp. z o. o. invites **Parties** concerned to **submit a Tender** (Everybody welcomed) concerning the delivery of the equipment with the necessary software, within the framework of the project no. **WND-RPSW.01.01.00-26-197/11 pn**., designed to Create Świętokrzyskie GNSS Reference Station Networks, being implemented by TRIMTECH Sp. z o.o.

1. **The subject matter of the Tender shall be the delivery of the reference stations, repeters and licence for the PNAS, RTK software and kit for control the stability of the software, and licenses for Vbiling**
Minimal technical parameters:

No.	Technical paramteter	Minimum Requirements
1A Reference Station – 10 pcs		
1	Satellite System	GPS NAVSTAR (L1, L2, L2C, L5), GLONASS (L1, L2), GALILEO (L1, E5a, E5b), EGNOS
2	Total numbers channels	At least 440 channels for simultaneous tracking of signals from satellites: GPS, GLONASS, Galileo, BeiDou, QZSS i EGNOS
3	Satellite signals tracked simultaneously	GPS: L1, L2, L1 C/A, L2C, L5 (I+Q), L2 P(Y) (method for tracking unencrypted L2P); GLONASS: L1, L2, L1 C/A, L1 P lub L2 P; GALILEO: L1 (E1), E5a, E5b, E5a+b (AltBOC) (for all freq. phaze nad code); EGNOS: L1
		Zero elevation tracking technology for all satellite system: GPS, GLONASS, Galileo, BeiDou, QZSS i EGNOS
4	Communications ports	At least two separate communication ports built into the front cover, including at least one RS232 (DB9, Lemo) for two-way communication. For each port, must provide at least one transmission cable with a length of 1.0 to 2.0 m with RS232 DB9 to ensure full use of the port.
6	Ethernet ports	At least one RJ45 connector for Ethernet interface. The Contractor shall provide at least one cable to connect the receiver to the Ethernet port RJ45 jack on the external device (such as a router).
7	Internal memory	Minimum 8 GB of internal flash memory intended for recording observations. The receiver's memory may be implemented as a receiver installed in the memory card, but can not be implemented as a storage device (external hard drive, flash drive, etc) attached to a USB port.

No.	Technical paramteter	Minimum Requirements
		Overwriting the observational data in memory is full or after a specified time
8	Data Logging	The interval in the range of 0.02 s - 10min
		Record producer in the binary format. The receiver must be capable of convert file formats to RINEX and RINEX 2.11 3.x through your own website or allow direct observation record in these formats.
		Ability to set the length of the saved files as files of at least one-and 24-hour
		Simultaneous recording settings for 8 sessions
		The possibility shared observations on the FTP server
		Push FTP functionality, or the ability to send files observation on a remote FTP server.
9	Reference stations mode	Generate observational data streams in RTCM 10403.x, RAW (raw producer receiver) and CMR, CMR +, CMRx and share them with at least three ports as server TCP / IP Ethernet interface available via the receiver. Ability to define on different ports simultaneously different data formats.
		Generate data on the status of the receiver NMEA 0183 (min. message GGA).
		Can share streams observation on one server port number as TCP / IP Ethernet interface accessible by the receiver,
		Port must support at least three simultaneous connections to different IP addresses, and configured to enable three different data formats for each of these calls, regardless of the connecting order.
10	Frequency of sending observations	Between 20Hz - 10min
11	Static accuracy of differential measurements	Horizontal: $\pm$ 3 mm + 0.1 ppm
		Vertical: $\pm$ 3,5 mm + 0.4 ppm
12	Storage temperature	$-40^{\circ}C +80^{\circ}C$
13	Operating temperature	$-40^{\circ}C +65^{\circ}C$
14	Remote management	via web browser (web page of the receiver)
15	Web Site receiver	Availability of the Web browser, Internet Explorer or an equivalent free, HTTP and HTTPS
		Can be set via the website of the receiver parameters of the receiver for the transmission of data (streams configuration observation at the appropriate ports TCP / IP), data storage, configuration signals and satellites being tracked, restart the receiver
		Standing, configurable IP address
		Configurable ports TCP / IP network for FTP

No.	Technical paramteter	Minimum Requirements
		Password protection of configuration changes receiver
		Remotely install the receiver software (firmware)
16	Indication front panel display	Satellite tracking
		Power status
17	Cover	Dust-proof and resistant to moisture, a minimum of IP67 and MIL-STD 810F
		Resistant to shocks and falls from a height of at least 0.5 m onto a hard surface
18	Power	Can be powered from two independent external sources. As an independent power source can be used for the internal battery of the receiver. If the receiver is powered by two independent receiver ports Contractor shall provide for each port allows the power supply at least one power adapter with cable to connect the receiver.
		Automatic switching between power sources with full functionality
		Automatic power on the receiver when reconnect the power source while maintaining the configuration and settings before the power failure without the need for manual station.
		In the case of critical voltage drop automatically forced off the receiver
19	Date of manufacture	Produced in 2013
20	Additional requirements	Because of the need to integrate the receiver to the network management software VRSNet.pl, required that the equipment is 100% compatible with the software VRS3NetPlus

1B) Antenna – 10 pcs

No.	Technical paramteter	Minimum Requirements
1	Model	GNSS antenna type Zephyr Geodetic 2 lets you track satellites GPS + GLONASS + Galileo + BeiDou of a anti-snow dome protection.
		The antenna and the dome in accordance with the manufacturer's instructions supplied receiver
2	Phase-center repeatability	< 1 mm
3 4	Calibration Operating temperature	The absolute calibration of antenna phase center with dome calibration markings consistent with IGS, NGS
		Od -50^OC do $+70^O$C
5	Cover	Protection against dust and moisture IP67 Resistant to shocks and falls from a height of at least 2 m onto a hard surface The antenna is to be able to direct mounting on the screw thread 5/8 "
6	Satellite signals tracked	Track low elevation of H 0 ° Tracking the frequency: L1, L2, L2C, L5 (GPS), L1, L2 (GLONASS), L1(E1), E2, E5a, E5b, E6 (Galileo)
7	Antenna gain	50 dB ±2dB
8	Power	3.5 V DC do 20 V DC
9	Power consumption (maximum)	440 mW

No.	Technical paramteter	Minimum Requirements
8	Accessories	1) Adapter for antenna cable with TNC connector socket type N 2) 2 pcs adapters for the antenna cable from the socket to N-type TNC connector 3) Antenna cable length of 2 to 3 meters at both ends, permitting connection between a satellite receiver and surge ended socket N 4) The antenna cable length of 30 meters at both ends, which allows the connection between the antenna and the surge ended socket N 5) 2 x N-type connectors for LMR400 cable antenna mounted on the cable by screwing (clamped) 6) 2 pcs TNC connectors for LMR400 cable antenna mounted on the cable by screwing (clamped) 7) The surge arrester installed in the RF cable, low loss, the frequency range of 1.2 - 2.0 GHz, the maximum resistance of 50 ohms
9	Other	Antenna and dome made in 2013 The antenna and the dome must comply with the RoHS Directive
10	Documentation	Complete User Manual in Polish

1C) Communication module – 10 pcs

1	Firewall/router	850 Mbps firewall performance IPS performance (NSS 4.2.1) 65Mbps Performance AES256 encryption + SHA-1 / 3DES + SHA-1 VPN 65Mbps Maximum capacity 64K session New session on the second 2200 Maximum number of users Unlimited The number of available slots IOCs: 1 x SRX Series Mini-PIM Ports WAN / LAN 2 x 10/100/1000BASE-T + 6 x 10/100 BASE-T Support for GSM gateway YES WAN / LAN PIMs (possible extension): T1/E1, ADSL2 Annex A or B, G.SHDSL, VDSL2 Annex A DOCSIS 3.0 Cable Modem, GbE SFP, Sync Serial Power supply: 230VAC GSM: Auto MDIX Ethernet 1x10/100 PoE 802.3af (<4W typical with one-Modem connected) USB ports 3 x USB 2.0 ExpressCard ports 1xExpressCard/34 12VDC 30W Power Supply LED Indicators Power (HW) USB Modem Status (x3) ExpressCard Modem Status (x1) Modem Signal Strength (x4) LAN Activity (HW) GSM Modem USB or ExpressCard 3G/4G compatible with GSM gateway The communication module must allow IPSec VPN channel list with Juniper

No.	Technical paramteter	Minimum Requirements
		SRX240 on several interfaces including interface Ethernet, 3G or 4G and other..

1D) The casing protecting the satellite receiver and communication modules from unauthorized access – 10 pcs

No.	Technical paramteter	Minimum Requirements
1	Material	Made of steel, cold rolled steel
2	Weight capacity	50kg
3	Mounting	Hanging and standing
4	Other	Removable side panels, durable, glazed front door locked.
5	Inverter	Inverter DC - AC 12V/230V 600W with built-in automatic charger + function UPS Continuous Power 600 W Power (instantaneous) 1200W, input voltage 12 V (10 V - 15 V) Output voltage 230 V, frequency 50 Hz, efficiency 90% no-load power consumption of 0.8 mA USB output 5V 500mA, Response Time UPS function <8 ms Dimensions mm 265/150/57
6	Gel Battery	Voltage: 12V, 33Ah capacity, dimensions not greater than the height of 167 mm, length 190 mm, width 160 mm, weight: 10.50 kg

1E) Additional accessories – 10 pcs

No.	Technical paramteter	Minimum Requirements
1	Statyw	
2	Spodarka	
3	Adapter	
4	Miarka do pomiaru wysokości	

2) Repeter – 5 pcs

No.	Technical paramteter	Minimum Requirements
1	Radio	Power: max 4 W Frequency: 430-470 MHz
2	Format	NTRIP, RTCM, CMR, internal producers formats
3	Range	4 km
4	Accessories	Tripod battery loader Programming cable AntenaUHF, 5dB gain, height 96.5 cm Cable to the antenna
5	Power	Battery, maintenance free lead-acid GP12170 Width (W) 76.2 ± 1 mm, The total height (H) of 167 ± 2 mm, Container height (h) 165.5 ± 2 mm, Length (L) 181 ± 2 mm, Objective / Unit 6 Voltage / Unit 12 V, Capacity of 17 Ah at 20h-cycle to 1.75V per cell @ 25 ° C

PROGRAM REGIONALNY
NARODOWA STRATEGIA SPÓJNOŚCI

WOJEWÓDZTWO ŚWIĘTOKRZYSKIE

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		(77 ° F), Weight (kg) approx. 5.5 kg. Battery, maintenance free lead-acid made ??in the AGM Batteries for the planned lifespan of 10 - 12 years by. Eurobat. Designed for standby and cyclic., Voltage - 12 V Capacity - 33 Ah, Length -195 mm, Width - 130 mm, Height - 172 mm Weight - 10kg Solar batery: The polycrystalline Power max. [W] 30, Voltage max. [V] 17.49 Current max. [A] 1.71, Open voltage Voc [V] 21.67 Short circuit current Isc [A] 1.83, Weight [kg] 3.90 MC4 terminal
6	Case	2 pcs Peli case 1450, IP67
7	Working time	5 days (depending on the ambient conditions)

Licencje

3)	License for receivers for PNAS module	10 pcs license to connect a reference station to calculate the precise determination of the matrix module to the PNAS (Precise Network Automatic Software)
4)	License for users real-time	4 x 25 pcs real-time users for parallel work in real-time software module VRS3NetPlus
5)	License for static users for PNAS module	4 x 25 pcs static users for parallel work in calculate the precise determination of the matrix module to the VRS3NetPlus

6) Kit for testing the stability of the reference stations 1 pcs

6A GNSS Receivers – 4 pcs

1	Basic technical parameters	precise geodetic RTK GNSS receiver integrated with a GPS antenna , interference -resistant and able to eliminate multipath
		440 channels , simultaneous tracking of satellite signals : - GPS: L1C / A, L1C , L2C , L2E , L5 - GLONASS : L1C / A, L1P , L2C / A, L2P , L3 - SBAS : L1C / A, L5 - Galileo : GIOVE -A and GIOVE -B , E1, E5a , E5B - BeiDou (COMPASS) : B1 , B2,
		Positioning with OmniSTAR HP , XP , G2, VBS
		QZSS , WAAS , MSAS , EGNOS , GAGAN
		time on internal battery min . 4.5 hours in receive mode RTK corrections
		receiver fully cooperating with the VRS network , the base station
		provision for attaching a power source during the measurement
		able to use the receiver as a local base station emitting corrections via the Internet using the built-in receiver 3.5G modem protocol (NTRIP)
		positioning frequency : 1, 2, 5 , 10, 20 Hz .

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		dustproof and waterproof - according to IP 67
		built into the recording parameter inclinometer deflection from the vertical pole
2	Measurement accuracy - not less than	Static measurement, high precision: Horizontal + / - 3 mm + 0.1 ppm RMS Vertical + / - 3.5 mm + 0.4 ppm RMS
		Measurement of kinematic RTK (single station <30 km) Horizontal + / - 8 mm + 1 ppm RMS Vertical + / - 15 mm + 1 ppm RMS
		Measurement of kinematic RTN (within the network) Horizontal + / - 8mm + 0.5ppm RMS Vertical + / - 15mm + 0.5ppm RMS
3	Communication and data logging	the built-in modem GPRS/3G/UMTS/HSDPA with the possibility of the SIM card from the user,
		a receiver integrated with the memory module min. 4GB
		The radio modem: a fully integrated, sealed, broadband, sending / receiving 450 MHz frequency range 410 MHz to 470 MHz transmit power 2W
		Bluetooth wireless communication module built into the receiver,
		communication module WiFi: 802.11 b, g, mode access point or client built-in receiver
		Ports: Serial, USB, Bluetooth, power,
		Formats Input / Output: RTCM 2.3, RTCM 3.0, RTCM 3.1, CMR, CMR +, CMRx
		Receiver parameters can be configured via remote access from an external device (eg, tablet, smartphone, laptop) using Wi-Fi connection (Remote UI)
4	GPS controller kit	controller of the same company as the GPS receiver
		Windows Mobile 6.5
		800 processor ARM ™ Cortex ™-A8 processor,
		RAM 256 MB,
		8GB internal memory,
		Color Touch Screen, 4.2cala, VGA, 640 × 480 pixels, readable in daylight,
		full, physical alphanumeric keyboard with QWERTY (one letter in one click)
		power source allowing for min. 25 hours work without having to replace batteries
		SD memory card slot,
		communication ports, Bluetooth, 9-pin RS-232, USB host, USB client,
		resistance to shocks, falls on a hard surface from a height of min. 1m.,
		dustproof and waterproof - according to IP 67
		built-in modem controller GSM/GPRS/EDGE/3G/HSDPA with the possibility of the SIM card from the user
		5Mpix built-in camera with flash function,
		built-in GPS (WAAS enabled)
		built-in compass
		built-in accelerometer
5	Controller Software	software from the same company as the GPS receiver and controller

		the ability to perform measurements of GPS RTK
		Polish menu
		Staking out RTK method ,
		possible to calculate the line and arc
		opportunity to work with background maps as raster , min. JPG , BMP
		export / import data DXF , SHP
		export / import points as text,
		calculation module include : calculating the area , azimuth , distance from coordinates , surface modeling and volume calculation
		formation of coordinate systems and fitting of the local systems ,
		should allow visualization of the measurement of the number of observed satellites , the CIT rate , the average coordinate errors designated point , type of solution ,
		the ability to generate reports RTK in an open format directly from the software field .
		The ability to view the precision parameters - including the deflection of the vertical poles for each measured point
6	Kit	Rover
		Control unit with the handle on the pole and the other instrumentation (charger, carrying case, set the film on display)
		Battery Charger receiver min. 2-workstation
		Removable battery to the receiver - min. 2 pieces,
		utilities on the CD min. modeling and volume calculation, 3D linear modeling (corridors), import / export files CAD and GIS environment (at least DXF, DWG, SHP) recorded measurements for the calculation of static GNSS (GPS + GLONASS), which allows you to edit the imported data, calculation of baseline and alignment in relation to fixed points
		Polish manual
		composite pole with cover,
		rigid transport case for the receiver and controller

6B Software for calculating the stability of the reference stations – 1 pcs

1	Technical parameters	The software must be from the same manufacturer as the receiver , controller and controller software
		Import, edit, and export data files in CAD (minimum DXF , DWG , SHP)
		Import, edit, and export data files in format text
		Import and RTK data analysis performed by the GNSS receiver ,
		Import, export and edit data into a format Google Earth and SketchUp
		The ability to create 3D models of linear (corridors) based on text data , vector and measurement
		The ability to create cross-sections normal, oblique and long profiles ,
		Possibility of numerical models based on surface observation data measurements and other text files ,
		The ability to import raster data and their calibration points based on adjustments
		The ability to import , edit and export point cloud formats: PTS LAS
		Import and edit observations from static measurements of GNSS (GPS ,

		GLONASS , Galileo , Compass) files RINEX/T02/T01/DAT ,
		The calculation of the baseline from imported static observations ,
		Network adjustment module based on observations of static , total station observations and leveling data ,
		Module photogrammetry ground with the ability to calculate points based on pairs of images ,
		Air photogrammetry module , to calculate the orthophoto , point clouds , and create the numerical model of land cover based on photogrammetric bombing of unmanned systems photogrammetry low ceiling

6C Laptop – 1 pcs

1	Parameters	Matrix: 17.3 "LED 1600x900 Processor: Intel Core i7, 2.2 GHz, 3.2 GHz Turbo (4 cores) Size HDD: 1000GB SSD Size: 128GB Memory: 6GB Graphics Card: NVIDIA GeForce GT 630M, 1024 MB Optical Drive: DVD-RW Operating System: Windows 7 Home Premium Wireless Network WLAN 802.11 b / g / n Bluetooth: Yes HDMI: Yes 3xUSB 3.0 Camera 1.0 megapixels Warranty: 2 years
2	Software	MS Office 2013 Word, Excel, PowerPoint, Outlook
3	Inne	Case and moause

No.	Technical paramteter	Minimum Requirements

7 Vbiling license – 1 pcs

1	License billing data Vbiling for Symfonia Software for environmental VRS3NetPlus	Vbiling license program to work with the program Sage Symfonia in environments VRS3NetPlus and MS Windows

2. Warranty

The Purchaser requires that a minimum warranty period of the whole object of the contract was not less than 24 months.

3. **The requirements concerning the contents of the Tender**

Purchaser accepts bids submitted in English or Polish.

The conversion offers will be made in Euro at the average NBP exchange rate Euro - on day of submission of tenders.

Purchaser does not allow partial bids.

The submitted Tender shall contain as following, among other things.:

a) the full name and address of the Tenderer, the NIP number and contact details,

b) the specification of the offered devices with their full technical description,

c) the terms of the warranty ,

d) the total netto price in PLN or Euro, including all costs associated with the carrying out of the subject matter of the Tender,

e) the validity of the offer shall be a minimum of 30 days days after its service to the Orderer,

f) the deadline for the execution of the subject matter of the Tender,

g) the terms and date of payment,

h) the date of the offer,

i) the signatures, with the company seal, of the persons authorized to represent the Tenderer.

4. The criterium for the awarding of the contract to the winnning Tenderer shall be the lowest price and Meeting the Minimum Technical Specification.

5. The term of the carrying out of the subject matter of the Tender shall be January 17, 2014

6. The deadline for submittting of Tenders

The Tenders shall be accepted to December 6, 2013 till 15.00 p.m. The Tenders which come after the above mentioned deadline to the ORDERER'S office shall be not accepted. The Tenders can be submitted:

by an e- mail to: **projekt_swietokrzyskie** and

in person, at the office or by post to the following address:

Trimtech Sp. z o.o.

 31-216 Kraków, ul. Konecznego 4/10u

With a note "Swietokrzyskie Project"

7. The Winning Tender

After the choice of the Tender, the information about the winning Tender will be e-mailed to the Tenderers by December 9, 2013, Which will be equal to awarding a contract to the winning Tenderer (Placing an order with Them).

8. The Tender form is an Annex.

ORDERER

(seal and signature of the authorized person)

… dla rozwoju Województwa Świętokrzyskiego …

Projekt pn. „WND-RPSW.01.01.00-26-197/11" współfinansowany przez Unię Europejską z Europejskiego Funduszu Rozwoju Regionalnego w ramach Regionalnego Programu Operacyjnego Województwa Świętokrzyskiego na lata 2007-2013 i budżetu państwa

THE ACKNOWLEDGEMENT OF THE RECEIPT OF THE TENDER

(to be sent within 3 working days)

Company name			
City		**Zip**	
Street		**Nn**	
Date of the receipt of the Tender			
Company seal			
Signature of the person authorized to receive the Tender			

… dla rozwoju Województwa Świętokrzyskiego …

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