

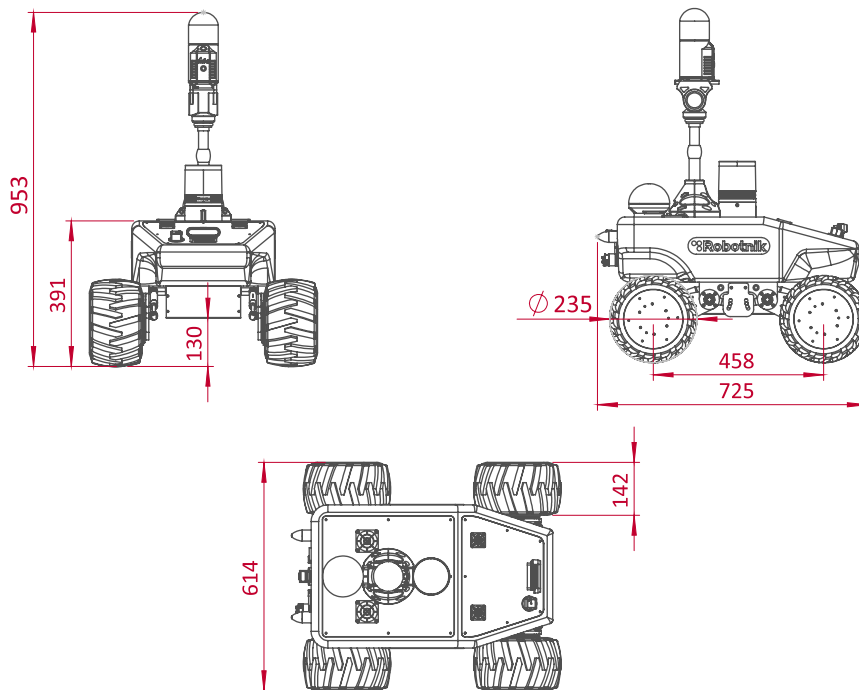
RB-WATCHER

REALITY CAPTURE



INSPECTION & MAINTENANCE

INDOOR & OUTDOOR
PRECISION
RELIABILITY
AUTONOMOUS
FREE NAVIGATION



TECHNICAL SPECIFICATIONS RB-WATCHER

MECHANICAL

Dimensions

- 725 x 614 x 953 mm

Weight

- 73 Kg

Maximum speed

- Up to 2.5 m/s

Target environment

- Outdoors and Indoors

Autonomy

- Up to 5 hours continuous operation

Traction motors

- 4 x Brushless servo motors 500W

Operating ambient temperature

- Temperature range -10° to +45°C

Ground clearance

- 130 mm

Contact charging

- Up to 1000 W

Battery

- LiFePO4 pack 15Ah@48V"

Chassis

- IP50 (IP53 weatherproof optional)

Wheels

- Rubber wheels

Platform

- SUMMIT-XL 48 V

COMMUNICATIONS

Router 4G

- 4G LTE CAT 6
- DUAL SIM
- WiFi & Bluetooth
- Gigabit Ethernet

Optional Smart Radio

- Low Latency Mobile Mesh
- Multiple Bands and Multiband
- Max Throughput: 80 Mbps
- Range: 10+ kilometres

NAVIGATION SENSORS AND LOCALIZATION

Front depth camera

- Depth up to 1280x720 (90 fps)
- RGB up to 1920x1080 (30 fps)

RTK GPS (Optional)

- Centimeter level precision (<1cm with NTRIP up to 35km)
- Converge time <10s

Multiple localization technologies, suitable for every specific environment and application

- 3D SLAM
- 2D SLAM

Static & Dynamic path planning with collision detection and avoidance

LEICA BLK-ARC

INSPECTION SENSORS

DESIGN & PHYSICAL

- Housing: Black powder coated aluminium
- Weight: 690 g
- Height: 183.6 mm
- Front to back: 92.5 mm
- Diameter: 80 mm

OPERATION

- BLK ARC-UI: Browser-based mission control user interface. Requires additional installation on a supported robotic carrier.
- Communication: USB 3.0 and Wireless (BLK ARC-UI connection)
- Internal memory: 24 hours of scanning (compressed data) / 6 hours (uncompressed data)

LiDAR & IMAGING

- Laser class: 1 (in accordance with IEC 60825-1)
- Wavelength: 830 nm
- Field of view: 360° (horizontal) / 270° (vertical)
- Range: Min. 0.5 - up to 25 m
- Point measurement rate: 420,000 pts/sec
- High resolution camera: 12 Mpixel, 90° x 120°, rolling shutter
- Panoramic vision system: 3-camera system, 4.8 Mpixel 300° x 135°, global shutter

DYNAMIC SYSTEM PERFORMANCE

- Range noise: +/-3 mm
- Accuracy indoor: +/-10 mm

ENVIRONMENTAL

- Robustness: Designed for indoor and outdoor use
- Operating temperature: 0 to +40 °C
- Dust & humidity protection: IP54 (IEC 60529)

DATA PROCESSING

- Data transfer: Wireless and USB 3.0
- Desktop software: Leica Cyclone REGISTER 360 and Cyclone REGISTER 360 (BLK Edition), HxDxR cloud-based platform

