

7535 G2

Hand-Held Computer

Service Manual

Month Day, Year Part No. 80000xx.x

ISO 9001 Certified
Quality Management System



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APPROVALS AND SAFETY SUMMARY

Declaration Of Conformity

Product: **7535 G2 Hand Held Micro-computer with Portable Docking Module**

Application of Council R&TTE Directive: 1999/5/EEC

Directive(s): EMC Directive: 89/336/EEC

Low Voltage Directive: 73/23/EEC

Conformity Declared Article 3.1a (Health): EN 60950: 2000

to Standards: Article 3.1b (EMC): EN 301 489-17: v1.1.1; 09-2000

Article 3.2 (RF Spectrum): EN 300 328-2: v 1.1.1; 07 2000

EN 55022: 1998 + Am 1, Class B;

EN 61000-3-2; EN 61000-3-3

EN 55024:1998;

EN 61000-4-2; ± 4 kV CD; ± 8 kV AD

EN 61000-4-3; 3V/m, 80-1000 MHz

EN 61000-4-4; ± 1 kV Power lines

EN 61000-4-5; ± 1 kV Differential mode

EN 61000-4-6; 3VRMS, 150kHz-80MHz

EN 61000-4-11; AC Mains Ports

Manufacturer: PSION TEKLOGIX INC.

2100 Meadowvale Boulevard

Mississauga, Ontario, Canada

L5N 7J9

Year of Manufacture: 2003

Manufacturer's Address PSION TEKLOGIX S.A.

in the European La Duranne; 135 Rue Rene Descartes; BP 421000

Community: 13591 Aix-En-Provence

Cedex 3; France

Type of Equipment: Information Technology Equipment

Equipment Class: Commercial and Light Industrial

I the undersigned hereby declare that the equipment specified above conforms to the above directives and standards.

Manufacturer: ~~Rob Williams~~

Vice President of Engineering

Psion Teklogix Inc. Ontario

Legal Representative

~~Dominique Binckley~~

Vice President International Sales

Psion Teklogix S.A. France

FCC DECLARATION OF CONFORMITY (DoC)

Applicant's Name & Address: PSION TEKLOGIX
2100 Meadowvale Blvd.
Mississauga, Ontario
Canada L5N 7J9
Contact Person: Iain Roy
Telephone No.: (905) 813-9900

US Representative's Name & Address: 1810 Airport Exchange Blvd., Suite 500
Erlanger, KY, 41018, USA
Contact Person: Joe Musgrave
Telephone No.: (859) 372-4106

Equipment Type/Environment: Computing Devices

Trade Name / Model No.: 7535 G2 Hand Held Micro-computer with
Portable Docking Module

Year of Manufacture: 2003

Standard(s) to which Conformity is Declared:

The 7535 G2 Hand Held Micro-computer with Portable Docking Module, supplied by Psion Teklogix, has been tested and found to comply with FCC PART 15, SUBPART B - UNINTENTIONAL RADIATORS, CLASS B COMPUTING DEVICES FOR HOME & OFFICE USE.

I, the undersigned, hereby declare that the equipment as tested is representative within manufacturing tolerance to units.

Applicant	Legal Representative in U.S.
Signature	Signature
Rob Williams 	<u>Joe Musgrave</u>
Full Name	Full Name
<u>Vice President of Engineering</u>	<u>V.P. Global Solutions, Americas</u>
Position	Position
<u>Mississauga, Ontario, Canada</u>	<u>Erlanger, KY 41018, USA</u>
Place	Place
July 4, 2003 	July 4, 2003 
Date	Date



IMPORTANT: WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE 2002/96/EC

If your product or accessory displays the above logo, then the following statement applies.

This Product, and its accessories, comply with the requirements of the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC. If your end-of-life Psion Teklogix product or accessory was first placed on the European Union market on or after August 13th, 2005, contact your local country representative for details on how to arrange recycling.

For a list of international subsidiaries, please visit: www.psionteklogix.com/

CE MARKING

When used in a residential, commercial or light industrial environment the product and its approved UK and European peripherals fulfil all requirements for CE marking.

R&TTE DIRECTIVE 1999/5/EC

This equipment complies with the essential requirements of EU Directive 1999/5/EC (Declaration available: www.psionteklogix.com).

Cet équipement est conforme aux principales caractéristiques définies dans la Directive européenne RTTE 1999/5/CE. (Déclaration disponible sur le site: www.psionteklogix.com).

Die Geräte erfüllen die grundlegenden Anforderungen der RTTE-Richtlinie (1999/5/EG). (Den Wortlaut der Richtlinie finden Sie unter: www.psionteklogix.com).

Questa apparecchiatura è conforme ai requisiti essenziali della Direttiva Europea R&TTE 1999/5/CE. (Dichiarazione disponibile sul sito: www.psionteklogix.com).

Este equipo cumple los requisitos principales de la Directiva 1995/5/CE de la UE, “Equipos de Terminales de Radio y Telecomunicaciones”. (Declaración disponible en: www.psionteklogix.com).

Este equipamento cumpre os requisitos essenciais da Directiva 1999/5/CE do Parlamento Europeu e do Conselho (Directiva RTT). (Declaração disponível no endereço: www.psionteklogix.com).

Ο εξοπλισμός αυτός πληροί τις βασικές απαιτήσεις της κοινοτικής οδηγίας EU R&TTE 1999/5/EK. (Η δήλωση συμμόρφωσης διατίθεται στη διεύθυνση: www.psionteklogix.com)

Deze apparatuur voldoet aan de noodzakelijke vereisten van EU-richtlijn betreffende radioap-

paratuur en telecommunicatie-eindappa-ratuur 199/5/EG. (verklaring beschikbaar: www.psionteklogix.com).

Dette udstyr opfylder de Væsentlige krav i EU's direktiv 1999/5/EC om Radio- og teleterminaludstyr. (Erklæring findes på: www.psionteklogix.com).

Dette udstyret er i overensstemmelse med hovedkravene i R&TTE-direktivet (1999/5/EC) fra EU. (Erklæring finnes på: www.psionteklogix.com).

Utrustningen uppfyller kraven för EU-direktivet 1999/5/EC om ansluten teleutrustning och ömsesidigt erkännande av utrustningens överensstämmelse (R&TTE). (Förklaringen finns att läsa på: www.psionteklogix.com).

Tämä laite vastaa EU:n radio- ja telepäätelaitedirektiivin (EU R&TTE Directive 1999/5/EC) vaatimuksia. (Julkilausuma nähtävillä osoitteessa: www.psionteklogix.com).

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Toto zariadenie je možné prevádzkovať v Slovenskej republike na základe Všeobecného povolenia č. VPR-01/2001.

Use of the 802.11b 7535 G2 in France:

Owing to French Government restrictions, the 802.11b 7535 G2 Hand-Held Computers are limited to indoor use. They may be used outdoors, on private property, only with prior authorization from the French Ministry of Defense.

For GSM/GPRS Users in North America:

Although the GSM/GPRS Expansion Module is a three band device; only the 1900 (PCS) band is used in North America.

This equipment complies with Class B 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 may cause undesired operation.

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

1. FCC Information to Users

For Class B Unintentional Radiators:

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 instruction manual, 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 of 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.

2. Warning to Users



Warning: *Changes or modifications not expressly approved by Psion Teklogix Inc. could void the user's authority to operate the equipment.*



LASER WARNINGS

For your own safety, it is critical that you comply with the following warnings:



CAUTION

Do not look into the laser beam or point the beam at people or animals.



CAUTION

Using controls or adjustments, or performing procedures other than those specified herein may result in hazardous radiation exposure.



CAUTION

The use of optical instruments with this product will increase eye hazard.

This product contains a laser scanner that emits less than 1.2 mW maximum radiant power at a wavelength of 650nm or 680nm. This product complies with 21 CFR 1040.10, 1040.11 and DIN EN 60825-1: 2001, and is classified as a Class 2 laser product.

The SE1200 ALR has an maximum radiated power less than 1.4 mW; according to EN 60825-1: 2001 it is classified as a Class 3B laser product.



DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE

Operating Psion Teklogix equipment where explosive gas is present may result in an explosion.



DO NOT REMOVE COVERS OR OPEN ENCLOSURES

To avoid injury, the equipment covers and enclosures should only be removed by qualified service personnel. Do not operate the equipment without the covers and enclosures properly installed.



CAUTION!

Danger of explosion if a 7535 G2 battery is incorrectly handled, charged, disposed of or replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the instructions described in “Lithium-Ion Battery Safety Precautions” on page 252 of the 7535 G2 User Manual. Carefully review all battery safety issues.

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1.1 About This Manual

This manual is intended as a technical reference guide for the Psion Teklogix 7535 G2 Hand-Held Computer, to be used by field personnel servicing those units at both the assembly and component level.

Approvals And Safety Summary

is an overview of the 7535 G2 Hand-Held Computer.

Chapter 1: Introduction

describes the features of the 7535 G2 Hand-Held Computer.

Chapter 2: Controls

describes the controls of the 7535 G2 Hand-Held Computer.

Appendix A: Support Services And Worldwide Offices

provides the helpdesk phone number at the Mississauga, Ontario, Canada office and details the support services available. This appendix also lists the worldwide office addresses and phone numbers.

1.2 Supporting Collateral

For 7535 G2 schematics, mechanical fabrication drawings, PCB fabrication drawings, datasheets, etc. please refer to the Psion Teklogix intranet website:

https://home.teklogix.com/do/mississauga_products/

Bills of Materials are available from BaaN. The session to print BOMs is tibom1410m000 (print to “Word” if a soft copy is required).

1.3 About The 7535 G2 Hand-Held Computer

The 7535 G2 is an industrial hand-held computer that runs the Microsoft® Windows® CE.net operating system. The 7535 G2 is intended for operation in temperatures from 0°C to +50°C. It supports the following features:

- A portrait-mode passive monochrome or TFT colour ¼ VGA display (with or without a touchscreen) with white LED backlighting.
- 58- or 36-key keyboard with EL backlighting.
- 32 MB (or 64 MB) of on board flash.
- 64 MB (or 128 MB) of on board SDRAM.
- Various internal and external undecoded and decoded scanners.
- Two different internal image scanners.
- 802.11b Compact Flash (CF) radio.
- An internal SD card slot intended for use with a memory card or a Bluetooth radio.



Figure 1.1 The 7535 G2 Hand-Held Computer

1.3.1 Identifying Hardware

The 7535 G2's hardware configuration is listed in the information provided by the System Properties applet in the Control Panel.

To reach this manually:

1. Press [BLUE] + <0> to open the start menu.
2. Select Settings > Control Panel. The *Control Panel* opens.
3. Double-click on the System icon. The *System Properties* window opens.
4. Click on the Properties tab. *System Properties* lists the hardware and software in the 7535 G2.

Listed items include:

- Date codes for the 7535 G2's boot software ('boot code'), peripheral-controller code ('PCON code') and OS software ('WinCE code').
- Processor type and speed.
- Amount of RAM and flash memory.
- Type and orientation of display.
- Presence and type of touch screen.
- Presence and type of scanner.
- Type of keyboard.

- Presence of heater.
- Revision and serial number of main logic board ('MLB Rev' and 'MLB Serial').
- Serial number of device.
- Presence and type of card in internal PCMCIA and Compact Flash slots ('PCM/CF Slots').

I.4 7535 G2 Hardware Architecture

I.4.2 Overview

The 7535 G2's main processor is the Intel PXA255, which is the second generation of the StrongArm processor (SA1110).

A smaller, low-power microcontroller, the "peripheral controller", is used to control and monitor many aspects of the 7535 G2's hardware, including controlling system power, communicating with the smart battery pack, handling communications with the keyboard controller, collecting raw non-decoded scanner input, monitoring temperature, light, and other sensors.

There are also two PIC microcontrollers; one in the keyboard assembly scans the matrix keyboard and controls the LEDs (see), and the other drives the keyboard backlight.

I.4.3 Body Variants

The 7535 G2 may be ordered with or without a tether port, and with or without a handstrap or handgrip. The handstrap and handgrip are also available as customer-installable options.

Part numbers for the assembled housings are as follows. These assemblies include window glass, keypads, beeper boards, and tether-port flexes:

Type Of Housing				Older IP54 Part Number
36-Key	No Touchscreen		No Tether Port	1001854
			Tether Port	1001853
	Touchscreen	4-Wire	No Tether Port	1001855
			Tether Port	1001856
		5-Wire	No Tether Port	1001852
			Tether Port	1001851
58-Key	No Touchscreen		No Tether Port	1001860
			Tether Port	1001859
	Touchscreen	4-Wire	No Tether Port	1001862
			Tether Port	1001861
		5-Wire	No Tether Port	1001858
			Tether Port	1001857

Table I.1 Housing Part Numbers

On disassembled units, the housings may be distinguished by a label attached to the inside of the housing:

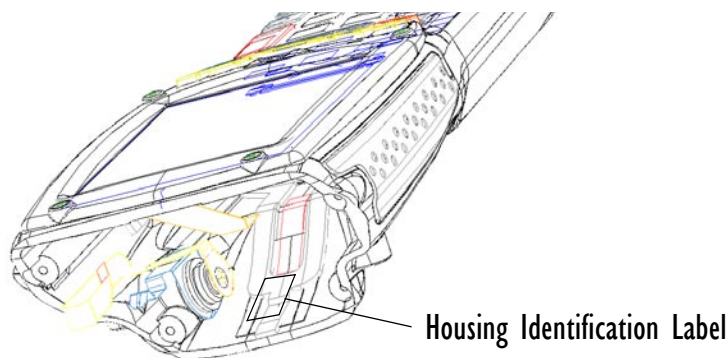


Figure 1.2 Location Of Housing Identification Label

1.4.4 Scanners

1.4.4.1 Scanner Control Services

This top level software service is responsible for supporting a variety of Physical Scan Drivers (PSDs), and presenting an API to applications. It receives decoded scan data from the drivers, performs any configured translations, and delivers the data to the appropriate application(s).

1.4.4.2 Non-decoded Laser Scanners

These scanners present raw data to the terminal. Internal and external non-decoded laser scanners are controlled by the main processor. Activation of the scanner trigger(s) or the keyboard scan button(s) causes the main processor to initiate a scan with the appropriate scanner. The peripheral controller acquires the raw scanner data and feeds it to the main processor.

The non-decoded scan driver is responsible for receiving this data from the peripheral controller and decoding it before passing it to the Scan Control Service, which performs any configured translations and delivers the data to the appropriate application(s).

1.4.4.3 Decoded Laser Scanners

These scanners process their raw data themselves, presenting formatted data to the terminal. Both 1D and 2D decoded laser scanners are supported by the 7535 G2. The scanners will be connected to one of the serial ports and controlled by the main processor. Activation of the scanner trigger(s) or the keyboard scan button(s) will initiate a scan with the appropriate scanner. The decoded scan driver is responsible for receiving scan data and passing it to the Scan Control Service.

1.4.4.4 Imaging Scanners

The 7535 G2 can support an imaging scanner; both internal and external imaging scanners are supported. Psion Teklogix provides a driver for this scanner.

1.4.4.5 Scanner Variants

The following internal scanner devices (scanners and RFID readers) can be included with the 7535 G2:

- Wide-angle undecoded 1-D laser scanner (Psion Teklogix assembly part number 10xxxxx).
- Standard undecoded 1-D laser scanner (part number 1001833).
- Long-range undecoded 1-D laser scanner (part number 1001834).
- Advanced long-range undecoded 1-D laser scanner (part number 1001835).
- Fuzzy-logic decoded 1-D laser scanner (part number 1001836).
- PDF417 decoded 2-D laser scanner (part number 1001837).
- VGA decoded imaging scanner (part number 1001838).
- X VGA decoded imaging scanner (part number 1001839).
- Long-range X VGA decoded imaging scanner (part number 1001840).
- X VGA high-density decoded imaging scanner (part number 1001841).
- X VGA infinite-focus decoded imaging scanner (part number 1001847).
- RFID reader (part number 1001843).
- Scanner/RFID reader combination (part number 1001842).

An option for no scanner is also available (part number 1020022).

The internal scanner device connects through the ScanBay interface.

Only one internal scanner is installed in the 7535 G2, but a second hand-held scanner can be connected via the tether port. Internal scanners can be triggered from the trigger switch on the 7535 G2's handgrip (if present) or from the Scan button on the 7535 G2's keyboard. External scanners can only be triggered from their own trigger switch.

1.4.5 The Display

The 7535 G2 is available with a 240x320-pixel display, either monochrome (64 shades of grey) or colour (256k colours). The contrast of the display can be adjusted from the keyboard via hot-keys, and is automatically temperature-compensated.

1.4.5.6 Touch Input

Touch input is an option for the 7535 G2's display. The touch driver controls the hardware directly to receive touch-down, touch-up, and movement events. Touch events are passed to the application via the operating system.

1.4.5.7 The Display Backlight

The 7535 G2 has a backlight behind its display. This backlight can be adjusted for intensity, and can be configured to turn on when the ambient light level drops below a configured value.

1.4.5.8 Display Variants

The 7535 G2 is available with the following displays:

- Colour with no touch screen.
- Colour with 4-wire touch screen.
- Colour with 5-wire touch screen.

The touch screen is provided as part of the display window glass. Devices with no touch screen have plain glass. The 5-wire touch screen is more accurate than the 4-wire touch screen, but is more fragile.

The display and touch screen are connected to the motherboard of the 7535 G2 through a Display Transition Board (DTB). The displays with the 4-wire touch screen use a DTB with part number 1916135-004; other displays (those with no touch screen and with the 5-wire touch screen) use DTB 1916135-001.

Display	Display Part Number	Display Transition Board	Touchscreen	Window Part Number
Colour	1030033-001	1916145-001	none	1020052-001 (glass)
			5-wire	1030079-999 (5-wire touchscreen)
		1916145-004	4-wire	1030170-999 (4-wire touchscreen)

Table 1.2 Display Options For The 7535 G2

1.4.6 The Keyboard

The 7535 G2 has two types of available keyboard layouts. One type has 58 keys; the other has 37 keys.

Windows CE .NET returns ‘virtual key codes’ for keypresses. Psion Teklogix’ keyboard drivers take into account when Psion Teklogix’ own special modifier keys (such as the Blue or Orange key) are pressed; the keyboard driver provides the virtual key code of the modified key.

1.4.6.9 The Keyboard Backlight

The 7535 G2 has a backlight behind its keyboard. This backlight can be adjusted for intensity, and can be configured to turn on when the ambient light level drops below a configured value.

1.4.7 The LEDs

The 7535 G2 has four tri-coloured indicator LEDs.

1.4.8 The Beeper

The 7535 G2 has an internal beeper whose volume can be manually adjusted via keyboard hot-keys.

1.4.9 Accessory Cards

The 7535 G2 can accept accessory cards, which fit into internal slots in the unit. These cards can contain additional memory, a radio, or other accessories. Typically, 7535 G2 hand-held computers are configured at the factory and arrive ready for use. These slots are accessible when the terminal’s endcap is removed. The 7535 G2’s accessory-card slots are not intended for user modification.

1.4.9.10 Card Variants

The 7535 G2 has two internal card slots, one for a Compact Flash card, and one for an MMC/SD card.

The Compact Flash slot is normally occupied by a radio. It can accept the following cards:

- A memory card (64, 128, 256, or 512 megabytes).
- An 802.11g radio card with internal or external antenna.

Compact-flash memory cards available for the 7535 G2 have included the following:

Part Number	Description
9003419	64-megabyte CompactFlash memory card
9003420	128-megabyte CompactFlash memory card
9003421	256-megabyte CompactFlash memory card
9003422	512-megabyte CompactFlash memory card

Table 1.3 Compact-Flash Memory Cards For The 7535 G2

Compact-flash radio cards available for the 7535 G2 have included the following:

Part Number	Description
1001933-001	802.11g radio card for USA
1001933-002	802.11g radio card for Europe
1001935	quad-band GSM radio card

Table 1.4 Compact-Flash Radio Cards For The 7535 G2

The MMC/SD slot also supports SDIO cards. It can accept the following cards:

- A memory card (64, 128, 256, 512, Or 1024 megabytes).
- A radio card (Bluetooth or 802.11b).

MMC/SD cards available for the 7535 G2 have included the following:

Part Number	Description
9001955	64-megabyte SD memory card
9001956	128-megabyte SD memory card
9001957	256-megabyte SD memory card
9001958	512-megabyte SD memory card
9001959	1024-megabyte SD memory card
1001936-001	802.11b radio card for USA
1001936-002	802.11b radio card for Europe
9001894	Bluetooth radio card

Table 1.5 MMC/SD Cards For The 7535 G2

1.4.10 The Endcap

The 7535 G2's endcap covers the end of the unit, incorporating the window for the internal scanner, if necessary. It can be removed to give access to the card slots and the interior of the unit.

1.4.10.11 Endcap Variants

There are five variants of the 7535 G2's endcap:

Part Number	Description	Notes
1001737	Endcap without scanner	
1001739	Endcap with scanner window	This endcap is used with all the scanners except the imaging scanners.
1001336	Endcap with scanner window, for units with GSM radio.	
1001735	Endcap with imaging-scanner window	This endcap is used with the two imaging scanners, 1030048 and 1030049
1001391	Endcap with imaging-scanner window, for units with GSM radio.	

Table 1.6 Endcap Variants

The external RFID reader, model RD7950, fits over the 7535 G2's endcap, leaving room for the scanner.

1.4.11 Ports

The 7535 G2 has the following external ports:

- Docking port.
Connects to chargers and docking modules; provides USB and serial connections.
- Tether port.
Connects scanners and other cabled peripherals.

See Appendix B for detailed descriptions and pinouts.

1.4.11.12 The Docking Port

The docking port allows the terminal to be placed in a cradle that allows battery charging and connection to peripherals. Available peripherals include chargers and a Portable Docking Module (PDM) that provides connections for USB host port, USB client port, and a serial port. See “The Portable Docking Module” on page 12 for details about the PDM.



Figure 1.3 The Docking Port

The docking port supplies DC power, a serial ‘console’ port, a USB host port, and a USB client port.

Power

Power for charging the batteries and powering the terminal (9-24 V DC; 3.4 A max) is supplied to the terminal through the docking port. The terminal can supply 5V power (1.5 A max, 1A continuous) to an external device through the ‘Power Output’ pin. This power is switched; the switch is controlled by

the Docking Port Services driver and is turned on only after the device is attached and a valid Dock ID is detected.

Console Port

The ‘console port’ is a serial text-mode interface to the 7535 G2’s system. Commands can be issued to the 7535 G2’s bootloader software through this interface. The console port is shared by the 7535 G2’s main processor and its peripheral controller; when the main processor is active, it is connected to the console port by default. This console port is COM3 under Windows CE .NET.

The console port uses a standard 3-wire serial interface (TxD, RxD, GND). Signals levels are standard RS-232 levels. This port is provided as a 9-pin D-connector on the Portable Docking Module.

USB Host Port

The USB host interface complies with USB specification 1.1 and provides a “high-speed” connection to external devices and hubs. Power for external devices is provided through the docking port’s power output pins. The OHCI driver is in charge of the USB Host interface.

USB Client Port

The docking port provides a USB client interface to connect the 7535 G2 to a USB host computer or hub. The 7535 G2 acts as a USB serial device attached to COM4 for Windows CE.NET. The 7535 G2 also can act as a USB client (a Mass Storage Device), when its bootloader is running, to allow software updates via USB.

Dock ID

By reading a resistance value, the 7535 G2 can identify the device attached to the docking port. The Docking Services driver reads the ID, identifying the device, checks the registry to see which driver to load, then loads the appropriate driver.

1.4.11.13 The Tether Port

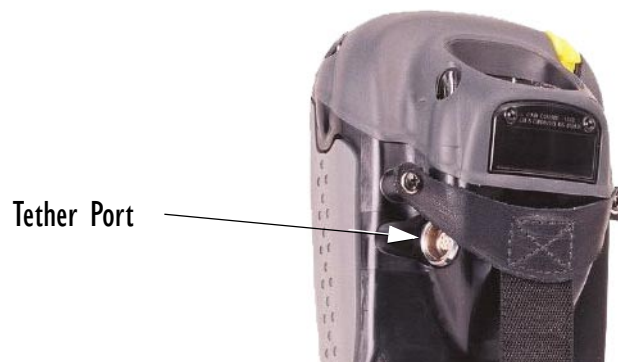


Figure 1.4 The Tether Port

The tether port allows an external non-decoded scanner, a serial scanner, or a USB client device to be connected to the terminal through a single connector. Generic serial devices, such as printers, GPS receivers, and other serial devices, are also supported.

Tether ID

The 7535 G2 can identify a device connected to the tether port by sensing an identification resistor within the connected cable. It then configures the port appropriately for the device and enables power to the port. See The Tether Port in Appendix B.

1.4.12 Power Management

The 7535 G2 is powered by a lithium-ion rechargeable battery pack. The 7535 G2 can be powered from external power when used with the AC adaptor. When the 7535 G2 is powered from the AC adaptor, it will also charge the battery pack.

An internal supercapacitor holds charge for up to ten minutes to preserve the contents of RAM while the 7535 G2's battery is being changed.

1.5 The Portable Docking Module

The 7535 G2 can be connected to a Portable Docking Module (PDM). The model 7535 G2 terminal can be connected to the same model PDM as well.

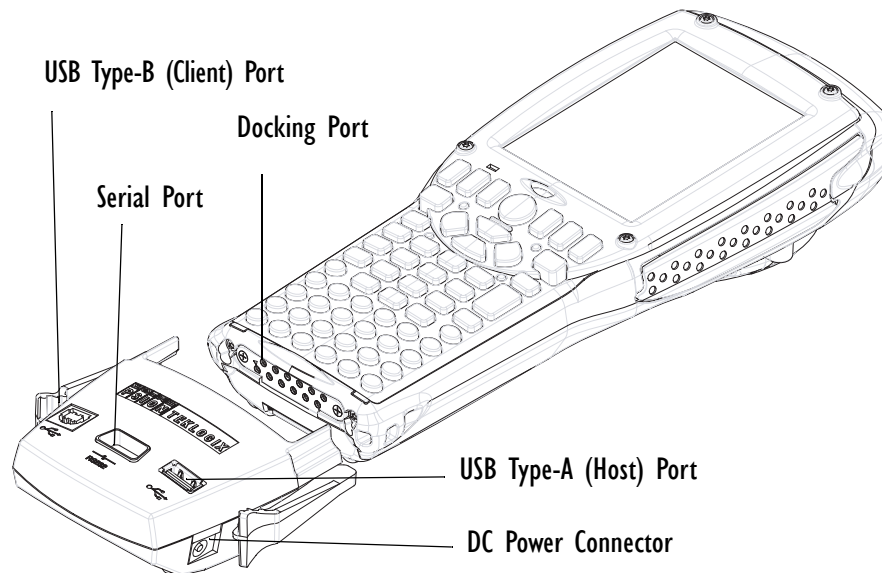


Figure 1.5 The Ports Of The Portable Docking Module

The Portable Docking Module provides serial and USB ports. The PDM has the following ports:

- Serial port.
This 9-pin D-connector accepts a null-modem serial cable which connects to an external development machine.
- USB type B port.
This port accepts a cable from a USB host (typically the development machine).
- USB type A port.
This port connects the 7535 G2 to other devices; the 7535 G2 serves as a USB host.
- Docking port.
This port connects to the 7535 G2.
- DC power connector.
Accepts 15 V DC from the power adaptor.

The Portable Docking Module is available as part of a kit from Psion Teklogix. This kit, Psion Teklogix part number 1030085, includes the following items:

- The Portable Docking Module (part number 1030083-001).
- A USB A-B cable (part number 9003322).
- A null modem cable (part number 9003659).
- An AC-to-DC power adaptor (part number 9007558).
- A power cord. (North American power cord: part number 9008693).

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2.1 Overview

This chapter describes the controls of the 7535 G2.

2.1.1 Identifying Hardware

The 7535 G2's hardware configuration is listed in the information provided by the System Properties applet in the Control Panel.

To reach this manually:

1. Press [BLUE] + 0 to open the start menu.
2. Select Settings > Control Panel. The Control Panel opens.
3. Double-click on the System icon. The System Properties window opens.
4. Click on the Properties tab. *Properties* lists the hardware and software in the 7535 G2.

Listed items include:

- Date codes for the 7535 G2's boot software ('boot code'), peripheral-controller code ('PCON code') and OS software ('WinCE code').
- Processor type and speed.
- Amount of RAM and flash memory.
- Type and orientation of display.
- Presence and type of touchscreen.
- Presence and type of scanner.
- Type of keyboard.
- Presence of heater.
- Serial number of main logic board ('MLB Serial').
- Serial number of device.
- Presence and type of card in internal PCMCIA and Compact Flash slots ('PCM/CF Slots-').

2.2 The Keyboard

The 7535 G2 has two types of available keyboard layouts. One type has 58 keys; the other has 37 keys.

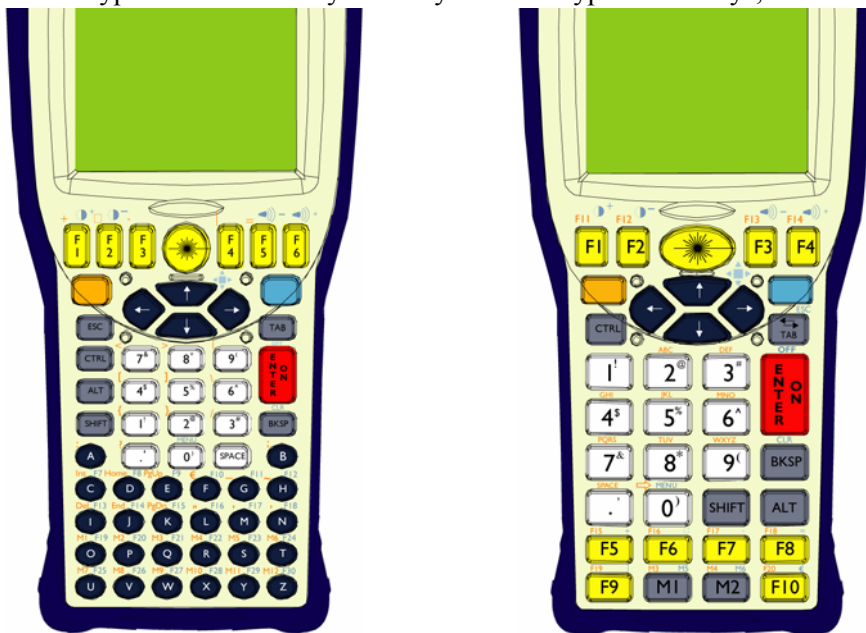


Figure 2.1 58-Key Keyboard (left) And 37-Key Keyboard

2.2.1 The Keyboard Backlight

The 7535 G2 has a backlight behind its keyboard. This backlight can be turned off and on, adjusted for brightness, and configured to turn on when the ambient light level drops below a configured value.

2.3 The LEDs

The 7535 G2 has four tri-coloured indicator LEDs.



Figure 2.2 Indicator LEDs

2.3.1 Charge LED

The lower-right LED is reserved for internal charger/power status. This indicator is active even when the 7535 G2 is inserted in a docking station (and in suspend mode) so that the charge status of the battery can be detected easily.

Function	Charge LED Behaviour
External power not available.	LED off.
Fully charged to within 95% of charge capacity.	LED displays solid green colour.
Quick charge successfully completed to within 75% of charge capacity.	LED flashes slow green.
Charge in progress.	LED displays solid yellow colour.
Cell temperature out of range for charge.	LED flashes yellow.
Unable to charge battery.	LED displays solid red colour.
Charge circuit failure.	LED flashes fast red.

Table 2.1 Charge LEDs

2.3.2 Radio Traffic LED

The upper-left LED on the 7535 G2 flashes yellow or green when the radio transmits and receives data.



Note: While the standard 802.11b radio available for the 7535 G2 supports the transmit/receive LED, not all radios support this function.

Function	Radio Traffic LED Behaviour
Radio Transmit	LED flashes yellow.
Radio Receive	LED flashes green.

Table 2.2 Transmit and Receive LEDs

2.3.3 Scan LED

Successful scans are indicated in two ways – by the scan LED and with an audio tone.

Function	Scan LED Behaviour
Scan in progress	LED displays solid red during scan.
Successful scan	LED displays solid green after decode. Off when scan ended.
Unsuccessful scan	LED flashes red.

Table 2.3 Scan LED

2.3.4 User Application LED

This indicator is available for custom applications. Neither the 7535 G2's operating system nor Psion Teklogix' terminal-emulator TekTerm use this LED.

2.4 The Beeper

The 7535 G2 has an internal beeper whose volume can be manually adjusted via keyboard hot-keys.

2.5 Turning The 7535 G2 On And Off

To switch on:

press and hold the [ENTER/ON] key for at least one second.

To switch off:

press the [BLUE] key, then press the [ENTER/ON] key. The 7535 G2 enters a suspended state. The contents of RAM are preserved.

2.6 Resetting The 7535 G2

The 7535 G2 hardware can be reset in two different ways. The first way restarts the operating system. The second way does not load the operating system, but presents the bootloader. The bootloader can load the operating system. It has a text-mode console at which commands can be entered.

To reset the 7535 G2 and restart the operating system:

- Press and hold down the [BLUE] key and the [ENTER/ON] key simultaneously for a minimum of six seconds. The four indicator LEDs light for a second, and the screen displays the Psion Teklogix and Microsoft® Windows® CE.net splash screen before displaying the startup desktop.

To reset the 7535 G2 and display the bootloader:

- Press and hold down the [SCAN] key, the [BLUE] key and the [ENTER/ON] key simultaneously for a minimum of six seconds. The four indicator LEDs light for a second, and the 7535 G2 displays the boot-loader's opening screen.

A reset results in a complete reboot of the unit. All RAM memory contents are lost. The contents of the flash memory and memory card are preserved.

SUPPORT SERVICES AND WORLDWIDE OFFICES

Psion Teklogix provides a complete range of product support services to its customers worldwide. These services include technical support and product repairs.

A.1 Technical Support

Technical Support for Mobile Computing Products is provided via e-mail through the Psion Teklogix customer and partner extranets. To reach the website, go to www.psionteklogix.com and click on the Teknet link on the home page, which takes you to the Partner Program page. Then click on the Log-in button or the Register button, depending on whether you have previously registered for TekNet. Once you have logged in, search for the Support Request Form.

A.2 Product Repairs

International

For technical support outside of Canada or the USA, please contact your local Psion Teklogix office listed on our worldwide website:

<http://www.psionteklogix.com>

Click on the heading labeled 'Contacts' to choose a Psion Teklogix technical representative closest to you.

Canada/U.S.A

Canadian and U.S. customers can receive access to repair services, by calling the toll-free number below, or via our secure website (see *Technical Support*, above).



Note: *Customers calling the toll-free number should have their Psion Teklogix customer number or trouble ticket number available.*

Voice: 1 800 387-8898 (press option "2")

Fax: 1 905 812-6304

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