TECHNICAL SPECIFICATIONS

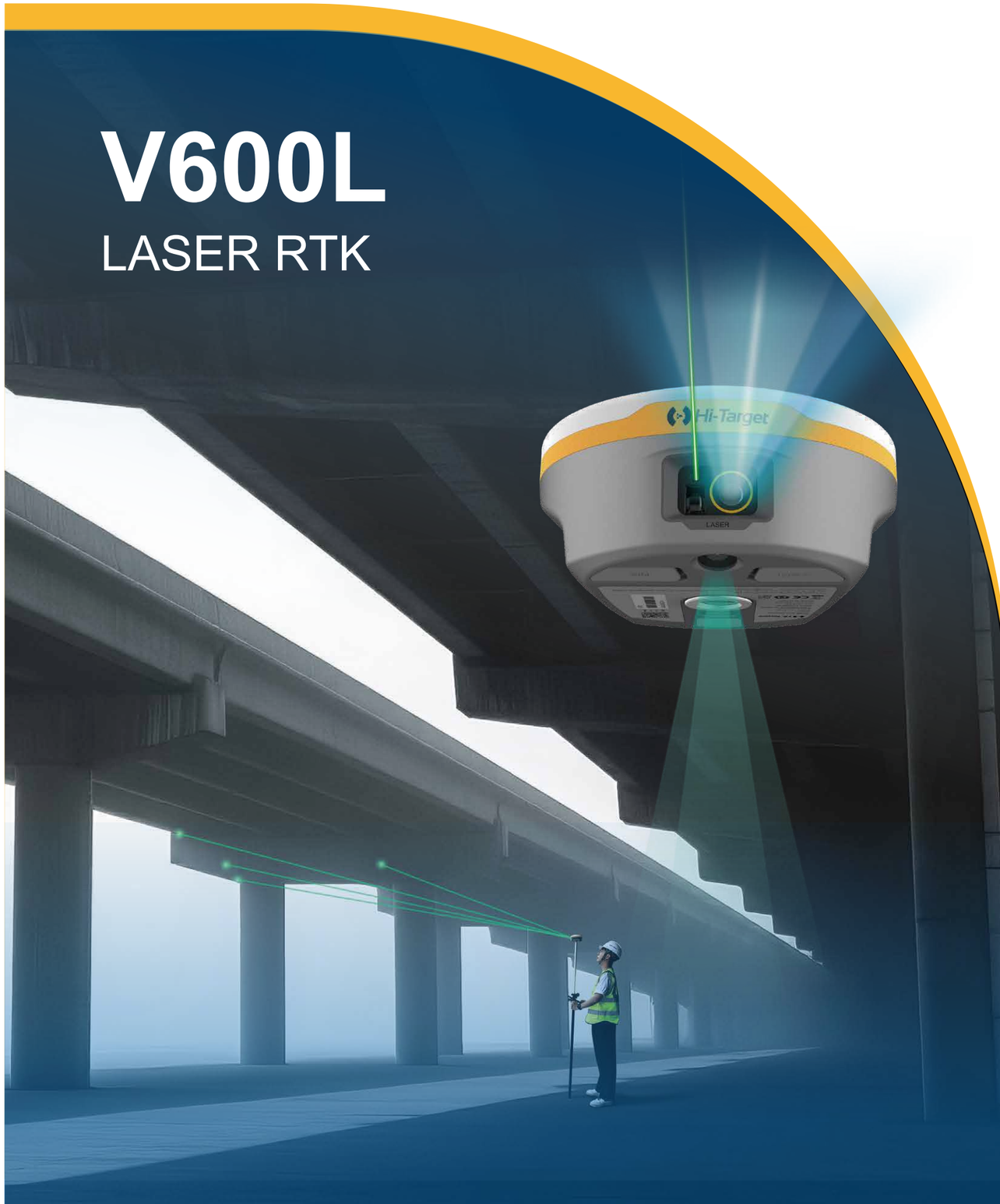
GNSS Signal[1]	Channel	1408		
	GPS	L1C/A, L1C, L2P(Y), L2C, L5		
	BDS	B1I, B2I, B3I, B1C, B2a, B2b		
	GLONASS	L1, L2, L3		
	GALILEO	E1, E5a, E5b, E6		
	QZSS	L1, L2, L5, L6*		
	NavIC	L5		
	SBAS	L1, L2, L5		
	PPP	B2b-PPP, Galileo E6-HAS(Enabled By Deffault)		
Positioning Performance[2]	High-Precision Static	H: 2.5 mm + 0.1 ppm RMS	V: 3.5 mm + 0.4 ppm RMS	
	Static and Fast Static	H: 2.5 mm + 0.5 ppm RMS	V: 5 mm + 0.5 ppm RMS	
	Post Processing Kinematic (PPK / Stop & Go)	H: 8 mm + 1 ppm RMS	V: 15 mm + 1 ppm RMS	
		Initialization time: typically 10 min for base and 5 min for rover Initialization reliability: typically>99.9%		
	PPP	H: 10 cm	V: 20 cm	
	PPP-AR	H:3cm RMS V:6cm RMS Initialization time: typically<5min		
	Code Differential GNSS Positioning	H: ±0.25 m+1 ppm RMS SBAS: 0.5 m (H), 0.85 m (V)	V: ±0.5 m+1 ppm RMS	
	Real Time Kinematic (RTK)	H: 8 mm+1 ppm RMS Initialization time: typically < 10 s	V:15 mm+1 ppm RMS Initialization reliability: typically > 99.9%	
	Hi-Fix	H: RTK+10 mm / minute RMS	V:RTK+20 mm / minute RMS	
	Time to First Fix	Cold start: < 45 s	Hot start: < 30 s	Signal re-acquisition: < 2 s
	Positioning Rate	1 Hz, 5 Hz and 10 Hz		
	Tilt Survey Performance[3]	200 Hz, auto calibration, additional horizontal pole-tilt uncertainty typically less than H: 8 mm+0.7 mm/°tilt(0~60°); V: 15 mm+0.7 mm/°tilt (0~60°)		
	Image Stakeout Accuracy	2 cm accuracy		
	Laser measurement[4]	RMS≤3cm@5m; RMS≤5cm@10m		
Physical	Dimensions (W x H)	130.97mm × 71.99mm		
	Weight	≤ 0.8kg (1.61 lb)		
	Operation Temperature	-40℃~+75℃ (-40°F~ +167°F)		
	Storage Temperature	-50℃~+85℃(-58°F ~ +185°F)		
	Humidity	100% Condensing		
	IP Rating	IP68 (according to IEC 60529)		
	Shock and Vibration	MIL-STD-810G, 514.6;Anti-salt spray: MIL-STD-810G, 509.4, 96h		
	Free Fall	Designed to survive a 1.8 m natural fall onto concrete		
Electrical	Internal Battery[5]	RTK rover(GSM): up to 16 h; RTK rover(UHF): up to 13 h;Laser Survey: up to 10 h; Visual Stakeout: up to 12 h; GSM RTK Base: up to 16 h;		
	External Power	using standard smartphone chargers or external power banks (Support 5V 2.8A Type-C USB external charging)		
Communication	I/O Interface	1 × USB type C port; 1 × SMA antenna port, 1 × Nano SIM card slot		
	Wi-Fi	Frequency 2.4 GHz/5.8GHz, supports 802.11 a/b/g/n/ac		
	Bluetooth	BT 5.2, 2.4 GHz		
	NFC	Near field communication for device touch pairing		
	Network Modem	3G/4G TDD-LTE, FDD-LTE, GSM		
	Internal UHF Radio	Power: 1 W / 1.5 W adjustable		
		Frequence: 410 MHz~470 MHz		
		Protocol: LoRa, HI-TARGET, TRIMTALK450S, TRIMMARK III, SATEL-3AS, TRANSEOT, etc.		
		Working range: Up to15 km[6]		
		Channel: 116（16 scalable）		
Laser	Laser Product Classification	Class 3R		
	Optimal Measuring Distance[7]	up to 100 m | up to 50 m (optional)		
Camera	Front Camera	Image-assisted laser aiming and Support real scene CAD stakeout		
	Bottom Camera	Support AR stakeout		
Control Panel	Physical Button	1		
	LED Lights	Satellite, Signal, Power		
System Configuration	Storage	64 GB ROM internal storage		
	Output Format	ASCII: NMEA-0183		
	Output Rate	1Hz~20Hz		
	Static Data Format	GNS, Rinex		
	Real Time Kinematic (RTK)	RTCM2.X, RTCM3.X, CMR		
	Network Mode	VRS, FKP, MAC, support NTRIP Client, NTRIP Caster, Hi-Target Caster		

Note:
[1]The measurement accuracy, precision, reliability and initialization time depend on various factors, including tilt angle, number of satellites, geometric distribution, observation time, atmospheric conditions and multi-path validation, etc. The data are derived under normal conditions.
[2]Accuracies are dependent on GNSS satellite availability. Hi-Fix Positioning ends after 5 minutes without differential data.Hi-Fix is not available in all regions, check with your local sales representative for more information.
[3]Irregular operations such as rapid rotation and high-intensity vibration may affect the inertial navigation accuracy.
[4]The accuracy is tested by Hi-Target in specified test scenarios, it may have some deviations in certain scenarios.
[5]The battery operating time is related to the operating environment, operating temperature and battery life.
Descriptions and Specifications are subject to change without notice
[6]Communication distance can be achieved when the LoRa protocol is used
[7] Optimal measuring distance achieved under favourable conditions (nighttime, high-reflectivity targets). Actual range varies with target reflectivity, ambient light and weather conditions.

Hi-Target

V600L

LASER RTK



V600L LASER RTK

Hi-Target next-generation Laser RTK that combines GNSS, IMU, dual-camera, and visible laser technologies for immersive, efficient, and precise fieldwork—especially in environments like under bridges, near fences, or across ditches.

With visualized laser targeting and non-contact measurement, it unlocks a new level of accessibility and safety in obstructed, complex, or semi-enclosed terrains.



Laser Stakeout —Stake Everything You can See

The laser points directly at the target, with a clearly visible indication; what you see is what you get, just aim to stake-out, achieving precise stakeout job several meters away with a single click.





IMU You Can Trust — No Initialization Needed

With Advanced IMU, no initialization needed. Start measuring instantly with up to 40% better stability and accuracy, even on rugged terrain.



Built-in LoRa Radio, Cross-Brand Compatibility

Integrated LoRa transceiver supports multiple protocols and brands, delivering up to 15 km working range in typical environments.

Hi-Survey Software

Survey Data Collection Software

Hi-Survey is an Android software that is designed for all types of land survey and road engineering projects in the field. It is compatible with Hi-Target professional controllers, Android phones, tablets and other third-party Android devices. It is a sleek and easy-to-use software that supports the operating of big data with built-in tools. With customized industrial application solutions, more possibilities are created for users.

Visual Laser Targeting

Seamlessly integrates laser and imaging technologies displaying the laser spot directly on the screen for fast, intuitive aiming. No guesswork, no extra steps.By fusing laser and visual technologies, our system delivers non-contact measurements with up to 5 cm accuracy within 10 m.





CAD Real-Scene 3D Stakeout

A brand-new high-performance CAD engine is combined with the real scene, achieving precise and seamless integration. It provides a new, visualized measurement and stakeout experience, ensuring that stakeout jobs are completed in one step.

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