



# Data Collection Device Manufacturer and Solution Provider

www.chainway.net

### **COMPANY PROFILE**

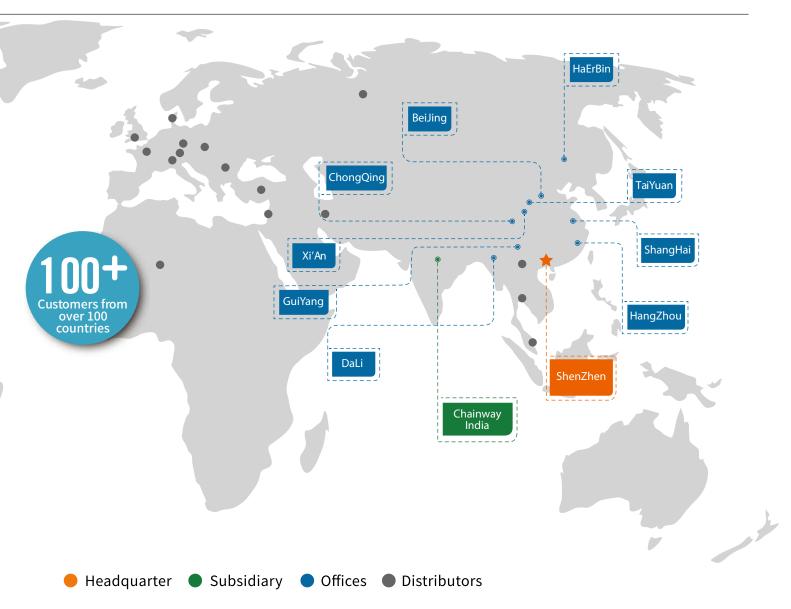
### **CHAINWAY®**

As a leading "Internet of Things" company in China, Shenzhen Chainway Information Technology Co., Ltd is a professional provider of products and solutions of RFID and barcode technology. Founded in 2005, Chainway, a high-tech enterprise, has won several times the title of the Best Provider of RFID Readers.

Thousands of clients from over 100 countries have experienced our products in logistics, transportation, healthcare, finance, retail, electric power, livestock, security and manufacturing, etc. Through our nationwide offices, overseas subsidiary and an extensive partner network, we aim to provide high quality service to our clients.



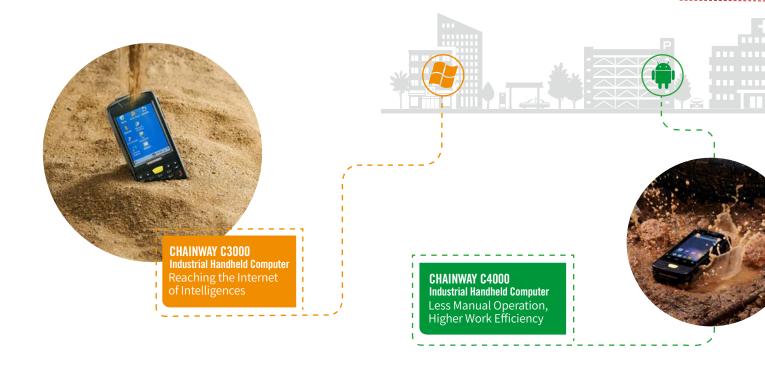
### **GLOBAL DISTRIBUTION**



### **PRODUCTS**

As a professional data capture terminal manufacturer, Chainway is dedicated to providing more convenient, reliable and rugged industrial products to clients from various industries. Now Chainway has mainly two product systems of rugged handheld computers and fixed vehicle computers.

Chainway products are integrated with 1D/2D barcode scanning, full-band RFID reading and writing, fingerprint recognition, NFC, GPS, and infrared communication, and support multiple types of wireless communication such as 4G LTE, 3G network, Wi-Fi and Bluetooth. Our products help customers manage real-time data in logistics, transportation, healthcare, finance, retail, electric power, livestock, manufacturing, etc.







## WINDOWS CE SYSTEM

### HANDHELD COMPUTER



### WinCE OS

C3000 integrates with Windows CE 6.0 operating system. The system is stable, secure and easy to use.

### **Rugged and Durable**

C3000, built for use in harsh industrial and outdoors environments, is IP65 sealed to withstand prolonged exposure to water, dust, -10/50°C temperatures, and multiple falls on all 6 faces from 1.5 meters to cemented ground.



### **High Performance Processor**

With powerful and fast dual-core 800MHz processor, 256MB of RAM, 4GB build-in flash storage, plus a SD card slot that can add up to 32GB of memory, C3000 delivers fluent and efficient user experience.

### **Dual batteries**

C3000 is equipped with a rechargeable lithium battery of 3200mAh and supports an optional pistol battery of 5200mAh, adding the total battery capacity up to 8400mAh. The pistol grip also provides superior user comfort.

### **Abundant Data Collection Functions**

Supporting industry-leading 1D/2D barcode scanning, accurate RFID reading & writing, fingerprint recognition, C3000 meets needs of various industries.







### **Accurate Scanning**

C4000 adopts state-of-the-art 1D/2D barcode scanning engine, which can even decode obscured barcodes with speed and accuracy, significantly reducing manual errors.

### **Full-band RFID Reading & Writing**

C4000 supports LF, HF, UHF and NFC. It is not only perfectly suitable for animal management by using a LF RFID reader, but as equally powerful and agile for inventory checking by using a UHF RFID reader.

### **Fingerprint Recognition**

It makes the collection of fingerprints more accurate and rapid. Users can input or delete fingerprint information, process fingerprint image, and match fingerprints. It has been widely used in personnel management.

### **Infrared Communication**

C4000 is configured with optional infrared communication module. It gained great popularity in electricity meter reading for its anti-electromagnetic interference, high speed and flexible use.

## HANDHELD COMPUTER



### **Uninterrupted Wireless Connectivity**

3G network, Bluetooth and dual band Wi-Fi ensure that users always have the best network connection and keep workers connected wherever they work.

### **Abundant Optional Accessories**

There are lots of accessories for you to choose from: A/C adapter, charging cradle, multiple extension ports, and pistol grip with additional built-in battery.





## ANDROID SYSTEM

### HANDHELD COMPUTER



### **Android OS**

The system delivers familiar user experience as that on Android smart phones and realizes seamless compatibility with thirdparty application software.

### 4G LTE Network (4G version)

Flexible connectivity options, including 4G network, dual-band Wi-Fi (2.4G+5G) and Bluetooth, ensure that users always have the best network connection and keep workers connected wherever they work.



### **Accurate Barcode Scanning**

C4050 adopts 1D/2D barcode scanning engine, which can decode obscured barcodes with speed and accuracy, such as those on parcels that have been stained during the long haul.

### **Full-band RFID Reading & Writing**

C4050 supports LF, HF, UHF and NFC. It is not only perfectly suitable for animal management, but as equally powerful and agile for inventory checking.

### **Dual Battery Design**

C4050 is equipped with a rechargeable lithium battery of 3200mAh and supports an optional pistol battery of 5200mAh, making the total battery capacity up to 8400mAh. Prolonged standby time meets the need of all day work without recharging and the pistol grip provides superior user comfort.

### **High-resolution & Large-size Display**

With a high-definition 4-inch display and highly sensitive light sensor, C4050 automatically adjusts screen brightness.



## CHAINWAY C6000



CHAINWAY C6000 handheld PDA will bring you ultimate experience with its high performance and ergonomic design. C6000 features ultrafast 4G network, industry-leading 1D / 2D scan engine, accurate NFC reading and writing, the latest Android 5.1 operating system, quad-core CPU, 8 MP autofocus camera with flash, built-in PSAM, powerful battery, and waterproof, dustproof and anti-shock performance.













### HANDHELD COMPUTER



### **Uninterrupted Wireless Connectivity**

4G LTE cellular network, Bluetooth and dual-band Wi-Fi ensure that users always have the best network connection.

### **Android OS**

Integrated with Android OS, it delivers familiar user experience as Android smart phones. The easy-to-operate system realizes seamless compatibility with third-party application software.

### **NFC**

C6000 also supports near-field communication, whose distinctive features such as high security, fast and stable connectivity, and low power consumption meet the needs of user authentication and e-payment.

### **Barcode Scanning**

C6000 adopts 1D/2D barcode scanning engine, which can even decode stained barcodes, reducing the risk for manual errors especially for express industry.



### **High-frequency RFID**

Optional HF RFID reading & writing module ensures that this business-class device can be widely deployed in industries such as ticketing, retail, parking charges, healthcare, logistics, warehousing and more.

### **Mobile and Portable**

The pocket-sized C6000 is comfortable to grip. It allows single-handed operations in various fields of mobility application.

### **Rugged and Durable**

C6000, built for use in harsh environments, is IP65 sealed to withstand prolonged exposure to water, dust, -10/50°C temperatures, and multiple falls on all 6 faces to cemented ground.

## **FIXED VEHICLE COMPUTER**



Chainway V600 is a vehicle computer with superior and reliable performance. Featuring 4G LTE network, 2.4G & 5G dual-band Wi-Fi, ultrafast quad-core processor, GPS & BDS, two-channel USB camera, 5MP autofocus camera, OBD data collection, HF RFID reading, Bluetooth 4.0 as well as biometrics, it can fully realize the overall management of driving school vehicles, school buses, taxis, buses, trucks, etc., effectively ensuring traffic safety.













## ANDROID SYSTEM

### FIXED VEHICLE COMPUTER



### **Powerful Application Performance**

Featuring the fastest Cortex-A7 quad-core processor and Android 5.1 OS, V600 realizes seamless compatibility with thirdparty application software like Uber and Didi taxi.

### **Rich Data Collection Functions**

V600 can collect, identify and verify fingerprints and IC cards quickly and accurately, which is widely used in authentication.

### GPS / BDS

V600 can get real-time information like vehicle location, speed, direction and route. It raises an audible alarm if the vehicles veer out of the predetermined route.

### **OBD Data Collection**

V600 can accurately record the vehicle speed and fuel consumption, and raise real-time alarm. Professional vehicle fault diagnosis is realized to ensure road safety and prolong life span.



### **4G LTE Network**

4G network ensures real-time information transmission. anytime and anywhere.

### **Two-channel Camera**

Configured with two-channel USB camera, V600 can take photos and videos simultaneously.

### **Voice Prompt**

All prompt messages can be present in the form of voice. V600 can also support for recording.

### **Safe Data Storage**

Non-volatile memory ensures information storage under conditions of power off or network off.

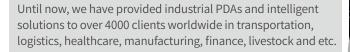
### **SUCCESSFUL CASES**

Chainway handheld computers cater to the needs of multiple industries, helping streamline workflows, enhance efficiency and contain operating costs.











## **Education Project for the West African Examination Council**

#### **BACKGROUND**

WAEC (West African Examination Council) holds unified examination annually within its member countries, namely, Nigeria, Ghana, Senegal, Liberia, and Sierra Leone. Every spring and summer, about 2.2 million candidates take examinations in 15,000 test centers of Nigeria.

### **CHALLENGES**

- Lacking an efficient management system and oversight mechanism makes it difficult for each region to arrange exams reasonably.
- 2. Manual identity authentication cannot stop cheating.
- 3. The system is not conducive to the follow-up statistical analysis of students.

### **SOLUTIONS**

Integrating RFID into mobile computers ensures all information can be recorded in real time; wireless communications make real-time backend data update possible, helping achieve systematic management of data such as subjects, time and location of examinations.

- 1. The system helped the Council properly make plans and efficiently arrange exams.
- 2. PDA intelligently identifying candidate information effectively reduced cheating.
- 3. Information like examinee name, the number of examinees and schools they come from can be all recorded and saved in real time.





### Mobile Nursing Project for a Chinese Hospital

#### **BACKGROUND**

The healthcare industry is one of the world's largest and fastest-growing industries where efficiency and accuracy are vital. To improve patient care and operational efficiency, a hospital in Sichuan brought in Chainway's mobile healthcare solution.

### **CHALLENGES**

- 1. The HIS system on PC terminal can't achieve mobility of bedside nursing.
- 2. Lacking detailed records is a barrier to generate positive patient outcomes.
- 3. Performance assessment and effective scheduling of nurses can't be realized.
- 4. The nurse handwritings are highly error prone.

### **SOLUTIONS**

The system integrated industrial PDA and compatible software, enabling seamless connection to HIS system. Chainway just in time delivers tools for medication administration, vital sign collection, information inquiry and personnel management.



### **EFFECTS**

The system standardized the nursing procedures and increased the productivity of staff members; reduced human error and enhanced patient safety; held down operating costs and streamlined operation procedures.



### **Mexico National Resident ID Project**

### **BACKGROUND**

Mexican Ministry of Social Development is committed to offering social welfare and social relief to the crowd in need. However, due to heavy funded population, the manual match during distribution is inefficient and phenomena like false claim and repeating receipt often occur, so that the sponsorship cost is often beyond the financial budget.



### **CHALLENGES**

- 1. Manual match sometimes results in false claim and repeated receiving.
- 2. It cannot capture and record pictorial information.
- The manual verification is time-consuming and errorprone
- 4. Heavy funded population makes cost uncontrollable.

### **SOLUTIONS**

The client deployed Chainway's handheld computers integrated with camera and fingerprint scanning functions, to optimize the processes of identity

verification and other information collection of the subsidy recipients.

- 1. It realized identity verification quickly and precisely, avoided false claim and repeated receiving.
- 2. Applicant information can be obtained and saved in real time, and be inquired at any time.
- 3. The portable computer facilitated the funding for people in remote areas.
- 4. It optimized the funding process, increased efficiency and reduced costs.

### **EU ICAR Livestock Management and Traceability**

### **BACKGROUND**

With social economy development, people have higher requirements for living quality, especially for animal food safety. The Agricultural and Husbandry sector of a European country introduced Chainway PDA with RFID to optimize animal feeding processes, to realize real-time information recording and food traceability.



### **CHALLENGES**

- 1. Using cards to manually record animal feeding information is inefficient and error-prone;
- 2. Paper records are difficult to store and timeconsuming to inquire;
- 3. There are difficulties for traceability when food safety incidents happen.

### **SOLUTIONS**

Chainway lightweight handheld computers with LF RFID reading modules and external antenna rods, can conveniently and efficiently read and write tag information. Via wireless communication, all the data can be transmitted to the backstage automatically.

- 1. It improves efficiency and reduces error rate;
- 2. It systematically records information, making it convenient to query and trace;
- 3. It promotes openness, transparency, and greenness.

## Exit and Entry Administration for the 16th Asian Games

### **BACKGROUND**

The 2010 Asian Games, a multi-sport event celebrated in Guangzhou, received a total of 9,704 overseas athletes from 45 National Olympic Committees (NOCs). 258,000 AD cards were issued and 2 million tickets were sold, making it the largest event in the history of the Games. On this occasion, the Committee chose Chainway PDAs to verify credentials of entry-exit personnel.

### **SOLUTIONS**

The security staff uses Chainway PDAs to scan credentials and read identity information of entry-exit personnel. By connecting to the backend database via wireless network, real-time inquiry and verification can be realized. The patrol police can carry the portable computer anywhere and anytime in the whole process. The police headquarter or command center can log in the backend system to monitor inspections.



- 1. The intelligent recognition rather than manual check greatly shortened time of border exit and entry.
- 2. The intelligent system put an end to forged documents and identity fraud.
- 3. The real-time supervision strengthened the management of inspection work.
- 4. Security check was achieved with high accuracy and efficiency, ensuring a successful Asian Games.

### **Asset Management for a State Bank**

### **BACKGROUND**

A Chinese state-owned bank generates substantial cash flow both in its bank vault and between its outlets every day. To optimize cashbox escort processes, they have adopted Chainway's handheld computers with barcode scanning technology and powerful information storage capacity to help them improve efficiency and enhance financial security.

### **CHALLENGES**

In the absence of the use of barcode scanners, the traditional manual method is inefficient, inconvenient and above all insecure, which is reflected in processes of asset management (cashbox identifying and tracking) and identity verification of cashbox escort personnel.

### **SOLUTIONS**

The bank has deployed Chainway's C3000 UHF handheld computers. Each cashbox first is equipped with a 2D barcode or a RFID tag that each contains unique information. By an easy wave, the unique information can be read and automatically transmitted to the backend database.



### **EFFECTS**

It changed the traditional manual operation mode of financial escort. That PDA can verify identity of escort personnel avoided human error. Administrators can view real-time information like automatically generated statements and tracking records of cashboxes so as to prevent potential security risks and improve the scientific management level.

### **Vietnam RF Electricity Meter Reading**

#### **BACKGROUND**

EVN (Electricity of Vietnam), a state-owned company, is mainly engaged in power generation, power transmission, distribution, and sales of electricity.



### **CHALLENGES**

- 1. Due to vast territory and huge population, the workload is heavy and efficiency is low for meter reading.
- 2. Coming into each house for meter reading disturbs residents
- 3. Effective supervision and management for meter reading personnel can't be achieved.
- 4. Paper records are not easy to save and not convenient to query.

### **SOLUTIONS**

Chainway PDA integrated the needed function modules to automatically realize electricity meter reading, and then the collected data can be transmitted in real time via wireless communication technologies.

- 1. It realized remote meter reading by RF and Bluetooth module.
- 2. Automatic reading significantly improved efficiency and accuracy.
- 3. All data and information can be conveniently checked, inquired and managed at any time in the backend system.

### Logistics Management for E-commerce Enterprises in China, India and Russia

### **CHALLENGES**

- 1. Manual operations are time-consuming and errorprone.
- 2. Delays often happen and unexpected events cannot be handled in real time.
- 3. It cannot provide real-time tracking records, resulting in poor shopping experience.
- 4. Without assessment criteria, an effective incentive mechanism can't be established.
- 5. It is not conducive to the unified management and deployment of headquarters.

- 3. It facilitated the unified management and optimized resource allocation;
- 4. It enabled real-time logistics tracking and standardized workflows;
- 5. It established a more sound distribution network system; comprehensively enhanced corporate image, service level and customer satisfaction.

### **SOLUTIONS**

By applying barcode recognition technology to Chaniway PDAs, key information of each order throughout the process (from order picking to goods delivery) is recorded. By uploading information to the backend system through a wireless network, administrators can have real-time access to all information.

- 1. It promoted the visibility of distribution and dispatch.
- 2. It realized intelligent receipt and delivery, saving costs and ensuring accuracy.



### **Retail Management for a Listed Department Store**

### **BACKGROUND**

The user is a famous Chinese department store chain. It offers a variety of products for retail sale, covering from apparel for men and women, footwear, famous bags, cosmetics to fashion accessories, whose urgent need is to upgrade management level, enhance quality of service and hold down costs.



### **CHALLENGES**

- 1. It is inconvenient to inquire relevant information about clothes for customers at the store, resulting in poor shopping experience.
- 2. Inventory checking by manual operations or barcode scanners leads to heavy workload.
- 3. All the sales data have to be input via a fixed PC terminal, which is inefficient and error-prone.

### **SOLUTIONS**

Configured with circular polarization antenna, RFID R/W and wireless communication functions, Chainway C3000 realized apparel stock-taking in bulk and real-time information inquiry for field sales. Timely data update and intelligent statistics are also easily achieved.

- 1. Quick response to customer needs enhanced customer shopping experience and store image.
- 2. Stock-taking in bulk saved time, eased off workload, helping improve efficiency.
- 3. Headquarters could better learn sales status and adjust marketing strategy in time.

### **Intelligent Driving School Project in China**

### **BACKGROUND**

Over 2000 domestic driving schools chose Chainway's solution in order to standardize training procedures and improve training quality.

### **CHALLENGES**

- 1. The school management is complicated and efficiency low.
- 2. It is hard to record training hours and driving mileage of students.
- 3. Identity fraud cannot be avoided due to the lack of an efficient way to verify student identity.

### **SOLUTIONS**

Integrating technologies such as HF RFID, fingerprint recognition, camera, etc., Chainway solution which covers software and vehicle computers, enables driving schools to quickly and accurately verify identity, to automatically record training hours and driving mileage, and to monitor the whole training process in real time.

- 1. It simplified workflows of driving training and tests, reduced unnecessary waste of resources.
- 2. All the records can be transmitted to the backend system in real-time. Records about instructor workload can be an indicator for performance assessment; those about student training status and school work progress facilitated the overall management of driving schools.





### Leading to an Intelligent Future



**WECHAT** 

Version: V1.0.0

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