

MODAT-100

Mobile POS Terminal

- 3.5" TFT sunlight readable LCD touch screen
- Marvell PXA 310 624 MHz CPU
- Pre-installed Windows Mobile 6.5
- Built-in 32-channel GPS Receiver
- Built-in smart card reader & magnetic stripe reader & 2" thermal printer
- 1D laser barcode data collection
- 3 Megapixels with low power consumptions camera
- Bluetooth, Wi-Fi and 3.5G/HSDPA wireless communication



Point-of-Service Application

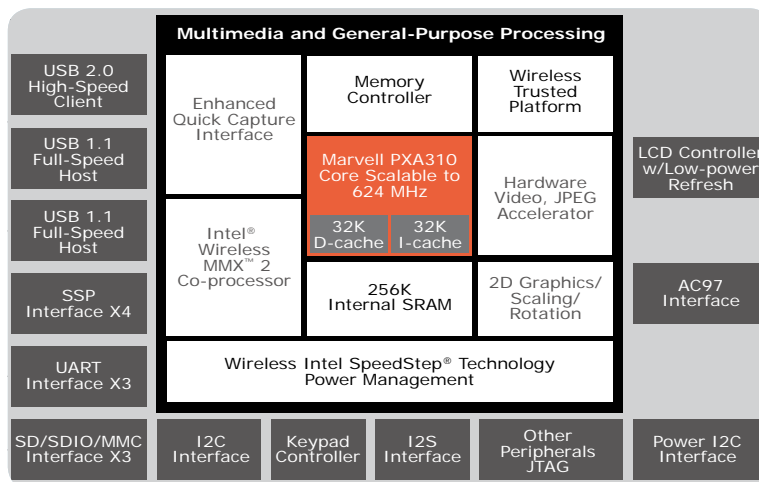
Standard Point-of-Service(POS) features, such as smart card readers, magnetic stripe card readers and thermal printers come integrated for an all-in-one mobile solution. Equipped with 1D laser barcode and 3 Megapixels camera, the MODAT-100 can capture data and images via a built-in high performance wireless communication module. The MODAT-100 offers mobility and flexibility that promises to streamline workflow and enhance productivity.



High Performance and Low Power Consumption Platform

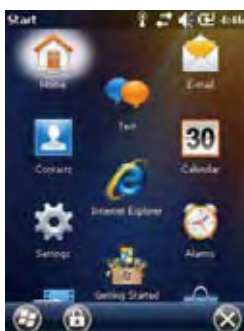
Marvell PXA 310

- Wireless Intel® SpeedStep® technology for MIPS/mW power efficiency, long battery life
- Hardware security/DRM processing
- Enhanced peripheral speeds and features such as support for camera sensors up to 5 Megapixels and Bluetooth v2.0 EDR
- Supports DDR SDRAM for cost-effective memory solutions
- Secure devices from boot-up to corporate network access



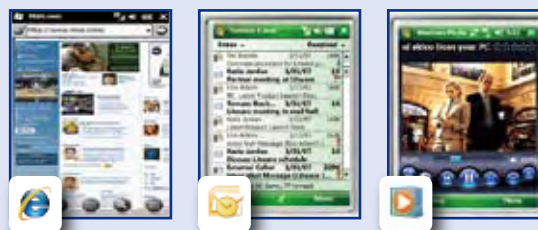
Built-in Windows Mobile 6.5

- Windows Mobile (WM) is a compact mobile operating system developed by Microsoft and designed for use in smart phones and mobile devices.
- IEIMobile Enterprise PDA Series adopts Windows Mobile 6.5 to meet the needs of your mobile workforce.



Built-in Application

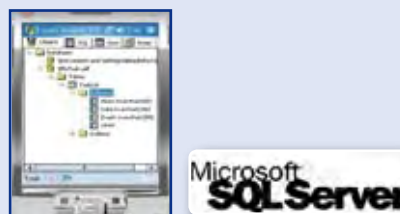
- Internet Explorer Mobile
- Microsoft Office Outlook Mobile
- Windows Media Player Mobile



- Optional Microsoft Office for Mobile is programmable and fully compatible with desktop Windows Office.



Optional Microsoft SQL Server Mobile Edition is the leading industry standard DBMS and compatible with desktop PCs or back-end ERP systems, which saves you the effort and time of building a new ERP system.



Windows Mobile Application Development

- **Only One Official IDE**
Microsoft Visual Studio 2005/2008/2010
- **Managed Code**
Intermediate Language
Just-In-Time (JIT) compilation : Run time translated to machine code (Native Code) by CLR (Common Language Runtime) which comes pre-installed and optimized in each Windows Mobile device
.NET Compact Framework
-Visual Basic .NET, Visual C# .NET.
-BCL (Base Class Libraries)



- **Native Code**
Machine code
C++
MFC, ATL, WTL, STL



Internet Download

- **Windows Marketplace for Mobile**
(<http://www.windowsmarketplace.com>)



Rugged Compact Design Suitable for Outdoor Use

The MODAT-100 features a sunlight readable panel for daytime use and an LED backlight for nighttime use. Its rugged design is drop-tested at 1.2 M and IP rated at 54. It can also function in a wide range of temperatures.



Sunlight Readable- 3.5" TFT LCD with LED backlight

- 3.5" diagonal with resolution of 240x320
- 6-bit 262,144 color display capability
- Long life & high brightness LED back-light improved outdoor readability
- Plainview TFT-LCD Resistive touch input



1.2 M Drop Test

- The average height of people using handheld product is 1.2 M
- Drop test passed 26 times. Guaranteed sturdy design



Operating Temperature 0°C ~ 50°C

Operate under extreme temperature, in the warehouse or out in desert .



Storage Temperature -20°C ~ 70°C

Can be stored under extreme temperature conditions



Seamless / Wireless Communication

Out on the field, the MODAT-100 keeps you connected via a built-in 3.5 G modem and a 802.11 b/g wireless LAN module. Empowered by advanced wireless technology, field workers can easily connect with back-offices to verify work orders, transmit field reports and retrieve necessary data and updated information.



Local-Area Communication



Gives you up to broadband-speed browsing and connectivity, compared to traditional wired LAN. Best for near field or ad-hoc data communications.

- Compliant with IEEE 802.11b/g
- Auto fallback optimal data rate
- Security : WPA/WPA2, 802.11i AES /CCMP, WEP with TKIP
- Hardware signaling BT/Wi-Fi co-existence supported

Peripheral Communication



- Compliant with Bluetooth specification V1.2.
- Profile : SPP, HFP, HSP
- Up to 1 Mbps data transfer rate and 10 M distance

Wide-Area Mobile Communication

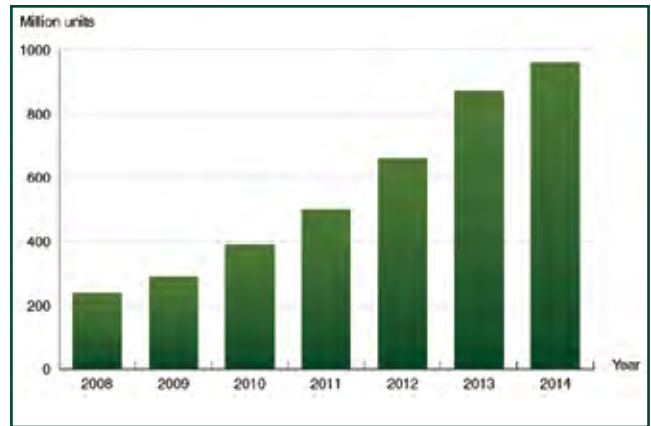


- UMTS/HSDPA: Triple band, 850//1900/2100 MHz
- GSM/GPRS/EDGE: Quad band, 850/900/1800/1900 MHz



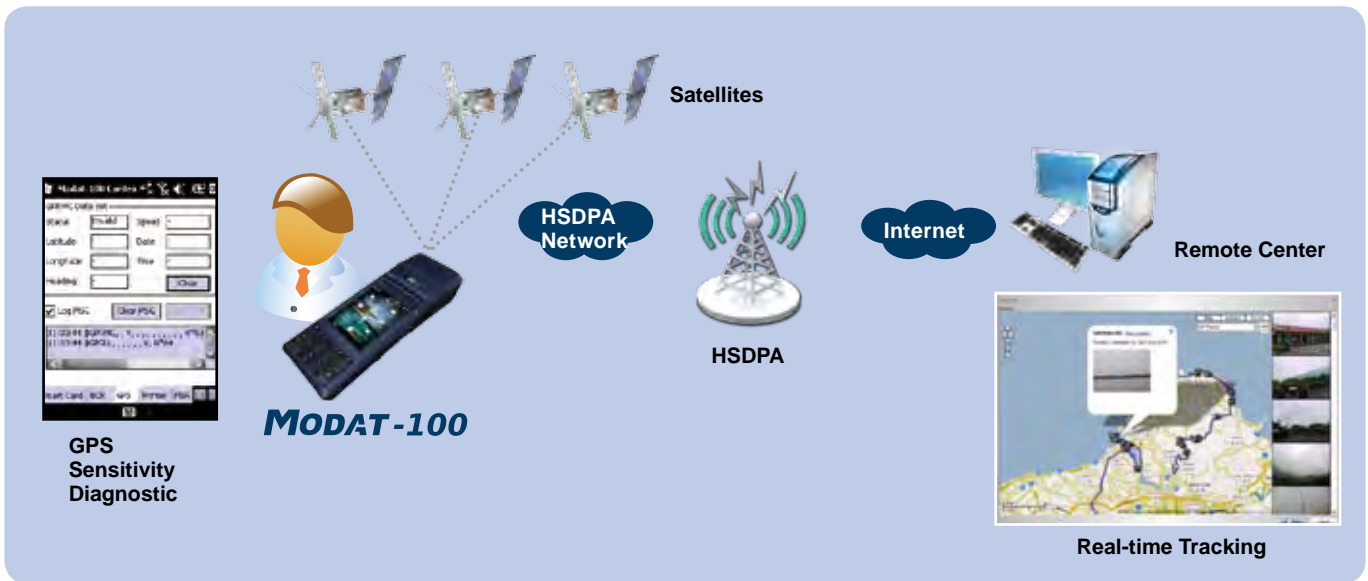
Built-in GPS

GPS technology for handsets has matured, offering much better performance in terms of sensitivity, power consumption, size and price. Sales of GPS-enabled GSM/WCDMA handsets grew to an estimated 150 million units in 2009, up from 78 million devices in 2008. And the forecast for shipments of GPS-enabled GSM/WCDMA/LTE handsets will grow to 770 million units in 2014. Equipped with GPS and GSM/WCDMA features, the MODAT-100 is an ideal industrial mobile electronics devices for Location-Based Services (LBS).



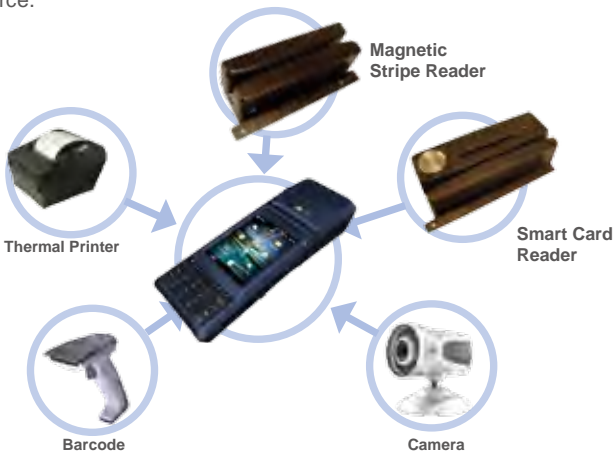
Features

- A 32-channel acquisition engine with over 1 million effective correlators is capable of massive parallel searches.
- A-GPS: Supports AssistNow Online and Offline, OMA SUPL compliant Time To First Fix (TTFF): < 1 sec
- Best-in-class acquisition and tracking sensitivity
- GPS Sensitivity Diagnostic Utility



Highly Integrated Mobile Point-Of-Service Design

Most Enterprise PDAs only come with Bluetooth, Wi-Fi or 3G. The MODAT-100 not only has a built-in wireless communication function, it also has integrated peripherals serving as your all-in-one Point-of-Service mobile assistant. The MODAT-100 increases the mobility of your field force.



Hybrid Card Reader



Smart Card Reader

EMV V4.1 Level 1 Compliant
 Supports ISO 7816 T=0, T=1 Smart Card.
 (Supports commonly used memory card.)
 Card Interface ISO 7816 part 1,2 and 3 Compliant
 Card Interface Communication Speed up to 115200 bps



Magnetic Stripe Reader

EIA/TIA-232 Compliant
 Card Speed 3 to 60 in/s (7.6 to 152.4 cm/s) Reads single, dual or triple track
 ISO 7811 Conformance (AGC (Automatic Gain Control) – Reads cards from 30% - 200% of ISO 7811 amplitude standard)
 9600 bps, 8 Data Bits, No Parity, 1 Stop Bit

IEImobile MODAT-100 Utility-SCR and MSR Diagnostic Software

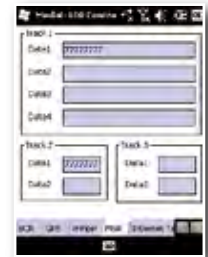
Payment System -SCR

SCR diagnostic software allows the user to initiate insert/remove sequences and perform read/write function tests all in one UI screen. During testing, current card reader and processing commands/responses are displayed.



Membership Control -MSR

Track 1 and Track 2 data such as credit card holder name, account number of the bank, expiration date or service code can be displayed on the UI screen simultaneously.



Built-in 2" Thermal Printer

Easy to load

Our original plate removal mechanism improves paper loading and maintenance.

Ultra compact

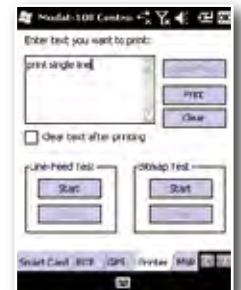
The 2-inch model measures 15.5 mm high, 70.3 mm wide, and 33.0 mm deep.

High speed printing

Prints up to 60 mm/s (480 dot lines/s) using Fujitsu's unique hard-drive control.

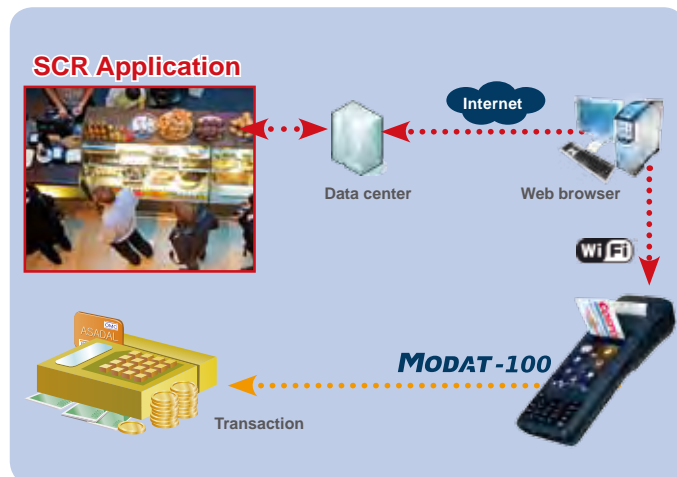
High resolution printing

8 dots/mm printing resolution.



IEImobile MODAT-100 utility

Print and test software included.



Advanced Data Acquisition Technology

The MODAT-100 built-in camera and 1D laser barcode offers the user multiple data collection methods.



3 Megapixels CMOS Camera

Capture images instantly and send data back to the office via HSDPA

Features

- Superior low-light performance
- Ultra low-power, low-cost sensor
- Integrated real-time JPEG encoder
- Flexible support for external auto focus, optical zoom, and mechanical shutter
- Automatic image correction and enhancement

High Power LED Flash Light

Image is enhanced even under weak light conditions. Great for night patrol and field survey applications.

Features

- Input power: 3 W
- Emitted color: White
- Low power consumption



Built-in Motorola-1D Laser Barcode Engine

Wide working range

- Meets the needs of a wide range of applications for increased productivity
- Easily optimized product designs

100 scans per second

Optimized scanning speed delivers aggressive performance and accurate capture of all barcodes — even damaged and poor quality barcodes

Low power consumption

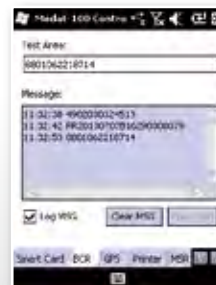
Increases battery life in portable terminals

Bright scan line and aim mode

Intuitive and easy to use across the entire working range



IEIMobile MODAT-100 Barcode Demo Software



- Press the hot key or [...] key to scan the barcode. Test area displays the number.
- During testing, the barcode reader detects and displays the commands/responses on the message box

I/O Interface

• MicroSD

You can install applications on your MODAT-100 by using:

- Microsoft ActiveSync. ActiveSync lets you transfer files, synchronize files, remotely debug, and perform other device management activities. ActiveSync is a free application available from the Microsoft web site
- MicroSD card

• SIM Card

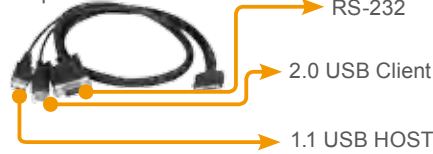
Insert SIM Card for 3.5G data transmission

• SAM Card

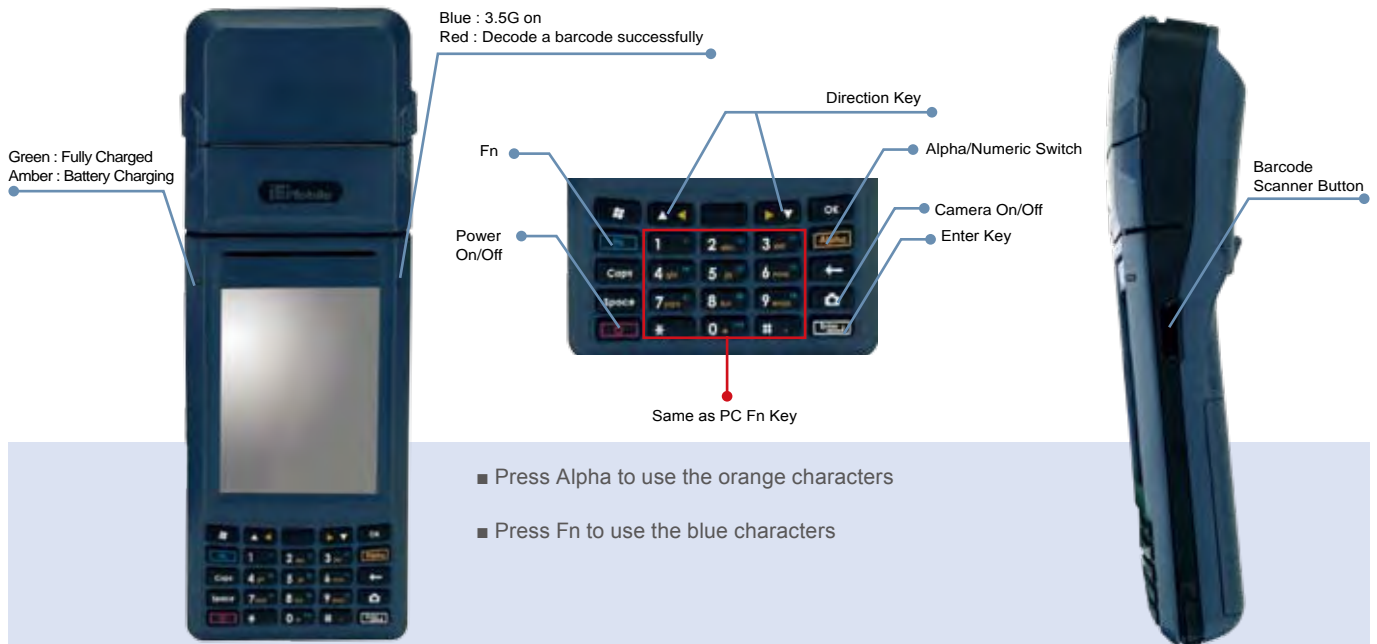
SAM (Security Authentication Module) card protects financial data transmission

• 16 pin Connector

16 pin connect cable



LED Indicators & HOT Keys



- Press Alpha to use the orange characters
- Press Fn to use the blue characters

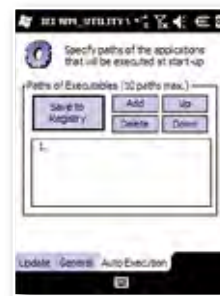
■ Bundled IEIMobile MODAT-100 Software Support

• Besides Windows Mobile SDK, the MODAT-100 provides an SDK (Software Development Kit)

- SDK (for embedded Visual C++)

• Utility

- IEI Utility (Registry management, start up program and function test)
- Remote Management Tool
- Locate versions of Boot Loader and OS image on the "General" page
- When a new version of OS and/or Boot Loader is detected it can be updated by pressing the "Yes" button.
- To open IEI Utility, click Start and select "Settings and System".
- To launch applications automatically, click the "Auto Execution" tab and add applications. Click the "Save to registry" button to save the settings.



• Diagnostic and Demo AP

- Internet Demo
- Barcode Demo
- MSR/SCR Demo
- HSDPA Demo/Utility
- Printer Demo
- Camera Demo
- GPS Demo



• COM Port Debugging Tool

Diagnose the COM6 (RS-232 port) using the COM Port Debugging tool to receive/send messages from the specified COM port.

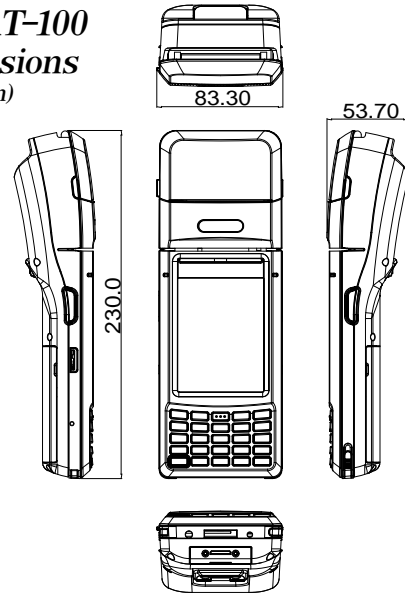




Specifications

Model		MODAT-100
Display	LCD Size	3.5" TFT LCD (Sunlight Readable)
	Brightness (cd/m ²)	190 cd/m ²
	Max Resolution	240 x 320 pixels QVGA
	Viewing Angle	80/80/80/80 Deg.
	Touch Screen	4-Wire Resistive Type Touch
System	CPU	Marvell® PXA 310 624 MHz
	Operation System	Microsoft® Windows® Mobile 6.5
	Memory	128 MB Flash + 256 MB SDRAM
	Storage	MicroSD Slot
Communication	Wireless LAN	Wi-Fi 802.11 b/g
	Bluetooth	Bluetooth® 2.1 + EDR
	3.5G	WCDMA/HSDPA
	GPS	GPS w/internal antenna
Data Collection	Barcode	1D Laser Scan Engine
	Camera	3 Megapixel CMOS Camera with LED Flash Light
Indicator & Buttons	LED Indicator	Charging/Barcode status LED HSDPA status LED
	Hot Keys	2 x Barcode Trigger
I/O Interface	Audio	1 x Headset
	Expansion	16-pin connector (RS232 / battery charging/ OTG-Host/ OTG-Client)
		2" Thermal Printer Smart Card Reader Support Magnetic Stripe Reader Support
Power	Power Adapter	Input: VAC:90 V~264 V Output: 12 V/3 A Wattage: 36 W
	Battery	7.4V 1,880 mAh battery
Environment	Operating Temperature	0°C ~ 50°C
	Storage Temperature	-20°C ~ 70°C
	Humidity	5%~95% non-condensing
	Drop Survival	1.2 M
	Environmental Protection	IP 54 (Excluding MSR/SCR/Printer)
Physical Characteristics	Certification	CE, FCC,
	Dimensions (LxWxH) (mm)	230 x 84 x 54
	Weight	546 g

MODAT-100 Dimensions (Unit: mm)



Optional Accessory List

Item	Part No.	Description
Cradle	MODAT-100-CR01-R10	Charging cradle integrated, one charging bay along with USB Host, USB Client and RS232 I/O ports
16-pin Cable	32024-001500-100-RS	16-pin cable connects to USB Host, USB Client and RS232
Battery Pack	31603-000014-RS	7.4V 1880 mAh Battery
Carrying Case	7Z000-MODAT100POUCH-RS	Black, professional protector case with shutter strap for MODAT-100

Ordering Information

Part No.	Description
MODAT-100-WB65-En	3.5" TFT-LCD 190 cd/m ² QVGA Enterprise PDA with Marvell® PXA 310 624MHz CPU, HSDPA, 802.11 b/g Wireless, Bluetooth, 1D barcode Scanner, Smart Card Reader, Magnetic Stripe Card, Windows Mobile 6.5 OS, RoHS

Packing List

Item	Part No.	Q'ty	Description
Battery Pack	31603-000014-RS	1	7.4V 1880 mAh Battery
Carrying Case	7Z000-MODAT100POUCH-RS	1	Black, Professional protector case with shutter strap for MODAT-100
Power Adpater	63000-FSP036RAB613-RS	1	FSP036-RAB613;VAC:90V~264V;12V/3A;36W;PLUG Ψ1.35/Ψ3.5/NONE LOCK/LENGTH:9.5MM;1500MM;FSP
Stylus	7Z000-MODAT100STYLUS-RS	1	
Headset	7Z000-EM1164001S-RS	1	

