

HUGEROCK T-SMART H81

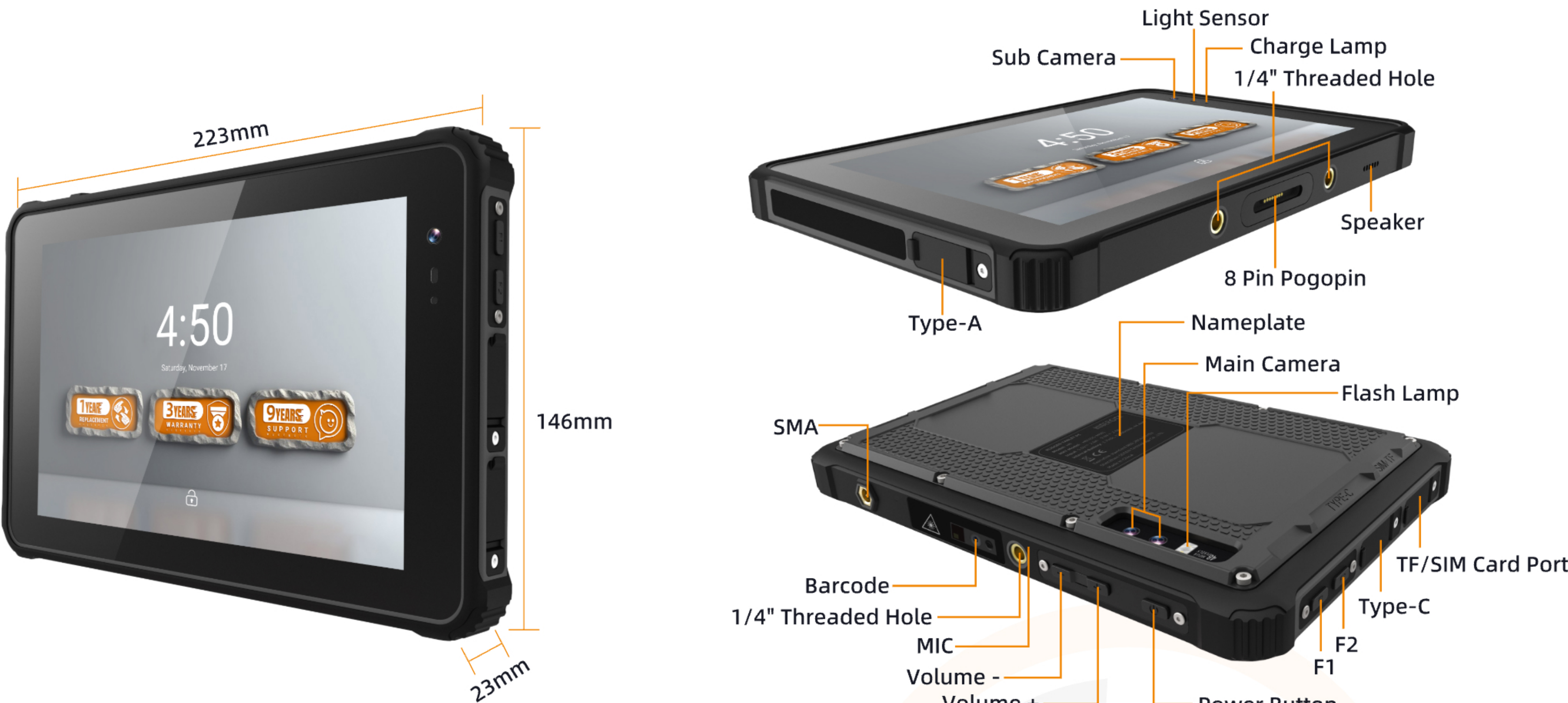
RUGGED TABLET PC



8-inch Rugged Mobile Computing Solution

Built for extreme environments, The HUGEROCK T-SMART H81 features IP68 waterproofing, 1.8m drop resistance, and -31°C to 55°C operating range, meeting MIL-STD-810H and IK08 impact standards. Its 1000-nit sunlight-readable display ensures clear visibility, while the 12,000mAh swappable battery with PD fast and magnetic charging provides all-day power.

The modular design supports multiple hardware configurations and 11+ expansion modules (NFC, RFID, RTK, etc.), making it ideal for geological surveying, logistics, smart manufacturing, and public safety. A graphene + aerospace aluminum cooling system and anti-shock structure enhance durability, reducing maintenance costs and extending lifespan. The H81 is the ultimate solution for field operations, law enforcement, and industrial automation.



SPECIFICATION

HUGEROCK T-SMART H81

Hardware	
Processor*	MediaTek Kompanio 900T Octa-core up to 2.6GHz 6nm process
Graphics*	ARM G68 MC4
AI Processing*	APU 3.0 (2.6T)
Memory*	8GB LPDDR4 RAM
Storage*	256GB UFS
Expandable Memory	Expandable via microSD (supports up to 2TB)
Camera*	Rear Dual Camera: Main: 48MP with autofocus & electronic flash Secondary: 5MP wide-angle lens Front 8MP front-facing camera
Battery	12,000mAh removable battery
Display*	8-inch AFFS/IPS panel 1920x1200 FHD resolution 1000 nits high-luminance (sunlight-readable)
Touchscreen	Capacitive touchscreen Glove-touch support Anti-fog coating Active stylus compatible

Interfaces & Sensors	
Card Slots	Dual nano-SIM + microSD (triple slot, dual-SIM or SIM+SD)
Charging*	Type-C 8-pin magnetic connector
Data Ports*	USB Type-A (Host) ×1 Type-C (OTG) ×1
Sensors	Gravity, Geomagnetic, Gyroscope, Rotation vector, Ambient light, Accelerometer
Charger	5V 2A, 9V 2A, Support PD fast charge protocol
Navigation*	L1+L5 GPS/BeiDou/GLONASS/Galileo/QZSS with AGPS/SBAS support

Design & Durability	
Dimensions	223 × 146 × 23mm (L×W×H)
Weight (Including hand strap)	886g
Color & Material	Black & gray PC-ABS-TPU composite

Connectivity	
Cellular*	WCDMA/LTE-TDD/LTE-FDD/5G NR
2G /3G/4G/5G*	2G: GSM 850/900/1800/1900MHz 3G: WCDMA B1/B2/B5/B8 (42.2Mbps DL / 11.5Mbps UL) 4G:FDD: 150Mbps down, 50Mbps UP TDD: 150Mbps downlink , 50Mbps uplink, Band:TDD-LTE (B34/38/39/40/41); FDD LTE(B1/2/3/4/5/7/8/12/17/20/26/28a&b) Cat-18 5G NR SA n1/n3/n20/n28/n41/n77/n78/n79 5G NR NSA n1/n3/n41/n7 DL 4x4 n1/n3/n41//
Wireless*	Dual-band Wi-Fi 6 2x2 (2.4/5GHz, 802.11a/b/g/n/ac/ax) BT 5.2 LE

Environmental Ratings	
Vibration	1–19Hz/1.0mm amplitude; 19–200Hz/1.0g acceleration
Dropproof /IK	MIL-STD-810H compliant (1.8m) IK08 impact protection
Water/Dust resistance	IP68 (IEC 60529)
Operating Temperature	-31°C to 55°C
Storage Temperature	-40°C to 80°C
Reliability	MTBF>5000h; MTTR<0.5h
Humidity	5% to 95% (95%RH, non-condensing)
Altitude	Up to 4,500m (15,000 feet)

Certifications & Software	
Certifications	3C/FCC/CE/ROHS/IP68 (IEC 60529)
Language	Chinese (Simplified/Traditional), English, Spanish, Portuguese (BR/PT), Italian, German, Dutch, French, Polish, Romanian, Turkish, Russian, Arabic, Indonesian, Malay, Thai, Vietnamese, Hindi, Hebrew
OS*	Android 14 (GMS / AER Certified)

Packaging & Warranty	
Warranty	36-month device warranty (12-month battery warranty)
Packaging box	Type-C cable ×1, Pre-applied screen protector ×1, Packaging box ×1, User manual ×1, Safety card ×1, Magnetic charging cable ×1, Hand strap ×1



*Detailed specifications vary by version. Refer to the differences table for details.

MODEL COMPARISON TABLE

HUGEROCK T-SMART H81

	T-SMART H81 (5G-M60)	T-SMART H81 (4G-M50)	T-SMART H81 (4G-M45)	T-SMART H81 (4G-M45H)
Processor	MediaTek Kompanio 900T Octa-core Up to 2.6GHz 6nm process	MediaTek Helio G99 Octa-core Up to 2.2GHz 6nm process	Octa-core ARM Cortex A73 (2.1 GHz) 12nm process	Octa-core ARM Cortex A73 (2.1 GHz) 12nm process
Graphics	ARM G68 MC4	Arm Mali™-G57 @ 850 MHz	ARM Mali-G72 MP3 GPU @700MHz	ARM Mali-G72 MP3 GPU @700MHz
AI Processing	APU 3.0 (2.6T)	/	Tensilica VP6x2 dual-core AI processor (~0.75 TOPS)	Tensilica VP6x2 dual-core AI processor (~0.75 TOPS)
Memory	8GB LPDDR4 RAM	8GB LPDDR4 RAM	6GB LPDDR4 RAM	8GB LPDDR4 RAM
Storage	256GB UFS	256GB UFS	64GB	128GB
Display	8-inch AFFS/IPS panel 1920x1200 FHD resolution 1000 nits high-luminance (sunlight-readable)	8-inch AFFS/IPS panel 1920x1200 FHD resolution 1000 nits high-luminance (sunlight-readable)	8-inch AFFS/IPS panel 1280x800 HD resolution 400 nits high-luminance (sunlight-readable)	8-inch AFFS/IPS panel 1920x1200 FHD resolution 1000 nits high-luminance (sunlight-readable)
Camera	Rear Camera: 48MP+5MP Front Camera: 8MP	Rear Camera: 48MP+5MP Front Camera: 8MP	Rear Camera: 32MP Front Camera: 8MP	Rear Camera: 32MP Front Camera: 8MP
Charging	Type-C 8-pin magnetic connector	Type-C 8-pin magnetic connector	Type-C 8-pin magnetic connector	Type-C 8-pin magnetic connector
Data Ports	USB Type-A (Host) ×1 Type-C (OTG) ×1	USB Type-A (Host) ×1 Type-C (OTG) ×1	USB Type-A (Host) ×1 Type-C (OTG) ×1	USB Type-A (Host) ×1 Type-C (OTG) ×1
Navigation	L1+L5 GPS/BeiDou/GLONASS/Galileo/QZSS with AGPS/SBAS support	GPS/BeiDou/GLONASS/Galile/QZSS with AGPS/SBAS support	GPS/BeiDou/GLONASS with AGPS/SBAS support	GPS/BeiDou/GLONASS with AGPS/SBAS support
Cellular	WCDMA/LTE-TDD/LTE-FDD/5G NR	GSM /WCDMA/VoLTE	GSM /WCDMA/VoLTE	GSM /WCDMA/VoLTE
3G Communication and Data	WCDMA 3.75G (HSDPA+42.2Mbps, HSUPA+11.5Mbps)	WCDMA 3.75G (HSDPA+42.2Mbps, HSUPA+11.5Mbps)	WCDMA 3.75G (HSDPA+42.2Mbps, HSUPA+11.5Mbps)	WCDMA 3.75G (HSDPA+42.2Mbps, HSUPA+11.5Mbps)
3G Band Support	WCDMA(B1/5/8)	WCDMA:B1/2/4/5/6/8	WCDMA(B1/2/5/8)	WCDMA(B1/2/5/8)
4G Communication and Data	FDD: 150Mbps down, 50Mbps UP TDD: 150Mbps , 50Mbps up	FDD: 150Mbps down, 50Mbps UP TDD: 150Mbps downlink , 50Mbps uplink	FDD: 150Mbps down, 50Mbps UP TDD: 150Mbps , 50Mbps up	FDD: 150Mbps down, 50Mbps UP TDD: 150Mbps , 50Mbps up
4G Band Support	TDD-LTE (B34/38/39/40/41); FDD LTE (B1/2/3/4/5/7/8/12/17/20/26/28a&b) Cat-18	TDD-LTE (B34/38/39/40/41); FDD LTE (B1/2/3/4/5/7/8/12/17/20/26/28a&b) Cat-13 DL	TDD-LTE (B38/39/40/41); FDD LTE (B1,B2,B3,B4,B5,B7,B8,B12,B17,B20,B28)Cat-7 DL / Cat-13 UL	TDD-LTE (B38/39/40/41); FDD LTE (B1,B2,B3,B4,B5,B7,B8,B12,B17,B20,B28)Cat-7 DL / Cat-13 UL
5G Communication	5G NR SA n1/n3/n20/n28/n41/n77/n78/n79 5G NR NSA n1/n3/n41/n7 DL 4x4 n1/n3/n41//	/	/	/
Wi-Fi	Dual-band Wi-Fi 6 2x2 (2.4/5GHz, 802.11a/b/g/n/ac/ax)	Dual-band Wi-Fi (2.4/5GHz, 802.11a/b/g/n/ac)	Dual-band Wi-Fi (2.4/5GHz, 802.11a/b/g/n/ac)	Dual-band Wi-Fi (2.4/5GHz, 802.11a/b/g/n/ac)
BT	5.2 LE	5.2 LE	5.0 LE	5.0 LE
OS	Android 14 GMS / AER Certified	Android 15 (GMS Certified)	Android 9.0 / 10.0 / 11 / 13 / 15 Android 15: GMS Certified	Android 9.0 / 10.0 / 11 / 13 / 15 Android 15: GMS Certified

Order No.	Model	Function Desscription
05121135	T-SMART H81 (5G-M60)	HUGEROCK/H81-M60-R/8GB+256GB/Gray+Black/1920*1200/1000nits/48MP+5MP/E20/NFC
05121136	T-SMART H81 (4G-M50)	HUGEROCK/H81-M50-R/8GB+256GB/Gray+Black/1920*1200/1000nits/48MP+5MP/E20/NFC
05121235	T-SMART H81 (4G-M45)	HUGEROCK/H81-M45-R/6GB+64GB/Gray+Black/800*1280/400nits/32MP/E20/NFC
05121199	T-SMART H81 (4G-M45H)	HUGEROCK/H81-M45H-R/8GB+128GB/Gray+Black/1920*1200/1000nits/32MP/E20/NFC

MODULE SPECIFICATIONS

NFC Module		P/N: 01250227
Feature Overview	Integrated NFC module with standardized API interfaces, enabling mobile payment solutions and bank card transactions.	
Operational Modes	Read/Write: Full read/write capability for NFC tag data storage and retrieval. Card Emulation: Mimics NFC cards for contactless payment systems and secure access control. Peer-to-Peer: Facilitates seamless data exchange between NFC-compatible devices.	
Performance Metrics	Effective Range: 20-50mm tag interaction distance. Frequency: 13.56MHz high-frequency operation.	
Supported Standards	RF Protocols: ISO/IEC 14443A/B, ISO/IEC 15693, ISO/IEC 18092, NFC Forum specifications. Tag Compatibility: Comprehensive support for industry-standard cards, Including: MIFARE S50/S70, Ultralight, NTAG 203/213/215/216, FM1204/FM1208, DESFire EV1 (D21/D41/D81),SRI512/SRIX4K, iCODE, HF Tagit, and derivatives.	
Barcode Module: E20 Barcode Scanner Module		P/N: 02690141
2D	QR Code, Micro QR, Data Matrix, PDF417, Micro PDF417, Aztec, Maxicode, Hanxin Code, Dotcode, Composite.	
1D	Code 128 (ISBT 128, AIM 128, GSI 128), EAN-13, EAN-8, UPC-E, UPC-A, ISBN, ISSN, Code11,Interleaved 2 of 5, Code39, Code93, Code32, Codabar, Matrix 2 of 5, Industrial 25, IATA25, MSI Plessey, GSI DataBar, Plessey, Febraban.	

