C4 Development Limited

TEST YOUR LIMIT
BEFORE YOU DRIVE

MASTER C4TALOGUE

Our objective is to provide the most advanced tailor-made breath alcohol analyzers and
ITS products to different countries

2010

www.C4.com.hk

Content

About Us

Shenzhen Well Electrics Co. Ltd. was established in 1996. We are specialized in the development of ITS (Intelligent Traffic System) products and traffic police equipment.

We have a team of well-qualified engineers concentrating in the development of ITS softwares. Our product, Alcovisor, which is breath alcohol analyzer, has already been widely used by the law enforcement agencies through out the world. Our company has obtained many certificates and approvals, which include ISO 9001, CE and many certificates from safety and security institutes in different countries . We are also a member of DATIA of the USA.

C4 Development Ltd. is the partner of choice the global market. Our objective is to provide the most advanced and tailor-made ITS products offering excellent solutions for many countries.

We focus on providing the best Original equipment manufacturer (OEM) and Original design manufacturer (ODM) services. One-stop shop tailor-made services are provided to our customers, offering 3D CAD modeling, computer conceptual design to SLA prototyping/working samples, sample fabrication to production, and component to final packaging. Customers are welcomed to suggest different kinds of cooperation methods.

C4 DEVELOPEMNT LTD.

Technical Data Sheet

Operating System	Windows CE 6.0; Windows Mobile 6
CPU	Samsung 6410 624MHz
Memory	256MB SDRAM, 256MB flash memory
Interface	USB 1.1 host & client
Size	218mm (L) X 82mm (W) X 55mm (D)
Weight	Excluding battery : 500g
Display	3.5" QVGA with backlight, TFT-LCD, 65K, 240 X 320
Touch Panel	Analog resistance type
Keypad	Numeric Keypad / Qwerty keypad with blacklight
Expansion Slot	Customer-accessible SD slot for removable memory cards up to 16G
SIM/SAM slot	1 SIM / 4 SAMs
Ethernet	Support (cradle)
Audio	Speaker, headset jack
Camera	2.0 megapixel color camera
GPS	Integrated GPS, build in (NMEA-0183 9600GPS
Operating Temperature	-20 ° C to 55 ° C / -4 ° F to 122 ° F
Storage Temperature	-30 ° C to 70 ° C / -22 ° F to 158 ° F
Humidity	93% non-condensing
Drop Specifications	4ft./1.2m drop to concrete with silicon case, 2drops per 6 sides
WWAN radio	2G: GSM, GPRS, EDGE(Quadband : 850/900/1800/1900MHz) or CDMA 1x/EVDO(Dualband : 800/1800MHz), ; 3G: WCDMA
WLAN radio	IEEE 802.11b/g
WPAN radio	Bluetooth Class II V1.2, IrDA 1.2
Barcode	1D & PDF417 laser class II or 1D
RFID	Integrated RFID, ISO 14443 A
IC Card Reader	EMV level 1,2 approved, ISO 7816, EMV 2000 Level 1,2
Magnetic Card Reader	Bi-directional, Track 1,2,3, ISO 7811, ISO 7813
Printer	2" thermal printer (max. 90mm/sec)
Standard Battery	Rechargeable, 7.4V, 4300mAh Li-ion
Basic	Cradle, Adapter, Power cable, USB Cable, Stylus Pen, Battery

US DOT Approved   CE Approved   DATIA Member   ISO 9001:2000

Camera for photo capture, recording and barcode scanning
Credit card reader
Smart card reader
Keypad with smart card scanner behind
Thermal Printer

Touch Screen
SIM card reader
USB connecter
Mouthpiece for Breathalyser

WP2001

Technical Data Sheet

Operating System	Windows CE 6.0; Windows Mobile 6
CPU	Samsung 6410 624MHz
Memory	256MB SDRAM, 256MB flash memory
Interface	USB 1.1 host & client
Size	218mm (L) X 82mm (W) X 55mm (D)
Weight	Excluding battery : 500g
Display	3.5" QVGA with backlight, TFT-LCD, 65K, 240 X 320
Touch Panel	Analog resistance type
Keypad	Numeric Keypad / Qwerty keypad with blacklight
Expansion Slot	Customer-accessible SD slot for removable memory cards up to 16G
SIM/SAM slot	1 SIM / 4 SAMs
Ethernet	Support (cradle)
Audio	Speaker, headset jack
Camera	2.0 megapixel color camera
GPS	Integrated GPS, build in (NMEA-0183 9600GPS
Operating Temperature	-20 ° C to 55 ° C / -4 ° F to 122 ° F
Storage Temperature	-30 ° C to 70 ° C / -22 ° F to 158 ° F
Humidity	93% non-condensing
Drop Specifications	4ft./1.2m drop to concrete with silicon case, 2drops per 6 sides
WWAN radio	2G: GSM, GPRS, EDGE(Quadband : 850/900/1800/1900MHz) or CDMA 1x/EVDO(Dualband : 800/1800MHz), ; 3G: WCDMA
WLAN radio	IEEE 802.11b/g
WPAN radio	Bluetooth Class II V1.2, IrDA 1.2
Barcode	1D & PDF417 laser class II or 1D
RFID	Integrated RFID, ISO 14443 A
IC Card Reader	EMV level 1,2 approved, ISO 7816, EMV 2000 Level 1,2
Magnetic Card Reader	Bi-directional, Track 1,2,3, ISO 7811, ISO 7813
Printer	2" thermal printer (max. 90mm/sec)
Standard Battery	Rechargeable, 7.4V, 4300mAh Li-ion
Basic	Cradle, Adapter, Power cable, USB Cable, Stylus Pen, Battery

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Key Features (WP2000 & WP2001)

Traffic Police PDA can greatly increase the efficiency of work performed by traffic police. This PDA integrates:
- Mobile Terminal
(Record all illegal events when the police is on duty)
- Breath Alcohol Analyzer (Optional feature)
(check the alcohol content of the drivers, record the test results and send to the service centre immediately through 3G).
- Magnetic Card Reader
- IC Card Reader
- Connect with the Police database and system
- Thermal Printer
- GPS
(Locate the position of the police on duty)

WALL MOUNT BREATHLYZER
Phoebus

Technical Data Sheet

Sensor	Fuel cell
Calibration	replaceable fuel cell module, no need for on-site calibration
Display	10.2" TFT 16:9 colour touch screen (screen can be enlarge to 21")
Input Power	12v
Operating Temperature	-5°C to 50°C
Operating system	Window CE 6.0
Size	37cm X 31cm X 9.5cm
Weight	5.5kg
Memories	Depending on memory card size
Display language	Any language which Win CE 6.0 supports
Printer	Thermal printer
Coin Collector	Support 1 size coin
Coin Capacity	200 coins
Camera	1.3 Megapixel camera (can be upgrade)
Wifi	802.11 b/g
External Port	USB2.0
Mouthpiece	Standard Dringing Straw
Sampling System	Automatically take a deep lung sample
Optional Power	Supply 12 volt car adapter or AC 6 volt adapter
Clock	Real time clock
Units of Measure	BrAC: mg/L, or any other units BAC: grm%, mg/mL, mg/100mL, or any other units
Detection Range	0.00% BAC to 0.40% BAC
Accuracy	0 - 0.10%BAC: ±5% 0.10 - 0.15%BAC: ±8% >0.1
Recovery Time	30 seconds after a positive test
Sample Time	4 seconds of continuous blow

Tailor Made Features and Functions
For different industries and Locations

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Phoebus – Industrial
Replace timeclock by Phobes

KEY FEATURES:
- Breath alcohol analyzer
- Staff card reader
- Camera (video capturing)
- USB connection
- Internet connection
- Thermal printer
- Facial recognition system (optional)
- Work attendance system

Phoebus – Public
Generate profit from advertisment

KEY FEATURES:
- 10.2" to 21" 16:9 colour touch screen
- Internet connection
- USB connection

INSTALLATION VENUES:

*Bar & Pub	*Hospital
*Restaurant	*Dormitory and Hostal
*Hotel	*Arena
*Nightclub	*Shopping Mall
*Casino	*Car Park

PROFESSIONAL BREATH ALCOHOL ANALYSER

JUPITER

Technical Data Sheet

Sensor	Fuel cell
Working Temperature	-10°C to 50°C
Storage Temperature	-25°C to 70°C
Size	19.5cm X 7.9cm X 3.5cm
Weight	433g included battery
Battery Life	Over 1500 tests (over 150 tests with printouts)
Battery	7.4V 1800mAh NI-MH rechargeable battery
Display LCD Size	3.2" TFT colour touch screen (65,000 colors)
Sampling System	Automatically or manually take a deep lung sample
Optional Power	Supply 12 volt car adapter or AC 6 volt adapter
Clock	Real time clock
Units of Measure	BrAC: mg/L, or any other units
	BAC: grm%, mg/mL, mg/100mL, or any other units
Detection Range	0 µg/100mL BrAC to 175 µg/100mL BrAC
Accuracy	0 - 0.10%BrAC: ±5%
(within working	0.10 - 0.15%BrAC: ±8%
temperature)	>0.15%: ±10%
Memory	36,000 tests records including all information
GPS	±5M
Connection port	USB
Printer	Thermal printer (optional)

Key Features

- Built-in Printer (Optional)
- Built-in GPS
- 36,000 tests records stored in memory
- 3.2" Touch screen
- Mouthpiece can be automatically ejected
- LED light indicate where to insert mouthpiece
- USB PC connection

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JUPITER (with Thermal printer)

PROFESSIONAL BREATH ALCOHOL ANALYSER

JUPITER PLUS

Technical Data Sheet

Sensor	Fuel cell
Working Temperature	-10°C to 50°C
Storage Temperature	-25°C to 70°C
Size	19.5cm X 7.9cm X 3.5cm
Weight	512g included battery
Battery Life	Over 1,000 tests (over 200 tests with printouts)
Battery	7.4V 4300mAh NI-MH rechargeable battery
Display LCD size	3.2" TFT color touch screen (65,000 colors)
Sampling System	Automatically or manually take a deep lung sample
Optional Power	Supply 12 volt car adapter or AC 6 volt adapter
Clock	Real time clock
Units Measure	BrAC: mg/L, or any other units
	BAC: grm%, mg/mL, mg/100mL, or any other units
Detection Range	0.00% BAC to 0.40% BAC
Accuracy	0 - 0.10%BAC: ±5%
	0.10 - 0.15%BAC: ±8%
	>0.1
Memory	20,000 tests records including all informations
GPS	±5M
Connection Port	USB
Printer	Thermal printer

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Key Features

- Built-in Printer
- Built-in GPS
- 20,000 tests records stored in memory
- 3.2" Touch screen
- Backlit keypad
- Mouthpiece can be automatically ejected
- LED light indicate where to insert mouthpiece
- Large battery capacity
- USB PC connection

JUPITER plus

Technical Data Sheet

Sensor	Fuel cell
Working Temperature	-10°C to 50°C
Storage Temperature	-25°C to 70°C
Battery Life	Over 3000 tests
Battery	4 AA alkaline batteries
Display LCD size	2.4" TFT colour touch screen
Weight	160g without batteries
Sampling System	Automatically or manually take a deep lung sample
Optional Power	Supply 12 volt car adapter or AC 6 volt adapter
Clock	Real time clock
Units of measure	BrAC: mg/L, or any other units BAC: grm%, mg/mL, mg/100mL, or any other units
Detection Range	0 µg/100mL BrAC to 175 µg/100mL BrAC
Accuracy	0 - 0.10%BrAC: ±5%
(within working	0.10 - 0.15% BrAC: ±8%
temperature)	>0.15%: ±10%
Memory	10,000 tests records including all information
Connection Port	USB
Optional Accessory	Wireless printer: Thermal or Dot Matrix

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MERCURY

Wirelessprint

Size: 12cm x 8cm x 3.5cm
Weight: 200g with battery
Batery: 7.4V 1800mAh NI-MH rechargeable battery
Battery Life: 300 printouts
Thermal paper size: 6cm X 630cm
Other Features: Easy-load paper

BLUETOOTH PRINTER
Model : WPT-2B

DOT MATRIX PRINTER
Model : T5

MARK X

Technical Data Sheet

Sensor	Fuel Cell
Working Temperature	-10°C to 50°C
Storage Temperature	-20°C to 70°C
Storage Humidity	Not greater than 95%
Size	150mm X 70mm X 35mm
Weight	169g without batteries
Battery Life	Not less than 500 tests
Battery	4 AAA alkaline batteries
Display LCD size	2.4" TFT colour screen
Response Times	5 seconds
Sampling System	Automatically or manually takes a lung sample
Units of Measure	BrAC: mg/L, or other units
	BAC: grm%, mg/mL, mg/100ml, or other units
Detection Range	0.000 mg/L to 3.000 mg/L
Accuracy	0 to 0.100% BrAC ±0.05%
	0.100 to 0.200% BrAC ±5%
	>0.200% BrAC ±10%
Memory	10,000 tests records
Measuring Modes	Active and passive
Optional Accessory	Thermal printer
Clock	Real time clock
Connection Port	USB

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Thermal printer

Size: 12cm x 8cm x 3.5cm
Weight: 200g with battery
Batery: 7.4V 1800mAh NI-MH rechargeable battery
Battery Life: 300 printouts
Thermal paper size: 6cm X 630cm
Connection Post: USB
Other Features: Easy-load paper

THERMAL PRINTER
Model : WPT-2

SITE OPERATION RECORDER

TalkieCAM®
Walkie Talkie with Video Capturing

TalkieCAM®

Technical Data Sheet

Video Pixels	640 X 480 (24fps) D1 video recording
Camera Pixels	5 Megapixel
Display	2" color screen
Support Walkie Talkie	Motorola, Kenwood or any other brand adaptable
Audio input	-58dB input and 1W output
Battery	3.7V 1700mAh NI-MH rechargeable battery
Battery Life	6 hours when video recording
Recording Media	SD card support 32G
Weight	90g not including battery
Size	10.3cm X 6.2cm X 3.4cm
PC connection port	USB
Video encryption	Internal hardware encryption

CE Approved

ISO 9001:2000

- Camera
- IR Light
- Pointing Light
- USB

- Capture Button
- Talk Button
- SD Card
- On/Off Button
- Screen
- Charger

IGNITION INTERLOCK
X2

Key Features

- Temperature and humidity - Human temperature and humidity are both measured by proper sensors to prevent circumvention.
- Simple calibration - one alcohol sample is delivered to the unit, from which the device auto calibrates, eliminating the need for the service center to manually adjust device calibration.
- Voice indicator - Several events are indicated by computer voice, like the rolling test.
- On-board data logger - A computer records every interaction a driver has with the vehicle. Recorded interactions include activity, time, date and BrAC level. The computer can store more than 8,000 (can be upgrade) separate events and display the content in a summary or detailed format.
- Meeting minder - A service calendar that uses audio and visual reminders to count the days between required scheduled appointments. If the driver misses his/her appointment, the service calendar disables the interlock device, preventing the car from starting.
- Circumvention record - If the interlock device detects a bypass, or detects a failed rolling retest, the logger will record all events.
- Rolling retest - A test taken prior to the initial breath test. The is the device's primary defense against circumvention. The test can be set to occur at fixed or random intervals. If a driver fails the test, the circumvention alarm will sound.
- Bypass detection - An instrument that detects whether the vehicle is running. If a car is running, but the driver has not yet taken a breath test, the circumvention alarm will sound. The interlock device then enters a lockout state for a predetermined period.
- Power interrupt - A record of when the vehicle's power has been disconnected or interrupted. This may occur if the driver tampers with the battery, repairs the battery, or replaces the battery. Driver are required to provide documentation of repairs.
- Violations reset - A function that contains features from the Data Logger and the Memo Minder. If the device detects a violation from one of these features, it will automatically reset the Memo Minder, requiring the driver to come in for early service.
- Emergency restart - In case of a vehicle stall, this feature allows the vehicle an emergency restart within several minutes of shutdown.
  Infrared/Rs232/USB data transfer - Support infrared, RS232, and USB download data and reports

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side view   45⁰ view   back view

Benefit

Alcovisor interlock is a hand-held breath alcohol analyzer with a vehicle ignition system. The driver must complete a breath alcohol test with a result below a preset limit before the vehicle can be started. Installing the Alcovisor Interlock will prevent accidents caused by drunk driving.

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FACIAL RECOGNITION SYSTEM

FACEGUARD

Main Usage

FaceGuard is a physical access control product powered by sophisticated face recognition technology, which can be used with our interlock to prevent manipulation. The system prodvides a real-time comparison between a live face and a stored faces data to confirm the identify of that person who has the privilege to drive the car. It offers maximum security, reliability and efficiency with its user-friendly and operation.

Main Characteristics

High Security

FaceGuard face recognition technology supports one-to-many authentication, allowing accurate and speedy access control without the need of any security token(e.g. smart card). Nevertheless, FaceGuard may also be used in conjunction with those tokens if multiple authentication mechanisms are required.

1) Turn on Car

2) Face Enrollment

3) Face Recognition and Blow

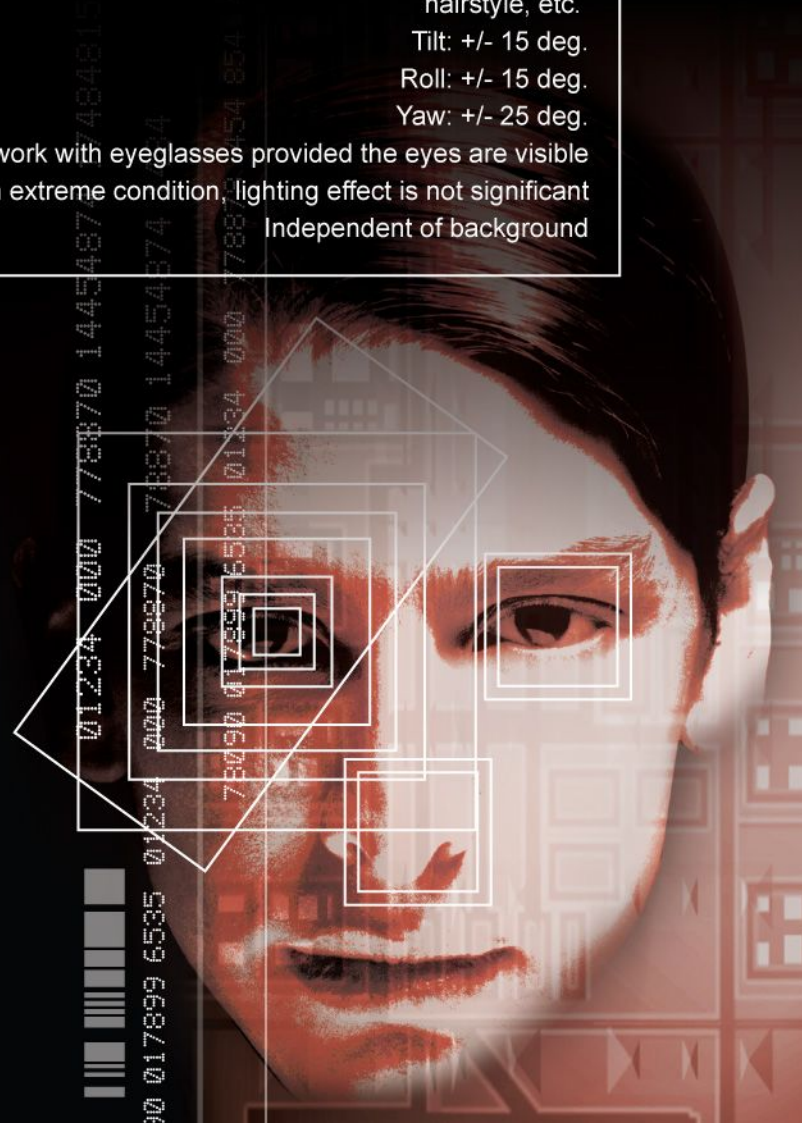4) Start the Engine

Component Parts

Face Recognition Camera and Control Box

Facial recognition system is a computer-driven application for automatically identifying or verifying a person from a digital still or video image, by comparing selected facial features in the live image with a facial database.

The Facial Recognition system, FaceGuard, is an optional accessory for the interlock. The benefits of using face recognition technology are not only identify the user of interlock, but also prevent the car from stealing.

Specification

Platforms	• Windows NT/2000/XP/2003 (Video capture features are not supported on NT and 2003 Server) • Linux on ARM9
Interfaces	• API Calls • COM+ OCX (for Windows only)
Languages	• VC++ • Delphi • Visual Basic • GCC
Speed	One-to-one Environment • Face Detection: 0.05s - 0.2s • Face Enrollment: 0.5s - 1.8s • Face Verification: 0.5s - 1.5s One-to-many Environment • Identification: 50000 matches per second
Face Detection	Cascade Classifier
Features Extraction	Dynamic Local Feature Analysis (DLFA)
Face Recognition	Automatic True Face Processing (ATFP)
Recommended Face Size	200 pixels x 200 pixels
Faceprint	Adaptive (800 Byte - 15 KByte)
Robustness to Variability	Robust with respect to changes in facial expression, facial hair, hairstyle, etc.
Pose	Tilt: +/- 15 deg. Roll: +/- 15 deg. Yaw: +/- 25 deg.
Eyeglasses	Can work with eyeglasses provided the eyes are visible
Lighting	Except in extreme condition, lighting effect is not significant
Background Distraction	Independent of background

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