



REPUBLIKA E SHQIPËRISE

BASHKIA GJIROKASTER

Relacion topografik

**STUDIM PROJEKTIM PER OBJEKTIN:
"NDERTIMI I BYPASS-IT NE QENDREN HISTORIKE (URA E
NANXES - URAT E MEDHA DUNAVAT)"**

BASHKIA GJIROKASTER

PROJEKT ZBATIMI

SHOQERIA "ZENIT&CO" sh.p.k

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2. Proçesi i rilevimit.

Punimet gjeodezike dhe topografike ne objektin e mesiperm, u kryen mbi bazen e kerkesave teknike te pergjitheshme dhe specifike te parashikuara gjate rikonicionit fushor dhe studimit te zonës.

“ZENIT&CO” sh.p.k organizoi punën dhe kreu punimet në bazë te pervojës se perfituar ne punimet e meparshme te kesaj natyre. Para fillimit te punimeve topografike u siguruan materialet e nevojshme hartografike, gjeodezike si dhe instrumentat edhe paisjet përkatëse.

Proçesi i Rilevimit eshte realizuar duke perdorur instrumentat me te fundit te teknologjisë në fushën e Gjeodezisë, të cilët janë:

- *GPS SOKKIA GRX2*



Specifikimet teknike për instrumentin “GPS SOKKIA GRX2”

SOKKIA

GRX2 Detailed Specifications

Category	Specification
GNSS Technology & Board	Vanguard, Fence Antenna, QLL
Number of Channels	226 (w Universal Tracking)
Satellite signals tracking GPS GLONASS GALILEO SBAS	L1C/A, L2C, L2E(L2P) L1C/A, L1P, L2C/A, L2P - L1C/A
User Interface	1 Power button 22 status LEDs
Communication Ports	1x Bluetooth Class 1 1x 7-pin (ODU) PWR 1x 5-pin (ODU) SER
SBAS	<0.6m (HRMS)
Static	H:3mm+0.5ppm V:5mm+0.5ppm
Code diff.	<0.5m RMS
RTK	H:10mm+1ppm V:15mm+1ppm
Network RTK	H:10mm+0.5ppm V:15mm+0.5ppm
Initialization Time	15 sec (typical)

- *TOTAL STATION TRIMBLE M3*



Specifikimet teknike për instrumentin “TOTAL STATION TRIMBLE M3”

DISTANCE MEASUREMENT

Reflectorless mode (white target)¹ 1.5 m to 300 m (4.9 ft to 984 ft)

Range with specified prisms

Good conditions (No haze, visibility over 40 km (25 miles))

With reflector sheet 5 cm x 5 cm (2 in x 2 in)

2" 1.5 m to 270 m (4.9 ft to 886 ft)

3", 5" 1.5 m to 300 m (4.9 ft to 984 ft)

With single prism 6.25 cm (2.5 in)

2" 1.5 m to 3,000 m (4.9 ft to 9,843 ft)

3", 5" 1.5 m to 5,000 m (4.9 ft to 16,404 ft)

Accuracy²

2" Prism ±(2+2 ppm × D) mm

2" Reflectorless ±(3+2 ppm × D) mm

3", 5" Prism ±(3+2 ppm × D) mm

3", 5" Reflectorless ±(3+2 ppm × D) mm

Winterized version

Prism ±(3 + 2 ppm × D) mm (–10 °C to +40 °C)

±(3 + 3 ppm × D) mm (–20 °C to –10 °C, +40 °C to +50 °C)

Reflectorless ±(3 + 2 ppm × D) mm (–10 °C to +40 °C)

±(3 + 3 ppm × D) mm (–20 °C to –10 °C, +40 °C to +50 °C)

Measuring interval³

Prism mode

2" 1.6 sec.

3", 5" 1.5 sec.

Reflectorless mode

2" 2.1 sec.

3", 5" 1.8 sec.

Least count 1 mm (0.002 ft)

ANGLE MEASUREMENT

DIN 18723 accuracy (horizontal and vertical) 2"/0.5 mgon

3"/1.0 mgon, 5"/1.5 mgon

Reading system Absolute encoder

Circle diameter 62 mm (2.4 in)

Horizontal/Vertical angle Diametrical

Minimum increment (Degree, Gon, MIL6400) Degree: 1/5/10"

Gon: 0.2/1/2 mgon

MIL6400: 0.005/0.02/0.05 mil

TELESCOPE

Tube length 125 mm (4.9 in)

Image Erect

Magnification 30× (18×/36× with optional eyepieces)

2" Effective diameter of objective 40 mm (1.6 in)

2" EDM diameter 45 mm (1.8 in)

3", 5" Effective diameter of objective 45 mm (1.8 in)

3", 5" EDM diameter 50 mm (2.0 in)

Field of view 1°20'

Resolving power 3", 5"

Minimum focusing distance 1.5 m (4.9 ft)

Laser Pointer Coaxial Red Light

TILT SENSOR

Type Dual-axis

Method Liquid-electric detection

Compensation range ±3.5'

COMMUNICATIONS

Communication ports 1 x serial (RS-232C), 2 x USB (host and client)

Wireless communications Integrated Bluetooth

POWER

Internal Li-ion battery (x2)

Output voltage 3.8 V DC

Operating time⁴

2" approx. 12 hours (continuous distance/angle measurement)

approx. 26 hours (distance/angle measurement every 30 seconds)

approx. 28 hours (continuous angle measurement)

3", 5" approx. 7.5 hours (continuous distance/angle measurement)

approx. 16 hours (distance/angle measurement every 30 seconds)

approx. 20 hours (continuous angle measurement)

Charging time

Full charge 4 hours

GENERAL SPECIFICATIONS

Level vials

Sensitivity of Circular level vial 10"/2 mm

Tangent/Clamps Endless

Display face 1 QVGA, 16 bit color, TFT LCD, backlit (320x240 pixel)

Display face 2 Backlit, graphic LCD (128x64 pixel)

Point memory 128 MB RAM, 128 MB Flash memory

Dimensions (W x D x H) 149 mm x 145 mm x 306 mm

(5.8 in x 5.7 in x 12.0 in)

Weight (approx.)

2" Main unit (without battery) 3.9 kg (8.6 lb)

3", 5" Main unit (without battery) 3.8 kg (8.4 lb)

Battery 0.1 kg (0.2 lb)

Carrying case 2.3 kg (5.1 lb)

ENVIRONMENTAL

Operating temperature range –20 °C to +50 °C (–4 °F to +122 °F)

Winterized –30 °C to +50 °C (–22 °F to +122 °F)

Storage temperature range –25 °C to +60 °C (–13 °F to +140 °F)

Winterized –30 °C to +60 °C (–22 °F to +140 °F)

Atmospheric correction

Temperature range –40 °C to +60 °C (–40 °F to +140 °F)

Barometric pressure 400 mmHg to 999 mmHg/533 hPa to

1,332 hPa/15.8 inHg to 39.3 inHg

Dust and water protection IP66

CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval. C-Tick.

Laser safety IEC 60825-1 am2:2007

2" Prism mode

2" Prism mode: Class 1 laser

2" Reflectorless/Laser Pointer: Class 3R laser

3", 5" Reflectorless / Prism mode: Class 1 laser

3", 5" Laser Pointer: Class 2 laser

Laser Plummet: Class 2 laser

Bluetooth type approvals are country specific.



¹ White objects with high reflectivity (KGC 90%). Measuring distance may vary depending on targets and measuring conditions.

² ±(3+3 ppm × D) mm –20 °C to –10 °C, +40 °C to +50 °C (–4 °F to +14 °F, +104 °F to +122 °F)

³ Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.

⁴ Battery life specification at 25 °C (77 °F). Operation times may vary depending on the condition and deterioration of the battery.

Specifications subject to change without notice.

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Gjatë procesit të matjes , i realizuar me instrumentat qe permendem më lart u përdor sistemi ndërkombetar i koordinatave **UTM** me elipsoid referues **WGS-84**.

Me qëllim lidhjen e projektit që do të realizohet me pjesën tjetër të infrastrukturës së zonës , u bë transformimi i koordinatave të pikave nga projeksioni **UTM** ne **KRGJSH(ETRS-89)**.

Për transformimin e koordinatave u perdoren programet përkatës.

Pas realizimit të matjeve në terren , matjet e realizuara u përpunuan me programin AutocadCivil3D per krijimin e siperfaqeve 3-dimensionale dhe hartimin e profilit gjatesor te rruges dhe llogaritjen e e volumeve ne funksion te vijes se projektit dhe profilit terthor tip te perdorur.

Për krijimin e Bazës gjeodezike për qëllim rilevimi ne terren është përdorur ***Poligonometria***.

Përgjatë zonës së parashikuar qe do të përfshihet në projekt janë fiksuar në tërrën 10 pika te forta qe do të shërbejnë si stacione gjatë zbatimit të projektit. Këto stacione janë caktuar ne vende të qëndrueshme , dhe janë fiksuar me shufra hekuri të betonizuara perreth tyre.

Kjo bazë gjeodezike mund te përdoret përsëri dhe si bazë për qëllime inxhinierike pasi i plotëson kriteret e saktësisë për piketimin në plan dhe në lartësi të objektit.