User Manual

Hero-MDT-AT2

Version: V1.0

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1 Technical Specification

Model: Hero-MDT-AT2

Overview

This product is an intelligent all in one navigator that provides various interfaces including serial, IO, for connection to an external host computer to achieve functions like navigation and communication. The product is based on the Android operating system, adopting Dual core ARM Cortex-A7 processor, with main frequency up to 1GHz; 7-inch HD display with a resolution up to 480 * 800; hard and soft keyboard input; built-in 4GB of storage space; the external 5557 interface, providing stable and reliable connection.

1.1 Application

- Taxi dispatch
- Logistics vehicle dispatch
- Personal Location Services
- Real-time monitoring
- Vehicle Management
- Real-time TMC traffic service
- Other mobile operation services, etc.

1.2 Technical specification

Hardware	
ARM	Dual core Cortex-A7, 1GHz
RAM Memory	DDR3 1GB
Nand-Flash Memory	4GB
TFT With TP	LCD 7.0’ 800*480 / Four-wire resistive single touch screen
Storage	support TF Card and SD Card, Max 32G Byte
UART	2 x RS232
RS485	1 optional
Data Output control	1 x 12V control, 1 x 5V control

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Data Input Detect	3 x input status detection
Speaker	8R/1.5W size, 32mm
CVBS	Max. 4 channel
GSM Antenna	built-in antenna, SMA port external antenna alternative
GPS Antenna	built-in active GPS antenna, SMA external active GPS antenna optional
Software	
OS	Android V4.2
Audio format	MPEG-3, WMA, etc.
Video format	MPEG-4, AVI, RMVB, etc.
Picture format	JPG, BMP, GIF, etc.
Text format	TXT
TTS voice	TTS support voice broadcast Chinese characters, Chinese grammar, numbers, English letter"
hand-written	support full screen hand-written input
Image hard decoding	H.264
Navigation	Support Android navigation system
Communication	
3G	WCDMA 3G module, support UMTS/HSDPA:900/2100MHz, GSM/GPRS:900/1800MHz
DATA	HSDPA, UMTS, EDGE, GPRS, CSD; Max.384Kbps (UL); Max.3.6Mbps (DL).
Voice	HR, FR, EFR, AMR, AMR-WB
SMS	Point-to-point MO and MT, SMS Cell Broadcast, Text and PDU Mode
Output Power	Class 3(24dBm, +1/-3dB); Class 4(33dBm, +/-2dB); Class 1(30dBm, +/-2dB)
Sensitivity	-110dBm
Wi-Fi	Built-in
GPS	
Receiver Type	L1 frequency band, C/A code, 22 tracking
Sensitivity	-165dBm (tracking),-148dBm (Acquisition)
Accuracy	≥15m(position),0.1m/s(velocity)
Acquisition Time	36s (cold start) 33s (warm start) 1s (hot start) ＜1s (Re-Acquisition)
Data Update Rate	1Hz
General	
Power	8-32V
Power consumption	<6W
Dimension	29*123*193mm

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Working temperature	-20℃～ +70℃
Storage temperature	-40℃～ +80℃
Vibration test	5-300HZ, 2G

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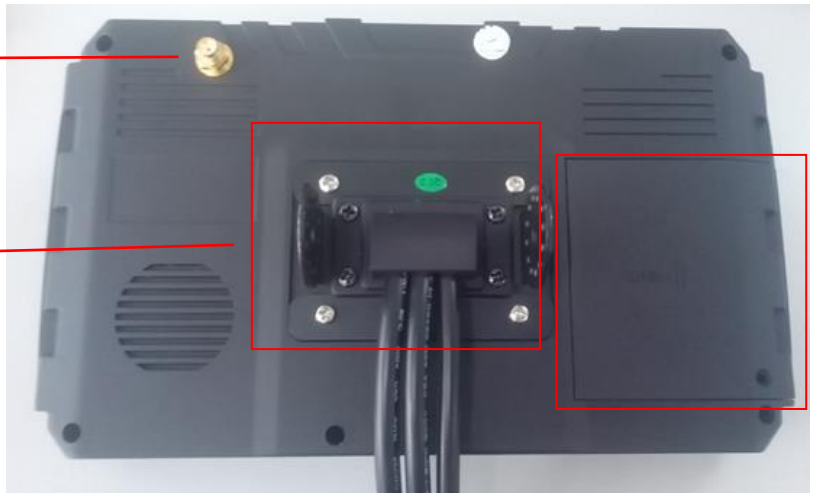
2 Device Interface

2.1 Front interface

2.2 Back interface



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2.3 Card slots

2.4 Side ports

2.5 Bottom interface:

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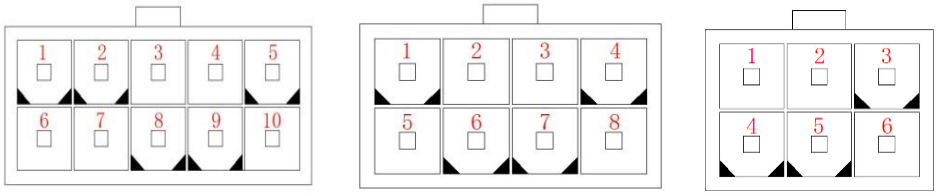
3 Cable Interface

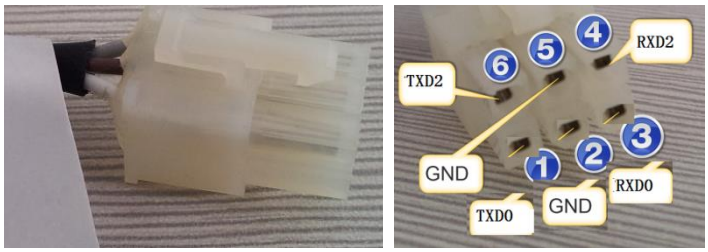
3.1 5557 2x5 pin, 2x4pin, 2x3 pin MALE connectors



3.2 5557 2x5 pin FEMALE connector

Pin No	Definition	Description
1	UART1_RXD0	RS232 receiving, COM2
2	UART1_TXD0	RS232 transmission, COM2
3	UART1_RXD2	RS232 receiving, COM4
4	UART1_TXD2	RS232 transmission, COM4
5	NC	
6	OUTPUT0	+12V output control
7	NC	
8	NC	
9	NC	
10	GND	Ground

3.2.1 UART



Pin No	Definition	Description	2x5 FEMALE No.
1	TXD0	RS232 transmission, COM2	2
2	GND	Ground	10
3	RXD0	RS232 receiving, COM2	1

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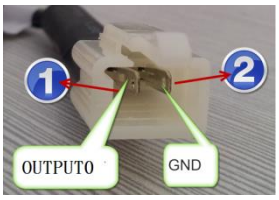
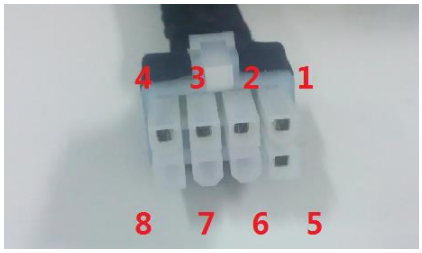
4	RXD2	RS232 receiving, COM4	3
5	GND	GND	10
6	TXD2	RS232 transmission, COM4	4

3.2.2 Output



Pin No	Definition	Description	2x5 FEMALE No.
1	Output0	+12V output control	10
2	GND	Ground	6

3.3 5557 2x4 pin FEMALE port



Pin No.	Definition	Description
1	CVBS3	External mixed video signal input 3
2	GND	Ground
3	CVBS4	External mixed video signal input 4
4	CVBS1	External mixed video signal input 1
5	GND	Ground
6	NC	
7	NC	
8	CVBS2	External mixed video signal input 2

3.3.1 CVBS input

Pin No	Definition	Description	2x4 FEMALE No.
1	CVBS-1, 2, 3, 4	External mixed video signal input	1, 3, 4, 8

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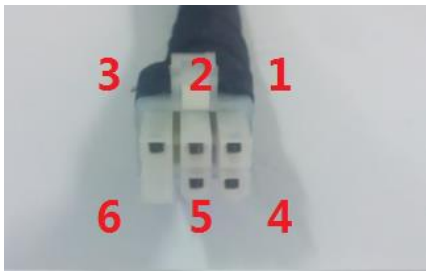
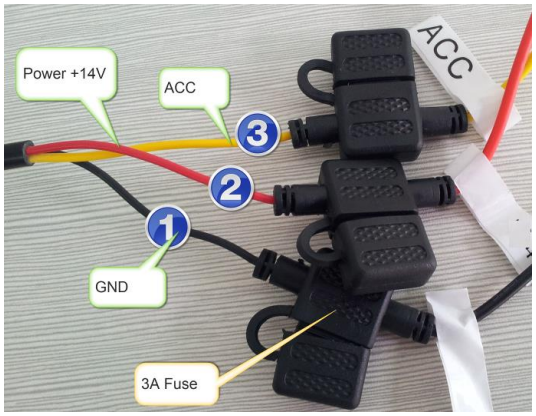
2	GND	Ground	2

3.4 5557 2x3 pin FEMALE port



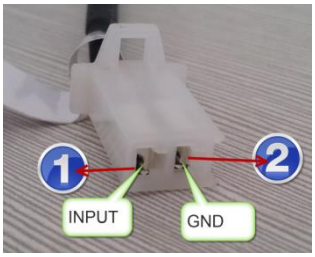
Pin No.	Cable label	Description
1	Car_14V_IN	Battery positive pole
2	Car_ACC	ACC input
3	GND	Ground
4	INPUT_2	Status detection input 2
5	INPUT_3	Status detection input 3
6	INPUT_1	Status detection input 1

3.4.1 Power



Pin No	Definition	Description	2x3 FEMALE No.
1	GND	GND	3
2	Power+	Battery positive pole	1
3	ACC	ACC input	2

3.4.2 Empty/Load



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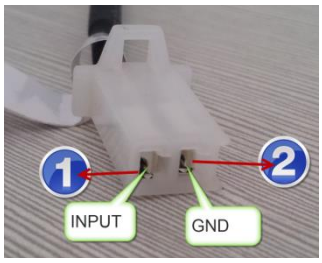
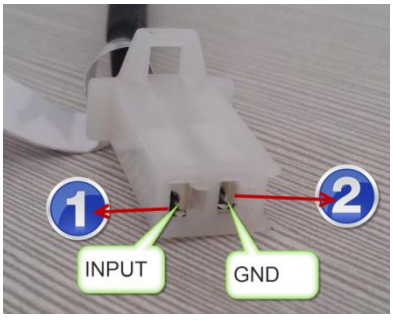
Pin No	Definition	Description	2x3 FEMALE No.
1	Input 2	To external alarm button	4
2	GND	Ground	3

3.4.3 External alarm



Pin No	Definition	Description	2x3 FEMALE No.
1	Input 3	To external alarm button	5
2	GND	Ground	3

3.4.4 Door



Pin No	Definition	Description	2x3 FEMALE No.
1	Input 1	To door status	6
2	GND	Ground	3

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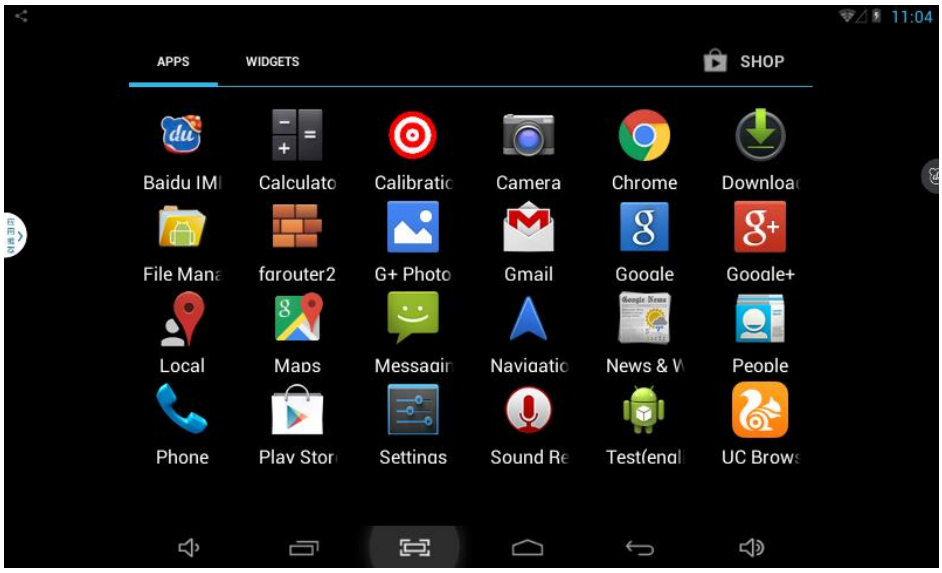
4 System Operation

4.1 Startup

Press and hold [Power] button to startup the system.
In first Startup, the system may require connection to Wi-Fi hotpot and logon Google Account. Use can ignore these steps and enter the Home Interface.

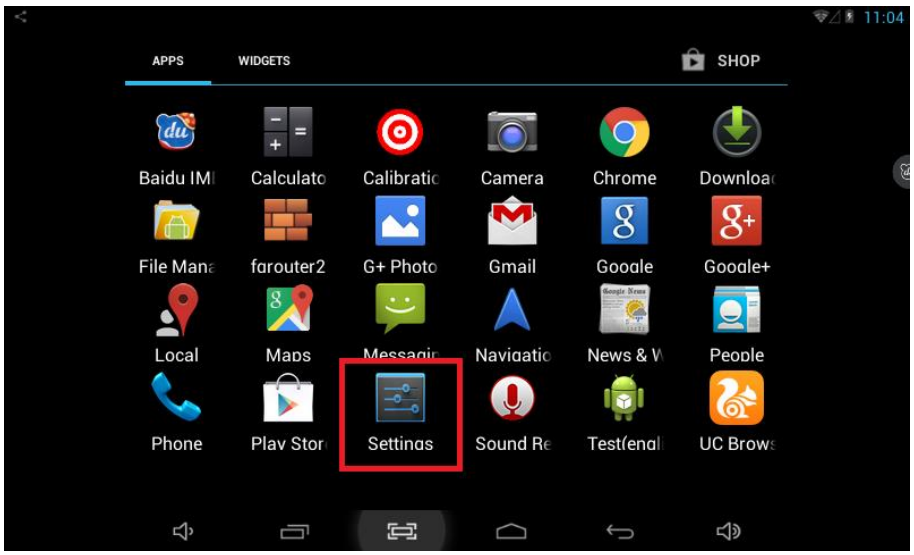
4.2 System APP list

Click APP list in the desktop, to enter the APP list of device:



4.3 System Setting

Click [Setting] Icon, to enter system setting.



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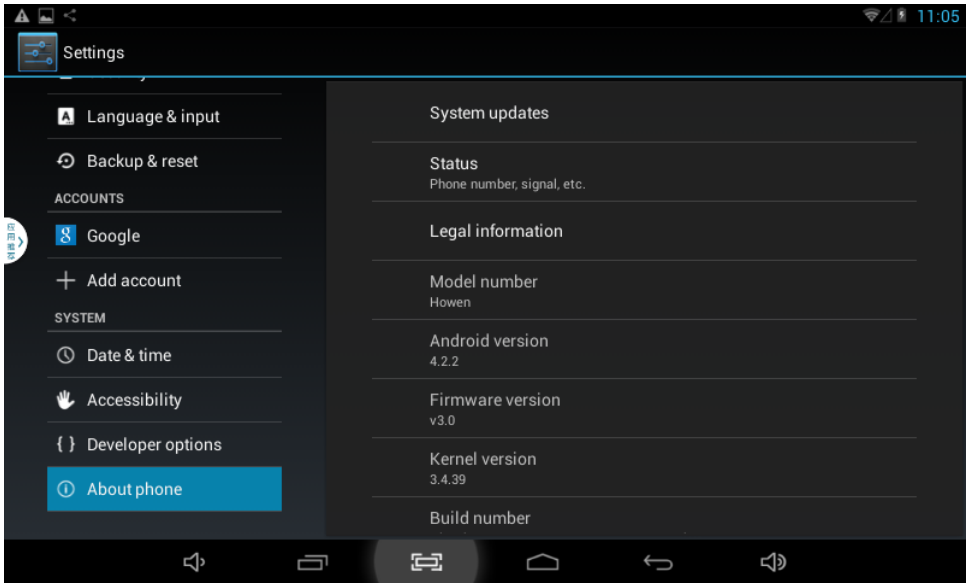
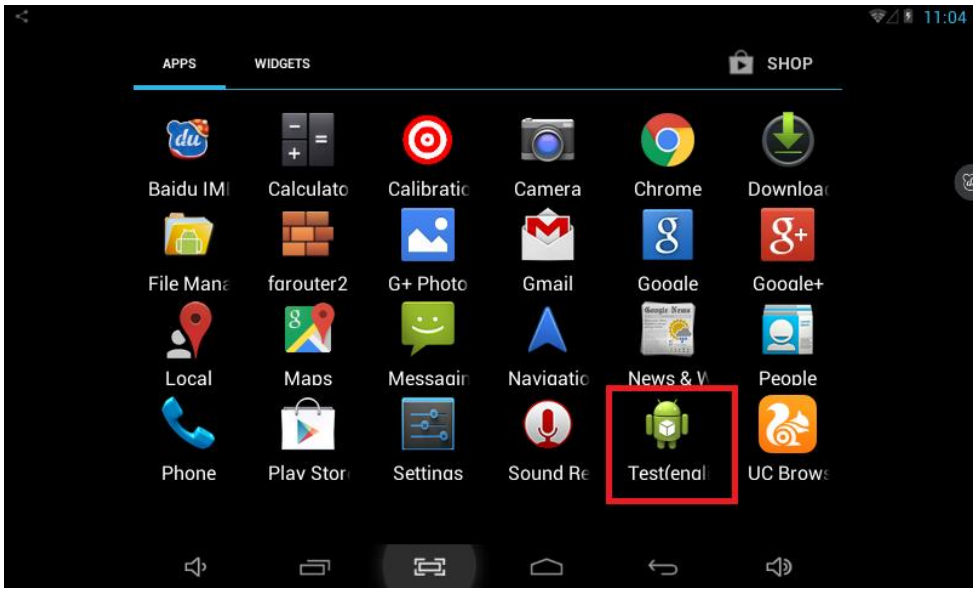
In the Setting of Android OS, Click [About Phone], to Check the System info of the device.



4.4 Howen Test

User can use Test APP to check the device info and support customization.



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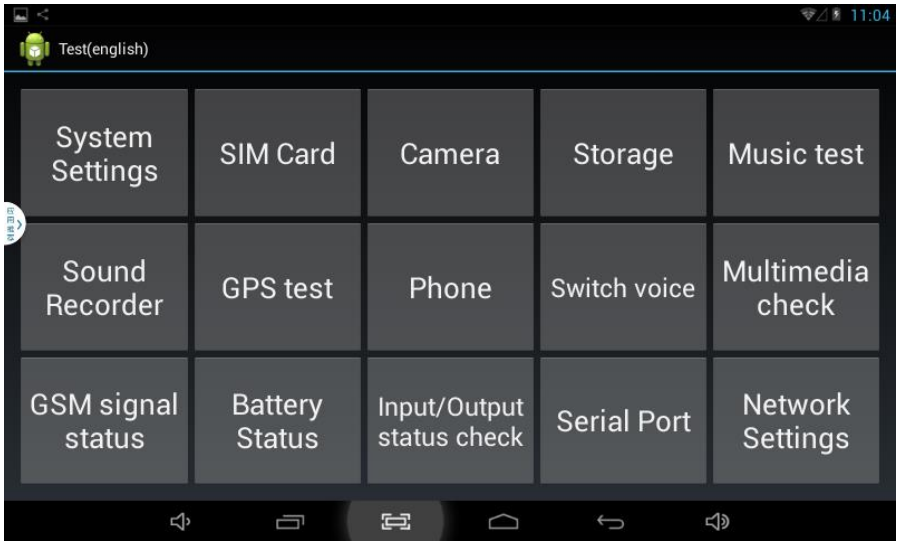

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: – Reorient or relocate the receiving antenna. – Increase the separation between the equipment and receiver. – Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. – Consult the dealer or an experienced radio/TV technician for help. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

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