Kraków 25.10.2013

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 reference stations with the necessary software, within the framework of the project no. **WND-RPSL.01.02.04-00-A77/11-02 pn**., designed to Create **Silesian 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 and licence for the PNAS software.

Minimal technical parameters:

1. Reference Station

No.	Technical parameter	Minimum Requirements
A) GNSS receiver – 5 psc		
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

1. Reference Station

No.	Technical parameter	Minimum Requirements
		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.
		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 50Hz - 10min
11	Static accuracy of differential measurements	Horizontal: ± 3 mm + 0.1 ppm
		Vertical: ± 3,5 mm + 0.4 ppm
12	Storage temperature	– 40^{O}C +80^{O}C
13	Operating temperature	-40^{O}C +65^{O}C
14	Remote management	via web browser (web page of the receiver)

1. Reference Station

No.	Technical parameter	Minimum Requirements
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
		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	1. Programmatic Interface. 2. 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 Required a license to connect the receiver to the software VRS3NetPlus
B) Antenna – 5 pcs		
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	< 1 mm

1. Reference Station

No.	Technical parameter	Minimum Requirements
	repeatability	
3	Calibration	The absolute calibration of antenna phase center with dome calibration markings consistent with IGS, NGS
4	Operating temperature	Od –50^{O}C 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
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
C) Communication module – 5 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

1. Reference Station

No.	Technical parameter	Minimum Requirements
		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 SRX240 on several interfaces including interface Ethernet, 3G or 4G and other.
D) The casing protecting the satellite receiver and communication modules from unauthorized access – 5 pcs		
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.
E) Additional accessories – 5 pcs		
1	Solar battery	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
2	Additional requirements	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%

1. Reference Station

No.	Technical parameter	Minimum Requirements
		no-load power consumption of 0.8 mA USB output 5V 500mA, Response Time UPS function <8 ms Dimensions mm 265/150/57 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
3	Output/Input	Socket ECOMATE with IP65 or IP67 Antenna socket UHF and GSM socket Battery level indicator on the housing Socket Lemo 7 pin or DC-IN
4	Cover	IP 67
5	Mast	The universal system for mounting the antenna on the chimney, roof or facade.

2. License PNAS module – 5 pcs

No.	Technical parameter	Minimum Requierements
a)	License to connect the receiver to calculate the postprocessing	Because of the need to integrate the receiver to the PNAS (Precise Network Automatic Software), required that the equipment is 100% compatible with the software PNAS. License to connect the receiver to the PNAS (Precise Network Automatic Software)
b)	Certificate of Authenticity	Certificate of Authenticity confirming the number of licenses purchased PNAS

2. The requirements concerning the contents of the Tender

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.

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

4. The term of the carrying out of the subject matter of the Tender shall be October 31, 2013

5. The deadline for submittting of Tenders

The Tenders shall be accepted to october 30, 2013 till 12.00 p.m. The Tenders wich fail to come before the above mentioned deadline to the ORDERER'S office shall be not accepted. The Tenders can be submitted:
by an e- mail to: projekt_slask@trimtech.com.pl 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 "Silesia Project"

6. The Winning Tender

After the choice of the Tender, the information about the winning Tender will be e-mailed to the Tenderers by October 30, 2013, until 16:00 a.m. Which will be equal to awarding a contract to the winning Tenderer (Placing an order with Them).

7. The Tender form is an Annex.

ORDERER

(seal and signature of the authorized person)

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			