

Operation Guide

USING THE VEHICLE CRADLE

A vehicle adapter/charger is required and is available through Roper Mobile Technology (Part Number CS312).



CBCE340BV with Optional Mount

Vehicle Cradle Connector Identification

Back of Unit:

1. USB Host
2. USB Client
3. Power Supply
4. Fuse



Under the Unit:

5. Serial Port 1
6. Serial Port 2
7. Serial Port 3

Note: When installing and configuring peripherals, ensure to select the proper Port (1, 2 or 3) and to connect to the configured port once installation complete.



1. Install power supply lead by inserting round connector into the round connector at the back of the cradle (refer back to connector identification).
2. Turn ring clockwise to hold in place.
3. Connect other end of connector to cigarette lighter.

Note:

- The Vehicle Cradle requires a power source of 9 to 30 Vdc.
- Ensure cigarette lighter connector is clean and corrosion-free to provide the least electrical resistance.

[Return To Table of Contents](#)

Operation Guide

USING VEHICLE CRADLE (CONTINUED)

Making your own Power Supply Lead

To make your own power supply lead, you may order the power connector at Roper Mobile Technology using the following information:

- Roper Mobile Technology item #: NAM036
- Manufacturer's name and item #: SwitchCraft 760K

Note:

- Be sure to insert a 3 amp time-lag fuse, or if you are using a fuse box, ensure to use a similar fuse.
- All contacts must be clean and corrosion-free to avoid electrical resistance.
- Keep the length of the Lead to a minimum.

Wiring

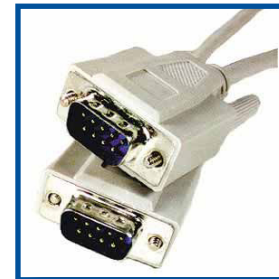
The Vehicle Cradle can have up to 3 serial cables connected at the same time. The DU-C-0040 measures approximately 180 cm (70 in) and includes 2 DB-9 sockets. Its sole use is for communicating with the host computer via ActiveSync.

Note: Another type of cable may be required to link certain devices such as a GPS or external radio. The DU-C-0040 may not be the appropriate cable for these devices and a special cable might therefore be required. To customize your own cable, refer to the "Serial Connector Pin Layout" section for further information.

Installing Vehicle Mount

The vehicle cradle is compatible with the RAM-MOUNT System.

- Roper Mobile Technology item #: DC813
- RAM-MOUNT item number: RAM-B-101U



DU-C-0040

RAM-MOUNT offers several installation possibilities. For further information, consult their web site at www.ram-mount.com.

The DC813 hinged support is comprised of the following parts:

1. 1 RAM-B-201 Socket Arm with Handle
2. 2 RAM-B-202 anti-vibration balls
3. 3 screws

Operation Guide

USING VEHICLE CRADLE (CONTINUED)

Installing the Vehicle Mount (Continued)

1. Place one of the 2 balls underneath the cradle and align holes with the receptacles for the screws.
2. Tighten all 3 screws to secure balls into place.



3. Position the second ball against any solid area in the vehicle.
4. Secure into place by tightening 4 screws (not provided).



WARNING

For safety reasons, it is strongly recommended that the vehicle cradle be installed at level lower than the driver's and passenger's heads.

5. Using handle, loosen the pin-head adaptor.
6. Insert each of the balls on either end of the arm.
7. Adjust cradle to desired angle and secure into position by tightening the handle.

WARNING

Roper Mobile Technology may not be held responsible for any injuries caused by the vehicle cradle or handheld mobile computer in the event of a collision. The Vehicle cradle has been designed to withstand normal bumps and vibrations during travel. It has not been designed to secure the handheld in case of a collision.



[Return To Table of Contents](#)

Operation Guide

MONITORING THE PROCESS ON A 3 SERIAL PORT CRADLE

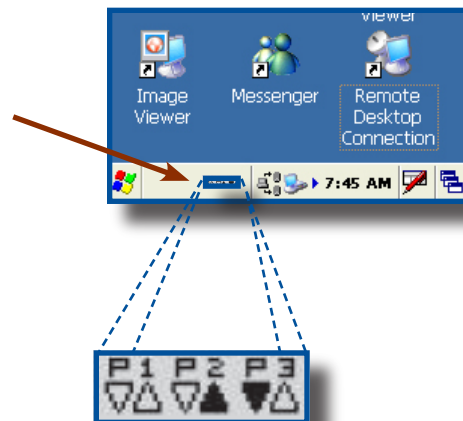
A unique feature of the 3 Serial Port Cradle will allow you to monitor the process on the CE3000B screen.

Note: A driver is required to ensure the 3 Serial Port Cradle (CBCE340BV) works correctly. For more information on the installation and configuration of the cradle, refer to the CE3000B Technical Guide located on [Docudap](#) technical web site.

- Cradle is powered and driver is installed correctly when the task bar displays the following icons.



- When communication begins and data is being transferred, additional icons will appear to indicate communication status.



Serial Port Connector Pin-Out

Ports 1 2 & 3 on the CBCE340BV Cradle



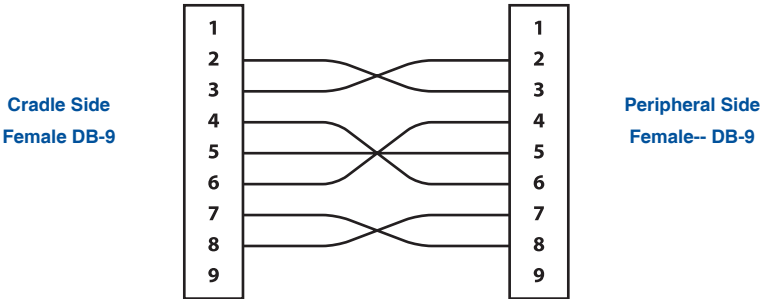
PIN		DESCRIPTION	TYPE
1	CD	Carrier Detect	INPUT
2	RX	Receive Line	INPUT
3	TX	Transmit Line	OUTPUT
4	DTR	Data Terminal Ready	OUTPUT
5	GND	Ground	
6	DSR	Data Set Ready	INPUT
7	RTS	Request To Send	INPUT
8	CTS	Clear To Send	OUTPUT
9	RI	Ring Indicator	

Operation Guide

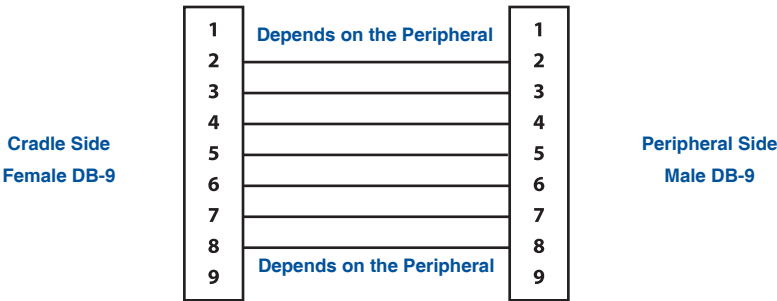
MONITORING THE PROCESS ON A 3 SERIAL PORT CRADLE (CONTINUED)

Serial Port Connector Pin-Out

Typical Communication Cable for Peripheral (Null Cable)



Typical Communication Cable for Peripheral



Operation Guide

FIELD REPLACEABLE BATTERY

The CE3000B unit comes equipped with a field replaceable battery designed to ensure quick charging, long battery life and to withstand shocks and vibrations. It is strongly recommended to use batteries that are provided by Roper Mobile Technology or one of its distributors.

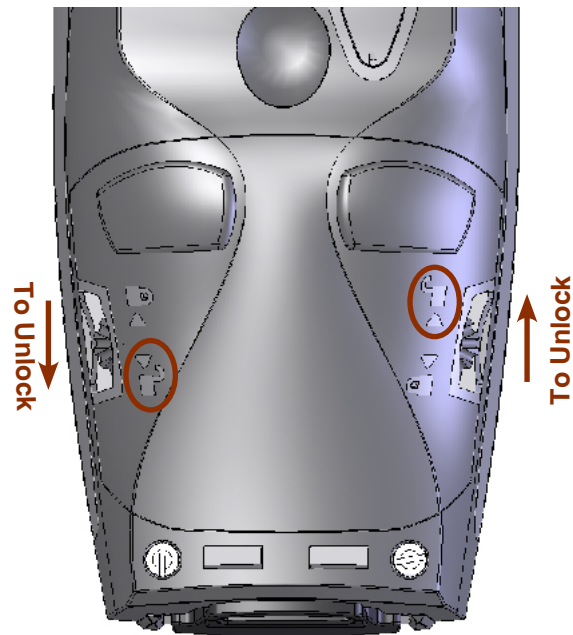
Note: Check for our label on the battery pack.

WARNING

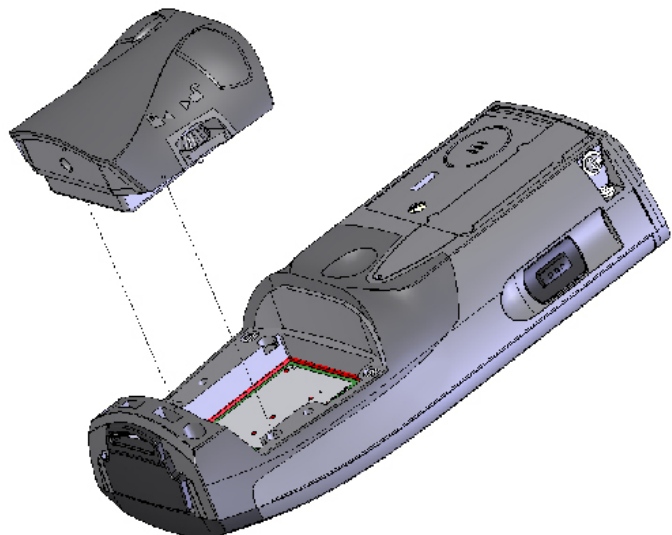
Always turn the unit off prior to changing the battery to ensure no data is lost.

Changing the Field Replaceable Battery

1. Turn the unit off.
2. Turn **left screw downwards** and **right screw upwards** to loosen in order to remove the battery pack. (Refer to the illustration on the right).



3. Remove Battery Pack by lifting it off the unit.

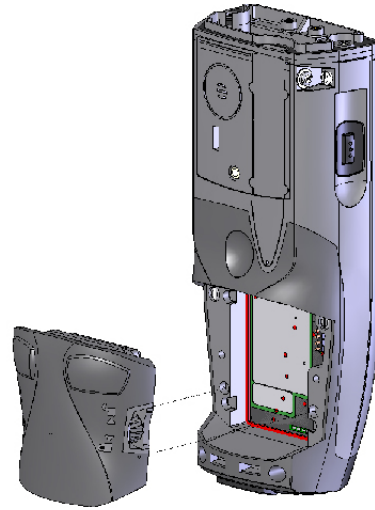


Operation Guide

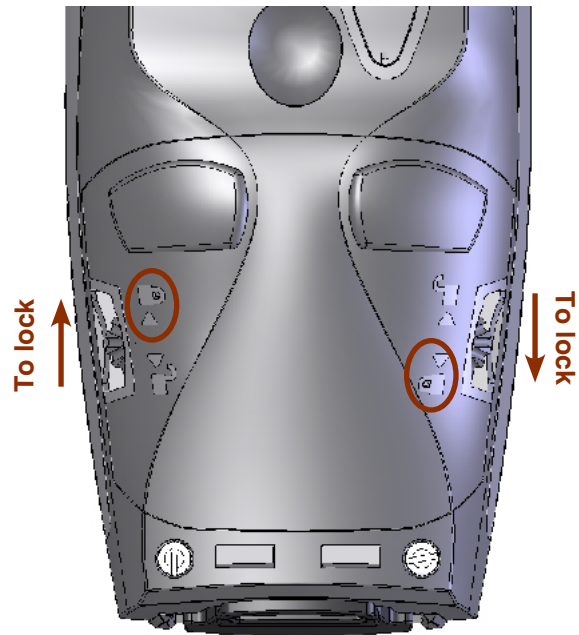
FIELD REPLACEABLE BATTERY (CONTINUED)

4. Replace with a fully charged Battery Pack.

Note: Ensure to insert battery pack correctly or you may not be able to tighten screws.



5. Turn **left screw upwards** and **right screw downwards** to tighten and secure Battery Pack into place. (Refer to the illustration on the right).



[Return To Table of Contents](#)

Adaptable Endcap Options

Part Number	Description
3240B-C	1D/2D Barcode Reader
3240B-EEC	Extended End-Cap
3240B-FC	Fingerprint & 1D/2D Barcode Reader
3240B-FEC	Fingerprint Reader
3240B-LEC	Laser Barcode Scanner
3240B-LF	Laser Scanner & Fingerprint Reader
3240B-NEC	Standard End-Cap
3240B-SCR	Contact/Contactless SmartCard Reader
3240B-REC	RS-232 DB9 End-Cap

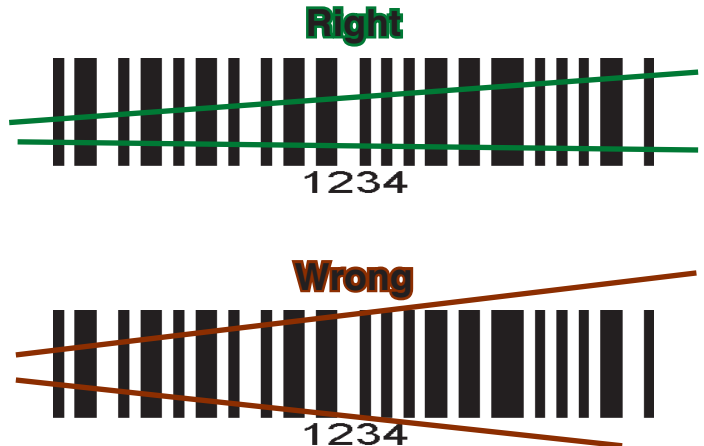
Adaptable Endcap Options

BARCODE READERS

Laser Scanner

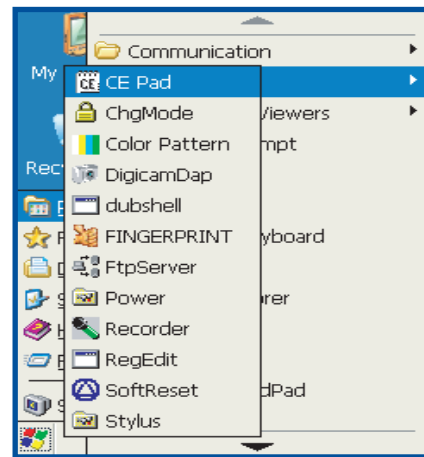
The 'Laser Scanner' function will depend on the application used and a special software driver. Refer to your application's User Guide for further instructions. Information included are basic scanning instructions.

Refer to the diagram to the right for right and wrong scanning methods.



Testing the Scanner

1. To test the scanner, click on:
 - a) Start
 - b) Programs
 - c) DAP Utilities
 - d) CE Pad
2. To activate scanner point the top of the unit toward the barcode label needed to be scanned.
3. Press the 'trigger' button located on the side of the unit and move the unit back and forth so the beam completely crosses the label.
4. Once the label has been decoded, the unit will sound a short 'beep'.

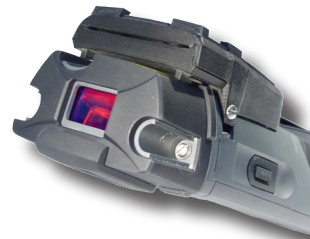


Note: If you keep the 'trigger' button pressed for too long, the unit will stop scanning by itself after a few moments. The unit will sound two (2) beeps to indicate that no barcode has been detected.

Advanced Users: Refer to the CE3000B Technical Guide for further instructions on programming.

CAUTION

- Avoid Exposure to Laser Light Beam.
- Do not intentionally look into the Laser Light Beam.



[Return To Table of Contents](#)

Adaptable Endcap Options

BARCODE READERS (CONTINUED)

2D Barcode Reader

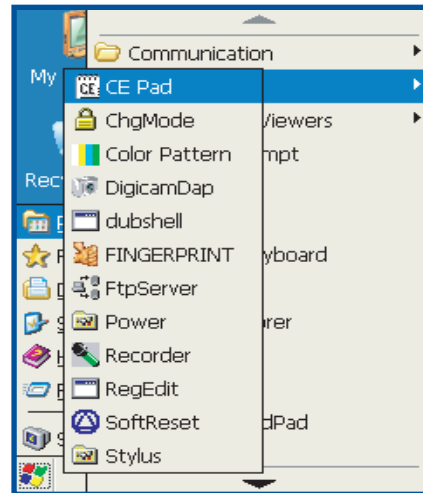
This special option is usually installed and configured in-house at the manufacturer's.

The 2D Barcode Reader is primarily controlled by the client application and a special driver. Therefore, please refer to your application specialist or supervisor for further instructions.

Note: You may also refer to the CE3000B Technical Guide located on DocuDap for further instructions on

Testing the Reader

1. To test the reader, click on:
 - a) Start
 - b) Program
 - c) DAP Utilities
 - d) CE Pad
2. To activate reader, press the 'trigger' button.
3. Hold the unit steadily at a distance of 10 cm (4 in), from the barcode.



WARNING

Do not move the unit while scanning or scan will not function.

Note: Unlike the laser scanner, the 2D reader does not “swipe” the barcode, but rather, it takes a photograph which is then recognized and interpreted by the unit. The photograph can be taken from any direction.

The 2D Barcode Reader will emit a red beam allowing the user to adequately focus on the barcode needing to be read.

Once the reading has been completed, the device will emit a sound and the confirmation LED will turn green for a moment. The numeric code will then be displayed on the screen.

You can release the trigger at any time to cancel the scanning. Two short beeps indicate that scanning has ended.

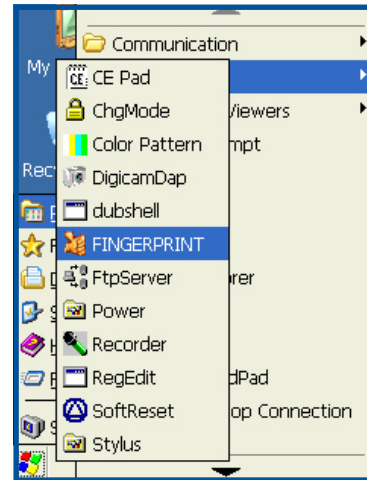
Adaptable Endcap Options

FAST FINGERPRINT SENSOR

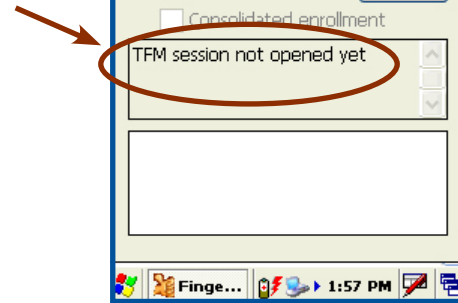
Testing the Fingerprint Sensor

1. Click on:

- a) Start
- b) Programs
- c) Dap Utilities
- d) Fingerprint

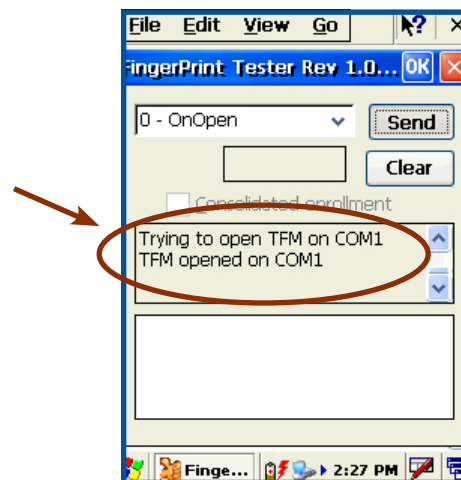


2. This window will appear indicating **"TFM Session is not opened yet."**



3. Click send to open session.

4. Wait until this message appears in the middle section of the window.

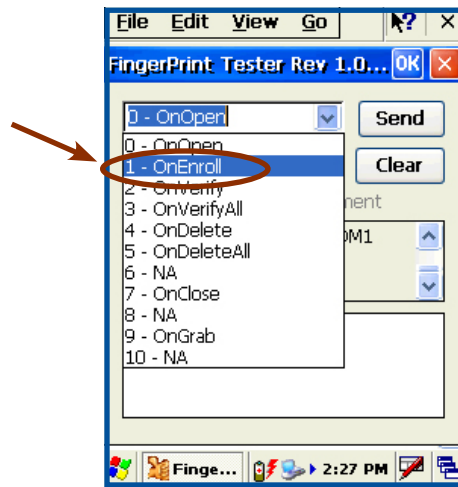


Adaptable Encap Options

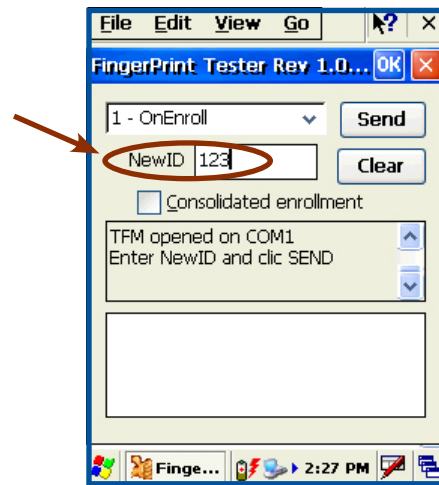
FAST FINGERPRINT SENSOR (CONTINUED)

Testing the Fingerprint Sensor (Continued)

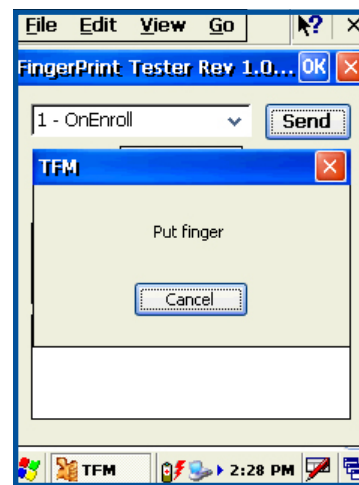
5. Select **1 - OnEnroll** from the drop down menu.



6. Enter **New ID Number** and click **Send**.



7. Place finger on Fingerprint Sensor and wait for fingerprint recognition.

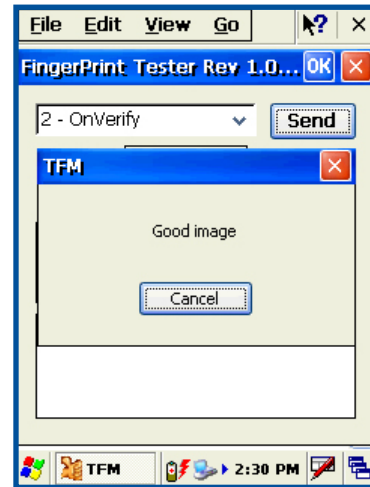


Operation Guide

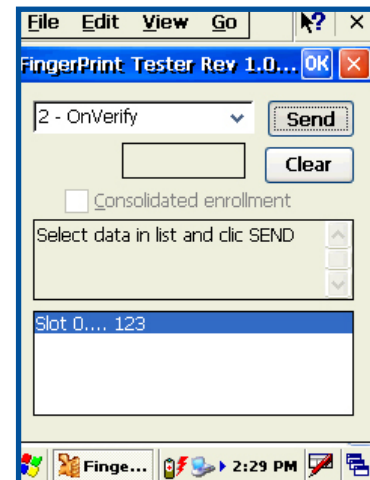
FAST FINGERPRINT SENSOR (CONTINUED)

Testing the Fingerprint Sensor (Continued)

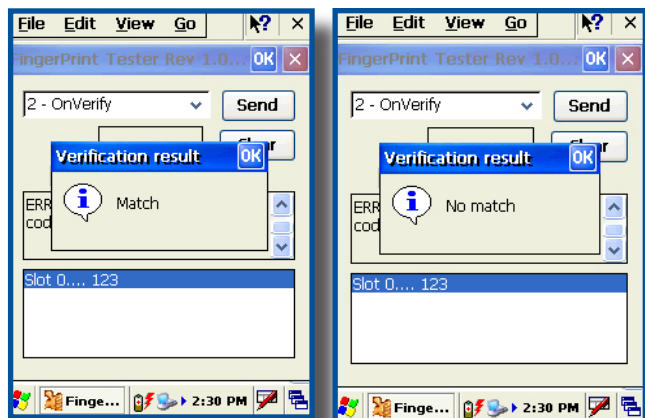
1. If Fingerprint image was taken appropriately, this screen will appear.
2. If the image was read correctly, you may now verify database for fingerprint recognition.



3. Click “OnVerify” to verify fingerprint in Database.
4. Click “Send” and wait a few moments for a Database search.



5. After a few moments, the “Verification Result” will be displayed.
6. It will either indicate “Match” or “No Match”.



[Return To Table of Contents](#)

Operation Guide

SMARTCARD READER (CONTACT & CONTACTLESS)

The CardMan® 5121 is based on a 13.56 MHz contactless Smart Card Interface that is compliant with ISO Specifications 14443 A, B and 15693. The reader works with a variety of 13.56 MHz contactless Smart Cards including but not limited to:

- Philips: MIFARE®, DESFire®, MIFARE ProX® Smart MX, and i.code;
- HID: ICLASS®
- Texas Instruments: TagIT®
- ST Micro: x-indent, SR 176, SR 1X 4K
- Infineon: My-d (in secure mode UID only)
- Atmel: AT088RF020

Host Interface	
USB 2.0 CCID (also supports 1.1)	✓
Transmission speed	12 Mbps
Power Supply	Bus Powered Max. U25mA
Contactless (RFID) Smart Card Interface	
ISO 14443 A	✓
ISO 14443 B	✓
ISO 15693	✓
Compliance	
Microsoft® WHQL Certified	✓
USB 1.1 & 2.0	✓
API	
PC / SC Driver	✓
Synchronous API (On top of PC/SC)	✓

PC/SC Driver Support	
Windows CE 3.0 Support / CE.NET (depending on the software)	✓
Hardware Specifications	
Dimensions (LxBxH)	57 x 40 x 1.5 mm
Weight	20 grams without Contact Connector; 40 grams with Contact Connector
Operating Temperature	10 - 55° C (32-131° F)
Operating Humidity	10 - 90 % rH
Meantime Between Failure (MTBF)	500,000 hours
Safety & Environmental Standards (pre-certified)	
CE, FCC & UL	✓

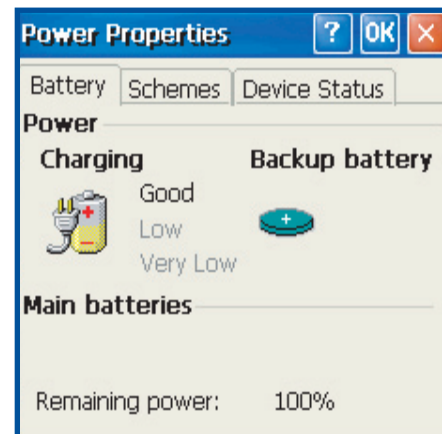
Note: A basic Demo Program can be provided upon request. Contact your Customer Service Representative nearest you.

Advanced Settings

ADVANCED BATTERY OPTIONS

To See Power Remaining

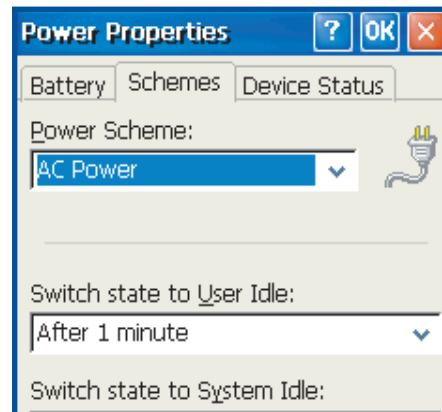
1. Under Windows CE 5.0, click on:
 - a) Start
 - b) Settings
 - c) Control Panel
 - d) Power
 - e) Battery



Preserving Power

It is possible to extend battery life by modifying the power delays of the unit, screen and backlighting settings.

1. To setup the screen and backlight delays, click on:
 - a) Start
 - b) Settings
 - c) Control Panel
 - d) _Power
 - e) Power Off

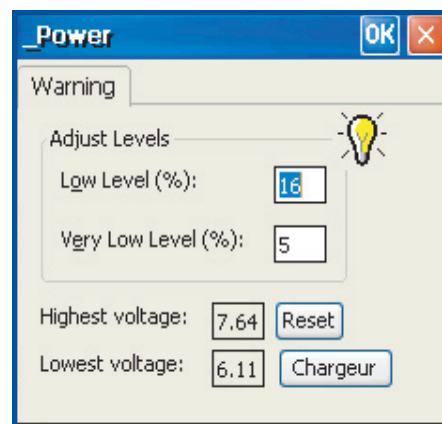


Battery Power Management

All CE3000BB units are delivered with a calibrated Main Battery.

1. Define "Low Level" as per your selection and applications used.

Note: The default settings are 16% for "Low Level" and 5% for "Very Low". When the battery reaches the low level the battery status indicator will flash red. A 5% the battery status indicator continues to flash and a window will display to indicate to the user that the battery is at a critical level and must be re-charged.



[Return To Table of Contents](#)