

# **BlueCheck III (BC3)**

## **User Manual**

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**Version 1.2**

**Released on 11/08/12**

**3M COGENT BLUECHECK III, BC3, CSD330 FBI CERTIFIED SAP LEVEL 30 OPTICAL FINGERPRINT SENSOR,  
EMBEDDED WITH WINCE 6.0 CORE AND BLUETOOTH**

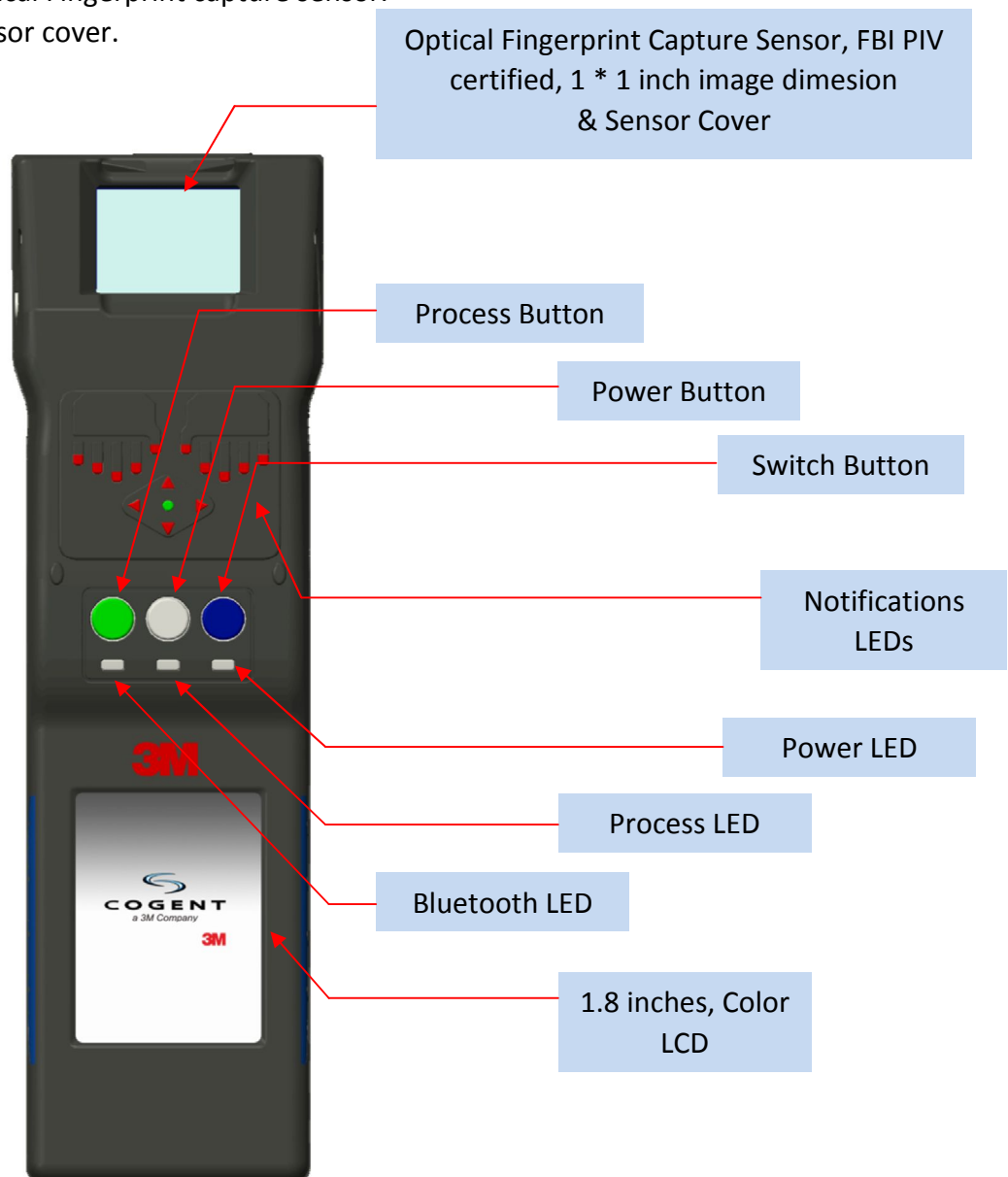
Platen Dimensions	1.18" Vertical * 1.26" Horizontal (30 mm * 32 mm)
Active Window Dimensions (Image dimensions)	1.0" * 1.0" (25.4 mm * 25.4 mm) (500 * 500 Pixels)
Geometric Distortion	FBI PIV compliant
Illumination Uniformity	FBI PIV compliant
Resolution	500dpi +/- 2%
Grayscale Quantization	8 bits per pixel, 256 grayscale
On-Device FRR	0.1% - 0.001%
On-Device FAR	0.01% - 0.0001%
Allowable Finger Rotation	+/- 15 degree
WSQ Compression Ratio	9:1
<b>Operation condition:</b>	
Temperature, Operating	-10 to 50 °C
Temperature, Non-Operating	-10 to 50 °C
Operating Humidity	10% - 90%
<b>Power:</b>	
Battery	1 x Standard Battery, Li-ion 3.7V 3600 mA/h
Operating Life	8~10 hours
Life(Standby)	36~40 hours
Device Charging Connectors	1 x AC-DC 5V charger, 1 x Car charger DC 12V-5V
Battery Charger	1 x Extra Battery Charger, DC5V / 1.5A
<b>Hardware:</b>	
CPU	Marvell PXA310 processor, 806mHz
Memory	128 MB DDR / 128 Nand Flash
Expansion Memory	Micro SD card (2GB)
Interface	USB 2.0 / Non Standard USB Port for Smart Card Readers (factory option)
Display	Color 1.8 inches (128 * 160 pixels)
Backlight	220 cd/m2
Keypad	3 keys
Notification	Multiple color LEDs
Audio	Speaker

Wireless Module	Bluetooth V2.0
<b>Operating System:</b>	
Device	WinCE 6.0 Core
PDA Requirements	Compatible with Motorola MC75 and other models embedded with Microsoft Windows Mobile OS
<b>Accessories:</b>	
Cables	1 x USB Data/ Power cable
Extra battery	1 x Extra Battery Li-ion 3.7V 3600 mA/h
Pouch	1 x Pouch Nylon
Lanyard	1 x Lanyard
Hood	1 x Ambient Light Rubber Hood
<b>Dimensions:</b>	7.4" L * 2.1" W * 2.15" D (189mm * 51mm * 54mm)
<b>Sealing :</b>	IP54
<b>Compliances :</b>	RoHS Compliant
<b>EMI :</b>	FCC/CE

## INTERFACES

BC3 holds simplest interfaces of biometric handheld device:

- Three buttons: Power button, Process button and Switch button.
- Three LEDs: Power LED, Bluetooth LED and Process LED.
- One color LCD.
- Optical Fingerprint capture sensor.
- Sensor cover.



### **Power Button**

- Hold down this button for 3 seconds to turn on BC3.
- Press this button to switch to “Shut Down” menu.
- Hold down this button for 5 seconds to force device turn off.

### **Process Button**

- Press this button to run the function displayed on LCD.

### **Switch Button**

- Press this key to switch to next function.

### **Power LED**

- Red color LED.
- It will be turned on when battery is low.
- It will be turned on when device is charging.

### **Bluetooth LED**

- Blue color LED.
- It will be turned on when Bluetooth connection established.
- It will be turned off when Bluetooth connection disconnected.

### **Process LED**

- Yellow color LED.
- It will be turned on when system is busy or processing.
- It will be turned off when system is not busy.

### **Optical Fingerprint Capture Sensor**

- Optical sensor to take fingerprint image.

### **Sensor Cover**

- Plastic cover to prevent ambient light.

## ***OPERATION MENUS OF BC3***

There are two operation menus for fingerprint sensor:

- Capture
- Calibrate

One menu to control Bluetooth connection:

- Pairing

There are two menus to manage fingerprint data stored in BC3:

- Send

- Delete

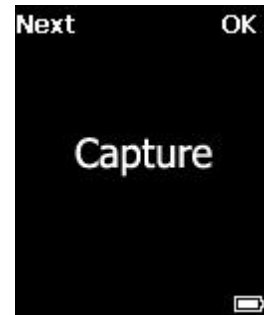
One menu to turn off BC3:

- Shut Down

### **Menu "Capture"**

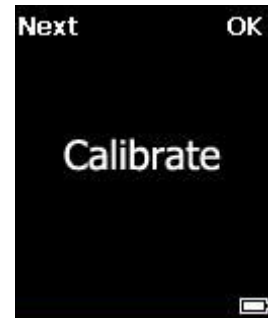
It's the default menu after turning on BC3.

Press down **Process button** to start fingerprint capture function.



### **Menu "Calibrate"**

Press down **Process button** to calibrate fingerprint sensor.



### **Menu "Pairing"**

Hold down **Process button** for 5 seconds then BC3 will switch to Pairing mode.

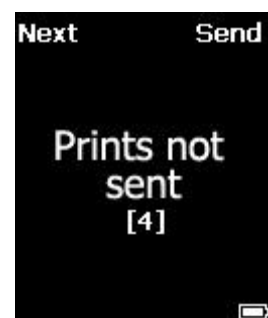
The host device can search and pair BC3 with Bluetooth interface between 60 seconds. If timeout, the pairing operation will be failed and host device can't get permission to connect BC3.

After pairing successfully, the name of host device will be displayed on the LCD of BC3, it means that the host device get the permission to establish the Bluetooth connection with BC3.



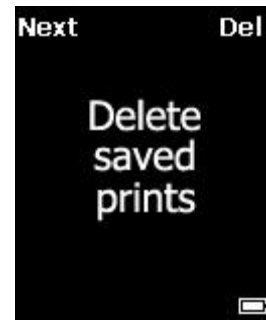
### **Menu "Send"**

Press down **Process button** to send the fingerprint images to host.



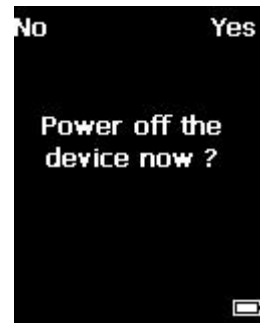
### Menu "Delete"

Press down **Process button** to delete fingerprint data stored in BC3.

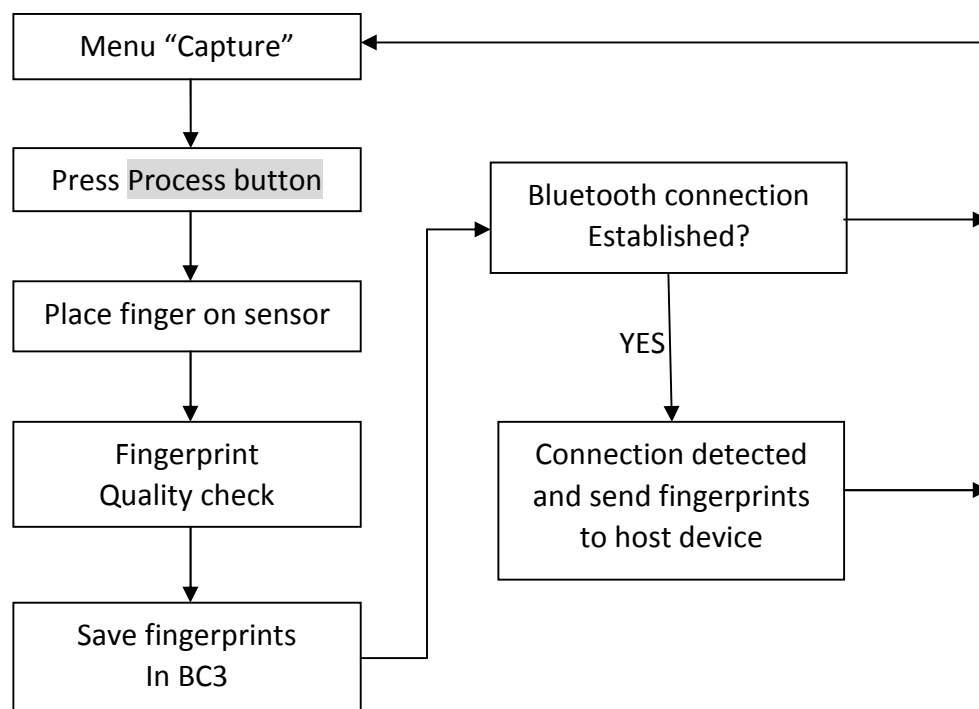


### Menu "Shut Down"

Press **Power button** and BC3 will switch to this menu.  
Press **Process button** to turn off BC3 when menu "Shut Down" is displayed on LCD.  
Press **Switch button** to exit when menu "Shut Down" is displayed on LCD.



## ***FINGERPRINT CAPTURE WORKFLOW***



## ***PARAMETERS***

There are some parameters in BC3

### **Pin Code**

The default pin code is “00000000”, it just active when BC3 under pairing mode.

The host device should input pin code correctly in Bluetooth pairing.

This pin code can be changed by Utility BC3Options.exe.

### **FCC ID: ZYF-BC3**

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.