

HUGEROCK T-SMART H81

RUGGED TABLET PC

ATEX Certified



8-inch Rugged Mobile Computing Solution

Ex-Marking: II 2G Ex ib IIB T4 Gb Certificate NO. ECM 25 ATEX-B DQ42

The HUGEROCK T-SMART H81 reinforced explosion - proof tablet computer is highly suitable for personnel working in explosive gas environments in industries such as petroleum and petrochemical, mining, military, and public security.

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.

1 YEAR
REPLACEMENT
HUGEROCK

3 YEARS
WARRANTY
HUGEROCK

9 YEARS
SUPPORT
HUGEROCK

All-mode
Full Bands

Android
14

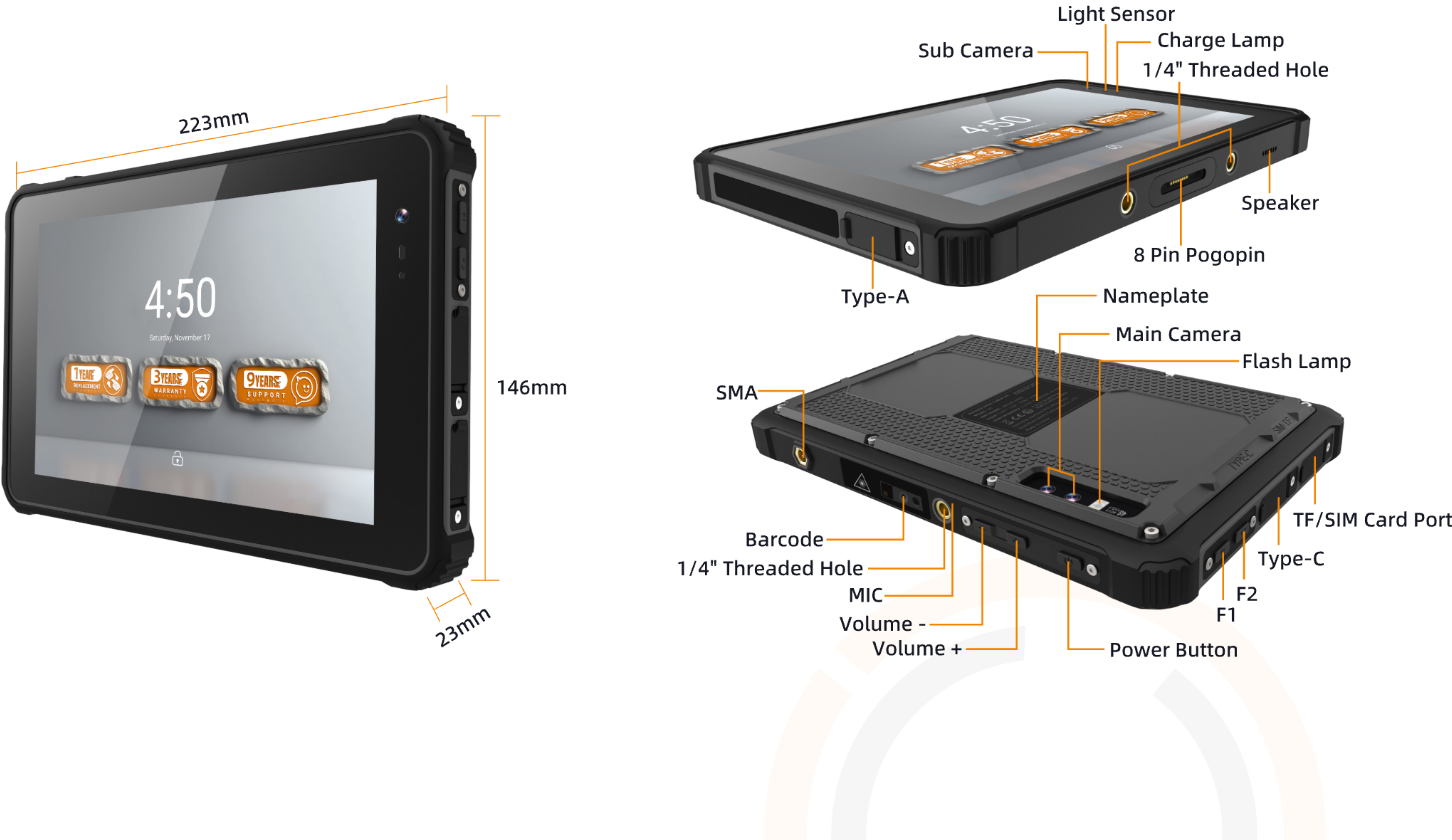
12000mAh
Removable Battery

1000 NITS
Sunlight Visible

8GB RAM
256GB ROM

-31°C
Cold Start

ATEX
Explosion Proof



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	ATEX ZONE 1/3C/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) x1 Type-C (OTG) x1	USB Type-A (Host) x1 Type-C (OTG) x1	USB Type-A (Host) x1 Type-C (OTG) x1	USB Type-A (Host) x1 Type-C (OTG) x1
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 Dessmention
05121162	T-SMART H81 (5G-M60)	HUGEROCK/H81-M60-EX/8GB+256GB/Gray+Black/1920*1200/1000nits/48MP+5MP/E20/NFC
05121164	T-SMART H81 (4G-M50)	HUGEROCK/H81-M50-EX/8GB+256GB/Gray+Black/1920*1200/1000nits/48MP+5MP/E20/NFC
--	T-SMART H81 (4G-M45)	HUGEROCK/H81-M45-EX/6GB+64GB/Gray+Black/800*1280/400nits/32MP/E20/NFC
--	T-SMART H81 (4G-M45H)	HUGEROCK/H81-M45H-EX/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.	

