



# GENERAL DYNAMICS Itronix IX100XAC750 Rugged Handheld Computer User Manual

[Home](#) » [GENERAL DYNAMICS Itronix](#) » GENERAL DYNAMICS Itronix IX100XAC750 Rugged Handheld Computer User Manual 

## Contents

- [1 GENERAL DYNAMICS Itronix IX100XAC750 Rugged Handheld Computer](#)
- [2 Controls](#)
  - [2.1 Backlight](#)
  - [2.2 Function Keys](#)
  - [2.3 Battery Information](#)
  - [2.4 Battery Charging](#)
  - [2.5 Battery Replacement](#)
  - [2.6 Battery Safety](#)
- [3 Battery Storage](#)
  - [3.1 Maintaining Your Computer](#)
  - [3.2 Cleaning Your Computer](#)
  - [3.3 Using Your Computer Safely](#)
  - [3.4 About CompactFlash Cards](#)
  - [3.5 Using CompactFlash cards](#)
  - [3.6 Fitting a CompactFlash card](#)
  - [3.7 Using Microsoft ActiveSync](#)
- [4 Troubleshooting](#)
  - [4.1 Legal Information](#)
- [5 Documents / Resources](#)
- [6 Related Posts](#)

**GENERAL  
DYNAMICS**

**GENERAL DYNAMICS Itronix IX100XAC750 Rugged Handheld Computer**



## Controls

The handheld computer is equipped with a 52-key alphanumeric keypad including cursor keys and a few special function keys. Other functions are available via the touch screen.

- Backlight
- Function Keys Stylus
- Entering Data
- Resetting Your Computer

## Backlight

Press the Blue Function key along with the large Yellow backlight key in the upper-right corner of the keypad to turn the backlight on or off. To adjust brightness press and hold the Orange Function key near the upper-left corner of the keypad; then push the lowercase o key to increase brightness or press the 7 key to decrease brightness. The backlight is on by default and turns off automatically after 1 minute of inactivity when on battery power. These settings may be adjusted in the computer's display settings. When the display backlight turns on, the keypad backlight also turns on. It turns off whenever the display backlight turns off.

## Function Keys

The FN keys have many functions. The most commonly used functions are:

- **Orange FN + Power:** When held for five seconds this performs a Soft Reset.
- **Orange FN + Blue FN + Power:** When held for five seconds this performs a Hard Reset.  
**CAUTION** The Hard Reset is an emergency procedure only. Use the Soft Reset instead if possible. If you Hard Reset, you will lose the settings saved in the operating system as well as all data stored in RAM. You will have to recalibrate your touch screen and personal data when you restart.
- **Blue FN + Yellow Backlight:** Toggles the backlight

The FN keys may also have different functions depending on the program in use. Below is a list of key combination functions associated with the Orange and Blue function keys:

Key	Orange FN	Blue FN
A		
B	~	BREAK
D	:	
E	#	
F	;	
G	"	<
H	`	>
I	*	INS
J	'	/
K	.	
L	?	
N	`	
O	(	
P	)	PAUSE
Q	!	
R	\$	PRINT SCREEN
S	\	SCROLL LOCK
T	%	=
U	&	
V		enter Volume Control
W	@	{
X		}
Y	^	[
Z		]
1	F1	F11

2	F2	F12
3	F3	F13
4	F4	F14
5	F5	F15
6	F6	F16
7	F7	F17
8	F8	F18
9	F9	F19
0	F10	F20

Tab	BKT	AB
Spc	BkSp	—
right Yellow	Right Scan	Backlight
left Yellow	Left Scan	
Up Arrow	PgUp	
Down Arrow	PgDn	
Right Arrow	End	Start
Left Arrow	Home	
Alt	enter	Esc

See your Getting Started Guide for a complete list of key functions

### Using the Stylus

The stylus is designed to be light-weight and comfortable to use, as well as being gentle on the touch screen. It is stored in a channel in the back of the terminal.

To remove the stylus from the channel, press on its textured part and push it up and out.

**NOTE:** It is good practice to return the stylus to the holder when not in use. If you lose the stylus, you may use your fingertips instead, but they are not as precise.

**CAUTION:** Do not use a ballpoint pen or sharp pointed object to operate the touch screen, as this can damage the screen.

## Entering Data

- Use the keypad or input panel to enter alpha and numerical data. Use the cursor keys or your stylus to move the cursor around the screen.
- Use Function Keys for special characters and functions.
- When a field appears requiring text entry, the input panel (soft keyboard) will pop up. This can then be operated with the stylus. To change input panel settings, see Input Panel.

## Resetting your Handheld Computer

If your handheld computer locks up or fails to operate, you may need to reset it in one of two ways.

- **Soft Reset:** Hold down both the Power and Orange FN keys for about five seconds. The screen will dim and the handheld computer will perform a Soft Reset. The Soft Reset does not affect the operating system and no data loss occurs.
- **Hard Reset:** Hold down the Power, Orange FN, and Blue FN keys simultaneously for about ten seconds. This will perform a Hard Reset, resulting in data loss.

**CAUTION** The Hard Reset is an emergency procedure only. Use the Soft Reset instead if possible. If you Hard Reset, you will lose the settings saved in the operating system as well as all data stored in RAM. You will have to recalibrate your touch screen and reenter your personal data when you restart.

## Battery Information

The computer's primary battery is a rechargeable Lithium-Ion (Li-Ion) pack. DO NOT use other batteries. They may damage your handheld computer.

After inserting a new Li-Ion battery pack, charge it to 100% before use. This ensures that the battery pack's power gauge calculations will be correct. Frequent incomplete charges lead to progressively larger errors that only a full charge can fix. Charge on AC power at least 7 hours to ensure the internal backup battery is also fully charged; however it may take longer if the ambient temperature is extremely hot or cold.

The internal backup battery retains data up to 48 hours if the main battery pack is fully discharged or removed. Its charge is automatically topped-off whenever the handheld computer is awake and on external or main battery power. To ensure data integrity, the main battery should always be kept charged and important data should be saved in non-volatile memory, such as on the System CompactFlash card.

Whenever possible, use the AC power adapter with the handheld computer to conserve the battery pack. The AC Adapter charges the battery pack and supplies a maintenance charge to the backup battery. Ideally, you should charge your battery pack at the end of every day. Proper charging practice keeps both batteries in good condition.

If you do not intend to use your handheld computer for an extended period of time, back-up all important data in non-volatile memory, such as on the System CompactFlash card.

## Checking the Batteries

To view battery information, select the Start button > Settings > Power icon > Battery tab.

## Main Battery Status

The Main battery power bar shows its current charge status.

**High:** the battery should not need charging in the next few hours.

**Low:** charge or replace the battery within the next hour.

**Critical:** charge or replace the battery immediately.

You will not lose Windows registry or data held in memory while you charge or replace the main battery.

**CAUTION** You must first suspend the handheld computer before replacing the battery, or the unit will Hard Reset and data loss will occur.

As the backup battery is constantly being charged, its charge status is not displayed.

### **Battery Conservation**

To conserve power, the handheld computer automatically switches itself off (suspends) after 3 minutes of inactivity when on battery power.

### **Battery Charging**

Use only the AC Adapter or vehicle charger supplied with your handheld computer. Plug the handheld computer charging adapter connector into the COM1 (left) socket of the handheld computer. Then connect the AC Adapter to a suitable AC mains power supply.

**NOTE** The AC adapter connector has spring loaded clips that keep the adapter attached when the unit is in use. Press in both clip latches before attaching or removing the AC adapter to prevent damage to the spring loaded clips.

The battery pack may take up to three hours to fully recharge. Make sure that the pack is fully recharged to 100% capacity so that the battery gauge calculations will be accurate.

The left green LED below the display flashes regularly while the battery is charging. When charging is complete, the green LED stays lit. If the LED ever flashes irregularly, a charging error has occurred and you should seek advice from your system provider.

### **Battery Replacement**

**WARNING** Do not attempt to open or puncture the batter pack. Do not burn the battery pack. The battery pack can burst or explode, releasing hazardous chemicals.

1. Turn off your handheld computer.
2. Remove the hand strap by pulling the lower clip down and out of its recess.
3. Using a coin or flathead screwdriver, release the two battery retaining screws.
4. Remove the old battery pack using the flat end of the stylus as a lever, if necessary.
5. Fit the new battery pack in position and press down firmly.
6. Using a coin or flathead screwdriver, lock the battery retaining screws.
7. Refit the hand strap.

**CAUTION** Only use approved Li-Ion battery packs with your handheld computer. Your handheld computer does not support any other battery chemistry. Use of non-approved batteries may be hazardous and can also damage your handheld computer.

### **Battery Safety**

- Observe the safety instructions printed on the battery.

- Replace the battery pack only with the approved part.
- Dispose of, or recycle used batteries in accordance with the manufacturer's recommendations and local customs.
- Do not abuse, deliberately pierce or subject the battery to excessive impact.
- Immediately discontinue use of the battery if it appears abnormal in any way, and consult your system provider for advice.
- Do not immerse the battery pack in liquid.
- Do not subject the battery pack to temperatures higher than 60°C (140°F).
- Do not short together the battery connections. Do not store the battery pack with metallic objects, due to the risk of short circuit.
- Battery chemical leakage is harmful. In the unlikely event of battery leakage, DO NOT TOUCH. In case of accidental contact, wash immediately with running water and seek medical advice. In case of accidental ingestion, seek immediate medical attention.
- Keep batteries out of the reach of children.

## **Battery Storage**

Standard Li-ion battery packs will gradually deteriorate, particularly if they are not stored in ideal conditions.

When storing Li-Ion packs, you should consider these factors:

- Fully charged packs deteriorate faster than partly discharged ones. For ideal storage, charge the packs to 100% then discharge them to 50% charge before storing.
- Do not allow stored battery packs to discharge completely, as this may permanently damage them. Follow a regular maintenance charge policy for stored packs.
- Avoid storing packs at temperatures greater than 30°C (86°F) as this speeds self-discharge and battery ageing.
- Storing packs at temperatures near 0°C (32°F) slows self-discharge and battery ageing, so packs that are stored for a long period are best kept at these temperatures.
- If you store battery packs at normal ambient temperatures, use this charging policy to maintain battery pack condition:
  - Charge installed packs every 21 days to maintain their charge capacity.
  - Charge uninstalled packs every 6 months.

When you bring a handheld computer out of storage, you should charge it for at least 7 hours so that both the main battery pack and the standby battery are fully charged.

## **Maintaining Your Computer**

Your handheld computer is rugged and water-resistant; however we recommend you take the following precautions to ensure that your handheld computer will give you many years of reliable service.

- Avoid unnecessarily subjecting the unit to extreme temperature, such as being left in a vehicle on a bright, sunlit day.
- Avoid leaving it in damp or dusty places.
- Do not use hard or sharp objects to touch the display screen. The handheld computer uses a glass touch panel

(display screen) to provide the best display clarity. The screen is well protected against falls onto flat surfaces, but can still be damaged if it is struck directly or scratched by a sharp object.

- Avoid dropping your handheld computer or subjecting it to severe impacts.
- Do not apply excessive pressure to the display screen.
- If you carry your handheld computer in a carry case or with other items, make sure the display screen is protected against scratching and other damage.
- Use only a soft, dry cloth to remove dust and dirt.

**CAUTION** NEVER use solvents of any kind on the case, keyboard or display screen.

### **Cleaning Your Computer**

If the screen of your handheld computer gets dirty, clean it with a dry, clean cloth. If the handheld computer gets very dirty, clean it as follows:

- Make sure the battery is correctly fitted. If you have dropped your handheld computer, check the case is intact.
- Wipe the handheld computer case and screen with a damp cloth.
- Polish the screen with a dry cloth.
- To remove stubborn deposits, use a soft bristle brush. Treat the screen and keyboard gently.
- Blow any water out of the connectors then leave the handheld computer to drain and air-dry. Do not expose the unit to temperatures above 60°C (140°F).

**CAUTION** NEVER use solvents of any kind on the case, keyboard or display screen.

### **Using Your Computer Safely**

Your handheld computer has been ergonomically designed for comfortable and safe use. However, as with all equipment, you should pay attention to good working practices while using it.

Some people may experience discomfort while using computers. If ignored, this discomfort may sometimes lead to Repetitive Stress Injury (RSI), which is also known as cumulative trauma disorder or repetitive motion injury. You can minimize the risk by following these guidelines:

- Pay attention to your posture. Keep your fingers and body relaxed whenever possible.
- Avoid keeping your muscles tense for long periods. Change your tasks often to avoid prolonged muscle strain. Support the handheld computer while you are using it.
- Reduce eyestrain by adjusting the backlight settings properly for your working environment. Look away from the screen periodically and focus your eyes on distant objects. Have your eyes checked regularly.
- Take frequent short breaks. Use these breaks to exercise the muscles in your hands, arms, shoulders, neck and back.

### **About CompactFlash Cards**

The handheld computer has a user accessible CompactFlash card slot.

Files stored on CompactFlash cards can be created, deleted, moved and amended in exactly the same manner as files stored in memory.

**NOTE** Microsoft Windows CE uses the ActiveSync software to convert Microsoft Office documents. If Microsoft Office files are saved from a desktop PC onto a CompactFlash card and then opened directly by a handheld computer, they may not be understood.

### Using CompactFlash cards

The handheld computer can use Type 1 CompactFlash cards for secure data storage. If you store any user-installed application programs and associated data on CompactFlash, it will not be lost after a hard reset.

**NOTE** The handheld computer cannot be operated without the CompactFlash card provided with the unit.

The CompactFlash socket is located in a recess underneath the computer's battery. Access to the socket requires battery removal. As the battery compartment is waterproof and secured by screws, it should not be opened where there is a risk of moisture, dust or dirt.

### Fitting a CompactFlash card

**CAUTION** The Operating System (OS) resides on the CompactFlash card provided with your handheld computer. Removing or replacing this CompactFlash card will result in loss of the OS.

To install a CompactFlash card:

1. Back up your data.
2. Remove external power and switch off your handheld computer.
3. Remove the battery (See Battery Replacement).
4. Remove the CompactFlash card stop.
5. Carefully insert the CompactFlash card into the socket, label side up.
6. Refit the battery and perform a hard reset.

**NOTE** you must also perform a hard reset after changing one CompactFlash card for another or to reload the OS.

### Accessing files on a CompactFlash card

Select My Computer > System

The screen displays a list of the files stored on the CompactFlash card.

### Peripherals

**CAUTION** Connect only approved cables and peripherals to your handheld computer.

To connect a peripheral via one of the COM ports:

1. Switch off both the handheld computer and the peripheral.
2. Install the peripheral to the cable (if detached).
3. Install the peripheral cable to the handheld computer.
4. Switch on both the handheld computer and the peripheral.

**NOTE** If the peripheral must connect to COM1 (left port) and you wish to operate the handheld computer from an external power unit, you may switch the charging cable from COM1 to COM4 (right port) if COM4 is a 26-pin configured port.



To connect a peripheral via the infrared (IR) COM port:

1. Ensure that the IR window at the bottom of the unit is pointing at the peripheral's IR port and that the units are separated by at least 15cm (6 inches).
2. If the peripheral has a protective cap covering its IR port, remove it. 3. If necessary, switch the peripheral off then on again, to instigate communications.

If you have difficulties, try a slightly larger or smaller separation between the handheld computer and the peripheral and start again.

### **Using Microsoft ActiveSync**

ActiveSync is a Microsoft utility program that allows you to share and update information between your handheld computer and a PC running Microsoft Windows.

The handheld computer has the following four connection options available, depending on the capabilities of your PC:

- Serial port (COM1 port only)
- USB port (COM1 port only)
- Wireless Infrared port
- Ethernet – requires setup of a serial partnership before use

The necessary cables and software are provided with the handheld computer.

To use Microsoft ActiveSync to connect to another PC:

1. Download and install the latest version of ActiveSync software to your desktop PC from <http://www.itronix.com/Q-200ActiveSync>. Once ActiveSync is installed on the PC, an icon will appear in the system tray.
2. Open ActiveSync on the desktop and make sure the connection method you want to use is enabled.
3. Attach the appropriate cable or line up the IR ports on both the handheld computer and desktop PC.
4. Turn on the handheld computer. ActiveSync should automatically begin the connection process.  
When a connection is established the handheld computer chimes and the ActiveSync window appears on the PC.

### **NOTES**

- If you have trouble connecting, make sure the PC connection setting on the handheld computer matches the the setting on the desktop PC. The handheld computer is set to USB by default.
- For information about using Microsoft ActiveSync, please refer to the program's online Help, or the Microsoft ActiveSync product website.

### **Troubleshooting**

If you have any problems with your handheld computer, you should contact your system provider. Before you do

so however, check the following:

1. If your handheld computer will not switch on, check the battery pack and try a different pack or try operating from the AC Adapter.
2. If you cannot read the display, try adjusting the backlight.
3. If you drop your handheld computer and it stops operating, try switching it off and on. Confirm that the battery pack is connected correctly.
4. If the handheld computer locks up while running an application:
  - Shut down and restart the application.
  - Shut down and restart the unit.
  - Perform a Soft Reset.
  - If all of the above steps fail, perform a Hard Reset.

**CAUTION** There are no user serviceable parts inside your handheld computer and high voltages may be present. Do not attempt to open it. Opening the case will also void your warranty.

## **Legal Information**

### **Identification**

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### **Compliance Statements**

The Go Book Q-200 computer contains multiple radios installed. Each radio may have an individual FCC Identifier. Only the FCC Identifier on the Itronix label located inside the battery compartment is valid for this configuration.

The handheld computer 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.

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

### **Compliance Statement for Canada**

This digital apparatus does not exceed class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications, standard ICES-003.

### **Europe**

This product complies with the radio interference protection requirements of the Council Directive 89/336/EC on the approximation of the laws of the Member States of the European Union relating to electromagnetic compatibility. The product was tested in a typical configuration and found to conform to the following test specifications:

**EN55022:** Radiated and conducted emissions. Class B.

**EN50082 or EN55024:** ESD and radiated and conducted immunity.

For further compliance details, refer to the specific CE Declaration Of Conformity. This is available on request, please quote the exact and full model number of the product(s) in question.

### **Warnings and Cautions**

**CAUTION!** Approved accessories only may be used with this equipment. In general, all cables must be of high quality, shielded, correctly terminated and normally restricted to 2 meters in length. Itronix AC Adapters employ special provisions to avoid radio interference and should not be altered or substituted. Unapproved modifications or operations beyond or in conflict with these instructions for use may void authorization by the authorities to operate this equipment.

**WARNING** It is important that only authorized Itronix personnel attempt repairs on Itronix equipment as this might void any maintenance contract with your company. Unauthorized service personnel might be subject to shock hazard on some Itronix equipment if removal of protective covers is attempted. The product you have purchased is powered by a rechargeable battery. The battery is recyclable and, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Do not crush the battery or place it in a fire. Check with your local solid-waste officials for details on recycling options or proper disposal.

**CAUTION** Internal components of the handheld computer will be damaged if exposed to contaminants. When dust covers, the PC card door, or the bottom access panel are open on the handheld computer, shield the unit from all contaminants such as liquids, rain, snow, and dust.

**CAUTION:** This device was evaluated for body-worn RF exposure compliance with carry case P/N: 54-0644-001. Use only the approved carry case (P/N. 54-0644-001) or similar body-worn accessories that do not contain metallic components and provide at least 0.5 cm separation between the device and the user's/bystander's body.

### **Safety Information**

The following safety symbols are used in this manual to indicate potentially dangerous situations. Do not proceed beyond a WARNING or CAUTION until the indicated conditions are fully understood and met.

### **See Also**

- Battery Information
- Battery Conservation
- Battery Charging
- Battery Replacement
- Battery Safety
- Battery Storage
- Cleaning Your Computer
- Using Your Computer Safely
- Using CompactFlash cards
- Fitting a CompactFlash card
- Accessing Files on a CompactFlash card
- About CompactFlash cards
- Adjust PC connection setting
- Backlight
- Stylus
- Function Keys
- Entering Data
- Resetting Your Computer
- Maintaining Your Computer

## **CompactFlash Cards**

- About CompactFlash cards
- Using CompactFlash cards
- Fitting a CompactFlash card
- Accessing Files on a CompactFlash card

## **Index**

- ActiveSync
- backlight
- batteries, checking
- batteries, conservation
- batteries, information
- batteries, replacement
- batteries, safety
- batteries, storage
- cleaning the computer
- CompactFlash cards, about
- CompactFlash cards, accessing
- CompactFlash cards, fitting
- CompactFlash cards, using
- computer, cleaning
- computer, maintenance

- computer, safety
- FN keys
- function keys
- peripherals
- reset, hard
- reset, soft
- stylus


## Handheld Computer Help

- Controls
- Batteries
- Maintaining Your Computer
- Using Your Computer Safely
- CompactFlash Cards
- Peripherals
- ActiveSync
- Troubleshooting
- Index
- Legal Information

## Handheld Computer Help

- English
- Français
- Deutsch
- Spanish

## Documents / Resources

	<p><a href="#">GENERAL DYNAMICS Itronix IX100XAC750 Rugged Handheld Computer</a> [pdf] User Manual</p> <p> </p> <p>IX100XAC750, KBCIX100XAC750, IX100XAC750 Rugged Handheld Computer, Rugged Handheld Computer, Handheld Computer, Computer</p>
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