

FCP NGP1

CP12L - MDT



BASED

# FIMI Computing Platform NGP1 User Manual

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# 1 Important

## 1.1 Copyright

This manual is copyrighted with all rights reserved. Under the copyrights law, this manual may not be copied, in whole or part, without written consent of FIMI Barco. Under the law, copying includes translating into another language or format. The device described in this manual, has been certified/registered by the safety agencies/regulatory authorities as model number CP12L-MDT

Bluetooth is a registered trademark owned by the Bluetooth SIG, Inc., U.S.A..  
Wi-Fi is a registered trademark of the Wi-Fi Alliance.

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## 1.2 Definitions, Acronyms, Terms, and Abbreviations

The following acronyms, terms, and abbreviations are used in this and subordinate documents.

Table 1 - Terms and Acronyms

Term/Acronym	Definition/Usage
FCP - NGP1	FIMI Computing Platform – New Generation programmer 1. In this manual is also referred as NGP1 Computing Platform
BIOS	Basic Input Output System: the lowest level software (firmware) used to run a computing system.
Blue Screen	Refers to an unintentional application crash, system error, or system hang where the application software is no longer available to the user. Typically displays an error message on the screen with a blue background.
CP	Computing Platform
Desktop	The software user interface presented to the user when a specific device application is not active or loaded.
EHK	Emergency Hard Key – A physical button that causes delivery of “emergency” therapy.
EMC	Electromagnetic Compatibility
Express Card	External port for connectivity options. Uses a PCIe and USB interface. Typically used for GSM / Eg / Storage media etc.
FW	Firmware
HW	Hardware
HDD	Hard Disk Drive
ID	Identification
IP	Ingress Protection
IEC	International Electro-technical Commission

Term/Acronym	Definition/Usage
IEEE	Institute of Electrical and Electronic Engineers
LCD	Liquid Cristal Display
Medtronic Inc. or MDT	Refers, in this document, to the Cardiac Rhythm Management business unit which produce implantable cardiovascular devices (i.e. pacemakers, implantable defibrillators, pacing leads).
MPI	Medtronic Patient Interface (includes functions that connect the CP to the patient such as ECG and device telemetry).
Operational Service Lifetime	Availability Lifetime + Service Lifetime
OS	Operating System
PCIe	Peripheral Component Interconnect Express. Used by the Express Card interface.
RF	Radio Frequency
SN#	Serial Number
SSD	Solid State (Disk) Drive
SW	Software
TCO	Total Cost of Ownership
TPM	Trusted Platform Module (TPM) is both the name of a published specification detailing a secure cryptographic processor that can store cryptographic keys that protect information, as well as the general name of implementations of that specification, often called the "TPM chip" or "TPM Security Device"
USB	Universal Serial Bus
VGA	Video graphics adapter - that part of a computer which turns data into a signal that the monitor can display.
WES	Windows Embedded Standard (operating system)
WEP	Wired Equivalent Privacy –Wi-Fi security scheme. Replaced by WPA
WPA and WPA2	Wi-Fi Protected Access. WPA2 implements the full IEEE 802.11 security protocol
WFV	Waveform Viewer

## 1.3 Safety and precautions

### 1.3.1 Intro



Product safety information, setup precautions and incorrect use of NGP1-FCP and its accessory are signalled by the word WARNING and by the

Warning  symbol

### 1.3.2 Read and follow these instructions when connecting and using your NGP1 Computing Platform



WARNING: Use of controls, adjustments or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards and/or mechanical hazards.

- The NGP1 Computing Platform is a Class 1 device, internally powered and it has been designed for continuous operation.
- To protect your NGP1 Computing Platform from possible damage, do not put excessive pressure on it, especially in the area of the LCD panel.
- When moving your NGP1 Computing Platform, use its handle or hold it tightly by placing your hand or fingers outside the LCD panel area.
- Unplug the NGP1 Computing Platform from its battery charger and release the battery pack if you are not going to use it for an extensive period of time.
- Unplug the NGP1 Computing Platform from its AC adapter and close all the doors if you need to clean it, while keeping the battery pack in place.
- Consult a service technician if the NGP1 Computing Platform does not operate normally after following the instructions in this manual.
- The casing should be opened only by qualified service personnel.
- Keep the NGP1 Computing Platform out of direct sunlight and away from stoves or any other concentrated heat source.
- The NGP1 Computing Platform is not suitable for use in presence of flammable mixtures, either in vapours or liquids.
- The NGP1 Computing Platform can be cleaned with several detergent and disinfectants (see Paragraph 6.1), but not sterilized.
- Remove any object that could fall into the vents or prevent proper cooling of the NGP1 Computing Platform electronics.
- Do not block the inlet or outlet ventilation holes on the rear part of the cabinet.
- The degree of protection against harmful ingress of water and particles is IP21, but, it is suggested to use the NGP1 Computing Platform in a dry and clean environment, whenever possible.
- Due to the possible interference caused by this product to an aircraft's navigation system and its communications network, using this product on board an airplane is against the law in most countries.
- Even if this product has been certified according to medical standards requirements, the use of radio devices in specific clinical environment may interfere or cause the malfunction of some medical equipment. Before using this device in a medical environment contact and ask permission to the local hospital authority.

- When recharging the NGP1 Computing Platform batteries, make sure the power plug and outlet are easily accessible.
- Detach the power cable or DC power cord only when the unit is off or when there is a charged battery inserted.
- Do not use the NGP1 Computing Platform without battery pack inserted and the battery door opened as objects or dirt may enter in the slot.



**IMPORTANT:** Depending on the application, it is advised to activate a power management scheme or a screen saver. If a still image in high contrast remains on the screen for an extended period of time, it may leave an 'after-image' or 'ghost image' on front of the screen. This is a well known phenomenon that is caused by the shortcomings inherent in LCD technology. In most cases, the afterimage will disappear gradually over a period of time after the power has been switched off. Be aware, that the afterimage symptom cannot be repaired and is not covered under warranty.

### 1.3.3 Installation Locations

The NGP1 Computing Platform is a transportable device, but not a portable equipment. Then its use is stationary, leant on a table, in the positions sets by its kickstand, with the screen facing the user. The kickstand is part of the Medtronic Patient Interface component and then further instructions on location and use of the NGP1 Computing Platform will be given with the overall user manual of the Medtronic Carelink Encore Programmer. The NGP1 Computing platform is a component of it and other subsystems are the Medtronic Patience Interface(MPI) and associated Firmware, cables and software.

Anyhow, in any circumstance, please follow the below recommendations:



- Do not place the NGP1 Computing Platform in an unsteady location. If the NGP1 Computing Platform is placed in an unsteady location, such as on an unstable stand or incline, the NGP1 Computing Platform may drop or tip over and cause injury
- Do not store or use the NGP1 Computing Platform in locations exposed to heat, direct sunlight or extreme cold.
- Avoid moving the NGP1 Computing Platform between locations with large temperature differences. Choose a site that falls within the following temperature and humidity ranges.
- Temperature: 5- 40°C equivalent to 41-104°F
- Humidity: 15-93% RH
- The NGP1 Computing Platform is a semi-ruggedized device but it is strongly recommended to not subject it to severe vibrations, do not drop it or subject it to other mechanical shocks or high impact conditions.
- Take care not to mishandle this product by either knocking or dropping it during operation or transportation
- The enclosure of NGP1-FCP has to be checked upon collision damage; in this case, please refers to qualified personnel.

### 1.3.4 Setup precautions

Instructions on Setup precautions of the NGP1 Computing Platform will be given with the overall user manual of the Medtronic Carelink Encore Programmer. The NGP1 Computing platform is a component of it

Anyhow, in any circumstance, please follow the below recommendations





- When you move the NGP1 Computing Platform between environments with very different humidity and/or temperature ranges, allow sufficient time to adjust to the new humidity or temperature.
- Do not use the NGP1 Computing Platform AC adapter for other equipment. This can generate heat or fire.
- Do not use other AC adapters with the NGP1 Computing Platform rather than the one supplied with it.
- When using a display for long and continuous periods of time, rest your eyes for approximately five minutes every hour. Failing to rest your eyes can cause eye strain, headaches and other discomforts.

#### 1.4 FCC notice

Any change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment

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.

##### 1.4.1 Cables

Connections to this device must be made with shielded signals cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

#### 1.5 FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment . End users must follow the specific operating instructions for satisfying RF exposure compliance. Please follow the operation instructions in this manual to maintain compliance with FCC RF exposure requirements. This RFID equipped computing platform meets FCC RF exposure guidelines when used in handheld or desktop situation

#### 1.6 Industry Canada notice

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class [B] digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

## 1.7 Approved for medical applications

The NGP1 Computing Platform meets the medical safety requirements

UL/cUL 60601-1 1st Ed.,  
 ANSI-AAMI-ES60601-1,  
 IEC 60601-1:1988 + A1:1991 + A2:1995,  
 EN 60601-1:1990+A1:1993+ A2:1995 ,  
 IEC 60601-1: 2005  
 EN 60601-1: 2006  
 and electromagnetic requirements:  
 EN/IEC 60601-1-2,  
 EN301 489-3, EN 301 893,  
 EN 300 330-2,  
 CFR 47 part 15

## 1.8 How to read this manual

If you are viewing this PDF document on the screen, you can use the following methods to find information:

- by using the various Navigation panels that various pdf readers are offering under the View menu
- using the "find" tool
- navigating with internal links, when offered.

### 1.8.1 Symbols

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold or italic type. These blocks contain notes, cautions, tips or warnings.

They are used as indicated in the below table:





	<p>Warning symbol          The symbol of exclamation mark is intended to alert the user of the presence of important operating and maintenance instructions in this manual that could also generate a safety risk for users, bystanders or patients</p>
	<p>Note symbol          This icon indicates important information and tips that help you make better use of your NGP1 Computing Platform and this manual</p>

Table 2 – Table of symbols used in this manual

Some warnings may appear in alternate formats and may not be accompanied by an icon. In such cases, the specific presentation of the warning is mandated by the relevant regulatory authority.

Furthermore the following symbols may appears on the product or its accessories

	<p>Product complies with 2002 / 96 / EC</p>
	<p>Notice of proper disposal</p>




	Conformité Européenne
	Compliance with Underwriters Laboratories
	Compliance with Demko IEC/EN 60601

Table 3 – Symbols used in the Product label

For verification only - NOT RELEASED

## 1.9 Biological Hazard and Returns

The structure and the specifications of this device as well as the materials used for manufacturing makes it easy to wipe and clean and therefore suitable to be used for various applications in hospitals and other medical environments, where procedures for frequent cleaning are specified.

However, normal use shall exclude biological contaminated environments, to prevent spreading of infections.

Therefore use of this device in such environments is at the exclusive risk of Customer.

In case this device is used where potential biological contamination cannot be excluded, Customer shall implement the decontamination process as defined in the latest edition of the ANSI/AAMI ST35 standard on each single failed Product that is returned for servicing, repair, reworking or failure investigation to Seller (or to the Authorized Service Provider).

At least one adhesive yellow label shall be attached on the top site of the package of returned Product and accompanied by a declaration statement proving the Product has been successfully decontaminated.

Returned Products that are not provided with such external decontamination label, and/or whenever such declaration is missing, can be rejected by Seller (or by the Authorized Service Provider) and shipped back at Customer expenses.

For verification only - NOT RELEASED

## 2 The FCP-NGP1 Computing Platform

### 2.1 Introduction

The FCP-NGP1 is a component of the Medtronic Care Link Encore Programmer 29901. This latter system is a implantable medical device programmer used to communicate with an implantable cardiac pacemaker or an implantable cardio-verter defibrillator.

The Medtronic System Care Link Encore Programmer 29901 shall be battery powered or line powered by a medical external PSU. The MPI includes the device telemetry providing two-way communication with an implantable cardio-verter-defibrillator (ICD) or cardiac pacemaker and ECG.

Computing Platform FCP-NGP1 is designed, certified and produced by FIMI. Care Link Encore Programmer 29901 is certified by Medtronic and produced by Plexus. The external PSU is produced and certified by APS (Mod. APS100EM-190530). The custom battery FBT3S2P is certified and produced by STL - Pegatron Corp .

Below the illustration of how the FCP-NGP1 mates with MPI part that carries a foldable kickstand.

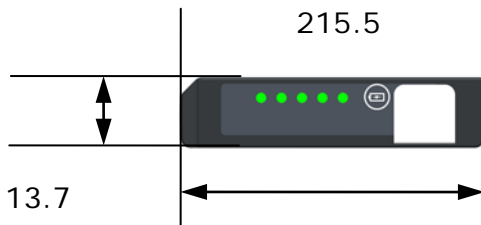
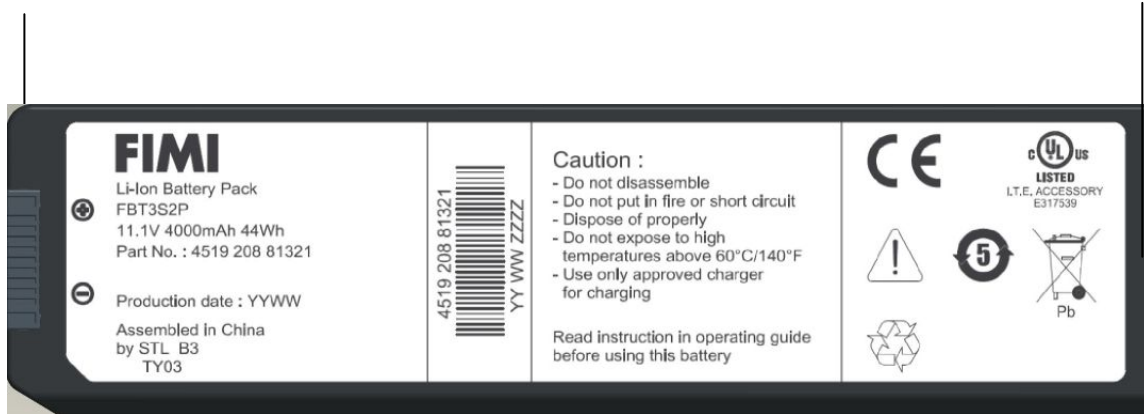


## 2.2 Overview

### 2.2.1 Dimensions (in mm)



### 2.2.2 Battery dimensions (in mm)



### 2.2.3 Weight

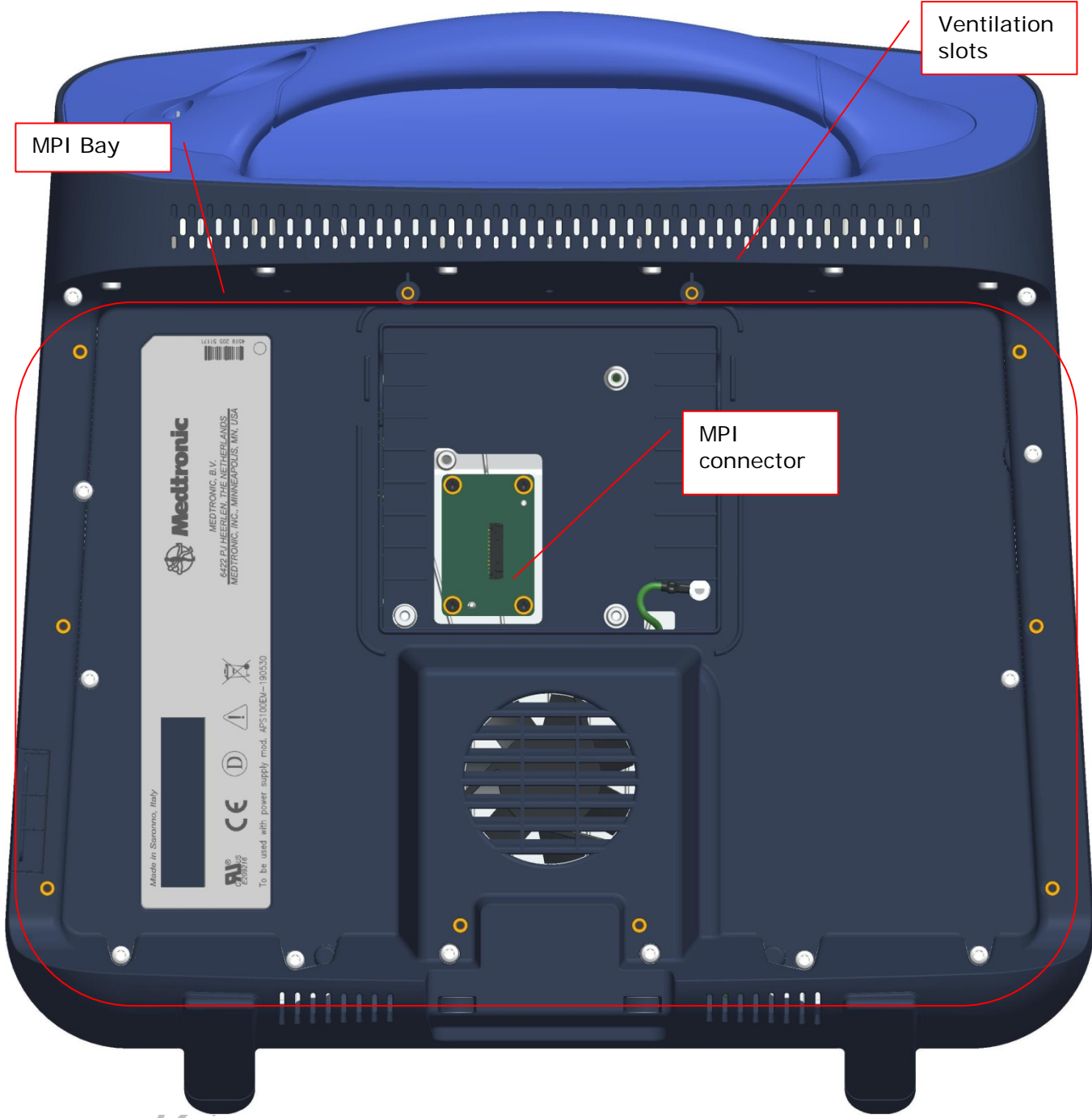
Your NGP1 Computing Platform has a total weight of 3.6 Kg with battery and stylus pen inserted

### 2.2.4 Features and connectivity

The below figures show the key features of The NGP Computing Platform



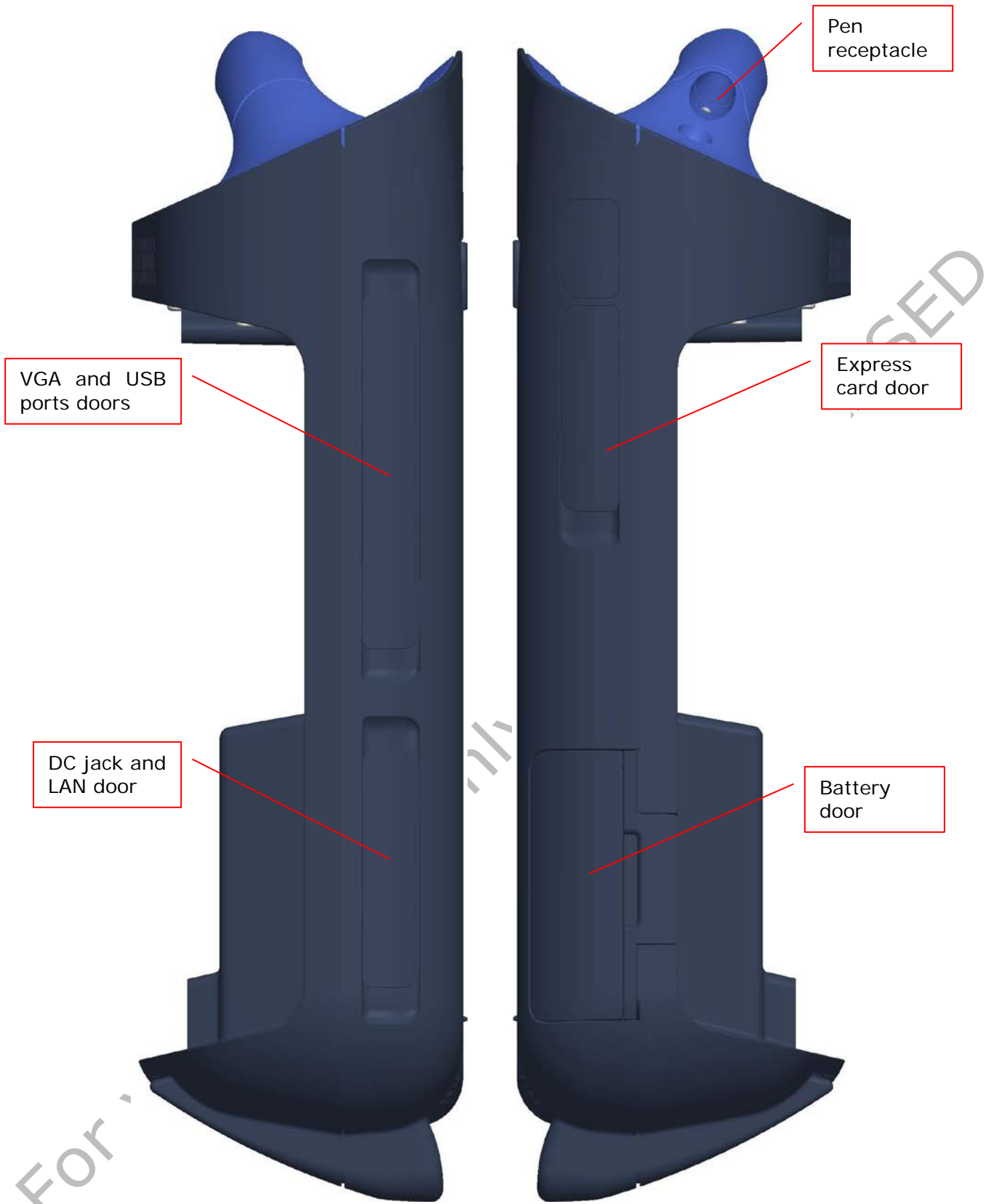




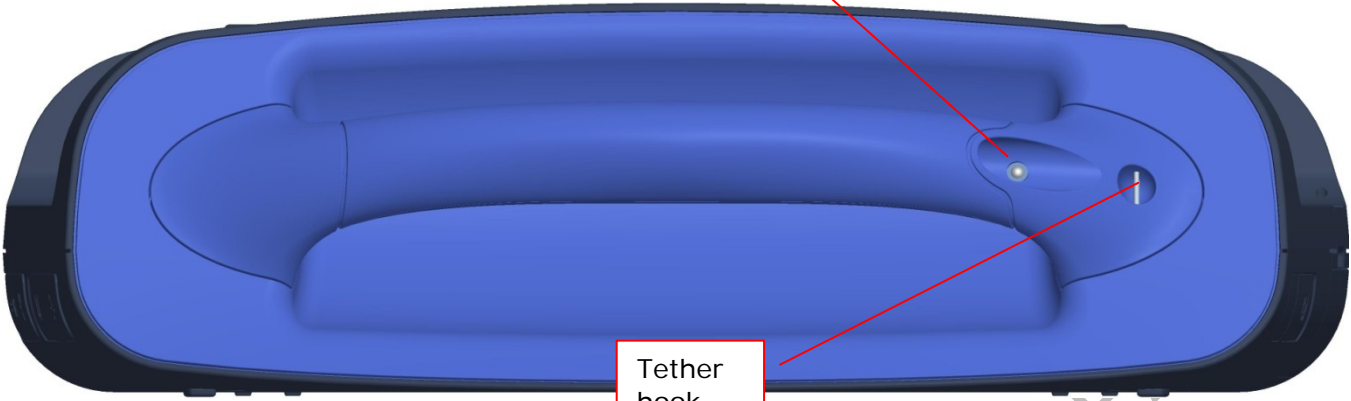
Ventilation slots

MPI Bay

MPI connector



Pen  
receptacle



Tether  
hook

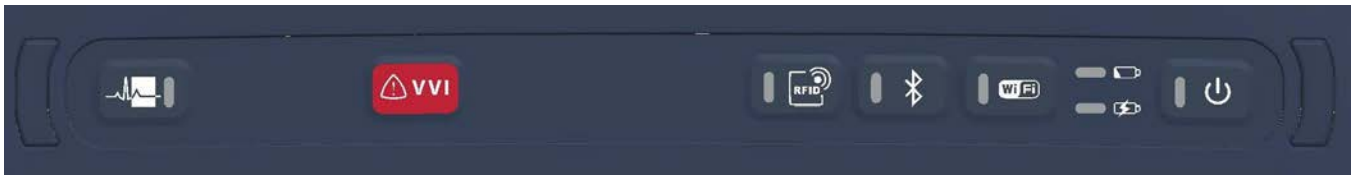
Docking  
connector



Docking  
pins

### 2.2.5 Buttons, indicators,

The NGP1 Computing platform has several buttons and indicators, all grouped on a membrane keyboard located on the top of the front part.



The buttons and the indicators can be operated both in FW and SW mode. While the installed application manages the SW mode (not covered in this manual) here below you can find a description of the buttons and indicators while in the FW mode.

	Symbol	LED color	Function	Description
1		Blue	Waveform viewer	Application dependent – See Medtronic Carelink Encore Programmer User Manual
2		Blue	Emergency hot key	
3		Blue	RFID enable	By touching it, the RFID scan is activated (if RFID functionality is enabled in the BIOS setup).. The Blue LED is ON when the RFID is scanning
		Blue	Bluetooth Enable	By touching it, the Bluetooth connectivity is enabled or disabled (if Bluetooth functionality is enabled in the BIOS setup).. The Blue LED is ON when the Bluetooth is enabled.
		Blue	Wi-Fi Enable	By touching it, the Wi-Fi connectivity is enabled or disabled (if Wi-Fi functionality is enabled in the BIOS setup). The Blue LED is ON when the Wi-Fi is enabled.
		Blue	Power On button	Power On / stand-by button. The Blue LED is ON when the Computing platform is ON. The Blue LED blinks when the Computing platform is OFF but connected to the mains.
		Upper: yellow Lower: yellow / green	Battery status indicators	Upper LED : Indicates the battery status Lower LED : indicates the battery charge. See 3.1.4

Table 4 – Button primary FW functionality description



**Warning:** Led can generated radiations that can be magnified by the improper use of optical devices. DO NOT VIEW LEDS DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 1M LED PRODUCT

## 3 Getting started

### 3.1 Pre requisites

The NGP1 Computing Platform is a component (or subsystem) of Medtronic Carelink Encore Programmer and other subsystems are the Medtronic Patience Interface(MPI) and associated Firmware, cables and software.

The operation of the computing platform is then depending on the loaded OS and applications. So the following user information are covering only functionalities that are minimally depending on the final use and configuration.

#### 3.1.1 Insert the battery

The NGP1 Computing Platform includes a high capacity Lithium-ion battery that fits into the right side of the unit Under normal conditions, you can run the NGP1 Computing Platform on battery power for about two and a half hours. Keep the battery in an ambient temperature of less than 40°C (104°F).

The battery, removed from its envelope, can be inserted as follows



Open the door with an upwards movement , being sure that the NGP1 Computing Platform is in a stable position or it is held firmly. Then fully rotate clockwise the door. The battery is anyhow kept in position by a hook located on the lower side of the door opening. Push the hook downwards until the battery is released and slightly ejected by the spring loading mechanism.





In the very unlikely event of a battery pack blocked in its compartment (due to shocks or other abnormal usage conditions) While keeping the hook fully downwards, the removal slip can be used to pull out the pack.

The battery pack can be reinserted by reversing the process.



**Warning:** To avoid personal injury, handle the battery with care. Do not open, puncture, short, or expose it to fire or water



**Warning:** The IP 21 performance requires that the battery door is fully closed and latched.



**Note:** Under normal conditions, you can run the NGP1 Computing Platform on battery power for about two and a half hours. But the operation on battery can be increased if the NGP1 Computing Platform is set with the proper Power Management settings under the selected Operative System

### 3.1.2 Connect the AC adapter

As the battery is delivered with around 50% of the charge, it is recommended to charge it fully for the first time. The battery is charged by connecting the NGP1 Computing Platform to its AC adapter as illustrated below. The DC plug must be connected by lifting the lower part of the rubber door placed on the bottom left part of the NGP1 Computing Platform.







The AC adapter allows to power the Computing Platform and to charge the battery pack, if present.



**Note:** When there is the AC adapter inserted, the NGP1 Computing Platform is losing its IP21 grade.

It is then recommended, when using the NGP1 Computing Platform disconnected from the AC adapter, to carefully close the rubber door. The AC adapter must not be used in wet environments or when the NGP1 Computing Platform is cleaned with liquids.



**Note:** When the AC adapter is inserted and connected to the mains while the Computing platform is off, the Power LED on the keyboards blinks at a rate of 0.4 – 0.5 Hz in order to indicate the existing connections to the mains.



For additional information about the NGP1 Computing Platform AC adapter, please consult paragraph 5.11.

### 3.1.3 Turning the system on

The NGP1 Computing Platform can be turned on by pressing the Power ON / stand by button.

After one second the LED turns ON. For a complete indication about this LED signalling, see below.

The system starts booting.



### 3.1.4 Charging the battery

When the NGP1 Computing Platform is connected to AC power (or docked into its docking station), the battery automatically charges until it reaches a full charge. This happens in any power state of the NGP1 Computing Platform, either when the unit is hibernated or fully operating or OFF.

Typically an empty battery can be fully charged in less than two hours.

There are two LEDs (one bicolour) that are indicating the status of the battery and the status of its charge process, when active. The indication varies also depending on the operating condition (power state) of the NGP1 Computing Platform.



**Note** To maximize the performance and the life of your battery, it is worth to deplete the battery charge to less than 10% every two weeks. To deplete the battery, use your NGP1 Computing Platform on battery power only until you hear a notification from the Operative system that the battery charge is less than 10%.

The below table indicates the three LED behaviour (Battery LEDs and Power LED).






Battery status	AC Adapter	Computing platform status	Battery charge LED	Battery status LED	Power LED ON
			 	 	
Fully charged / Not critical	Connected	OFF	ON	OFF	Blink
		ON	ON	OFF	ON
Charged / Not critical	Not connected	OFF	OFF	OFF	OFF
		ON	OFF	OFF	ON
Charging / Not critical	Connected	OFF	Green (if more than 90% till fully charged)	OFF	Blink
		ON		OFF	ON
Charging / Critical	Connected	OFF	Amber (if battery has less than 90% charge)	OFF	Blink
		ON		OFF	ON
Discharging / Critical	Not connected	OFF	OFF	OFF	OFF
		ON	OFF	ON	ON
Discharging / Very critical	Not connected	OFF	OFF	OFF	OFF
		ON	OFF	Blink	ON
Battery pack not present	Connected	OFF	OFF	OFF	Blink
(NGP connected to AC Adapter)		ON	OFF	OFF	ON

Table 5 - Status and battery conditions vs. NGP1 Computing Platform status

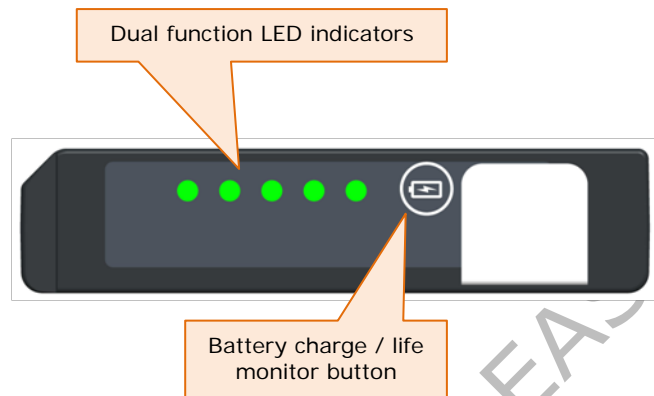
### 3.1.5 Battery pack indicators

Besides any indication given by the keyboard LEDs on the battery charge, the battery pack itself can give some indications to the user about life and charge

In fact, by pressing the button on the front side of the pack for less than two seconds, the 5 LEDs are lighted on displaying the "relative State of Charge" with these criteria:

First four LEDs represent a 20% of the total charge.

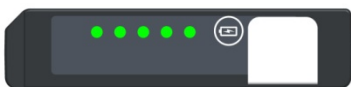
The fifth LED represent a minimum 15% of the charge.



This means that all the 5 LEDs on are indicating a charge of more than 95%, while, e.g. 2 LEDs on represent a charge state of more than 40%, but less than 60%.

If the button is pressed instead for more than 2 seconds then the LED indicator displays the indication of how the full charge capacity has degraded with respect to the original design capacity, after a give life or number of charge cycles.

The indication is according the below table:



100 % - 80 % Full charge capacity / Design capacity – LED 1 – 5 blink five seconds at 2 Hz frequency



79 % - 60 % Full charge capacity / Design capacity  
LED 1 – 3 blink five seconds at 2 Hz frequency



Less than 60 % Full charge capacity / Design capacity – LED 1 blinks five seconds at 2 Hz frequency



In case the application SW does not give you a status log about the battery pack health, it is advisable to periodically check about the health status of your battery with the built-in indicator.

In case the application SW does not give you indication about the need to replace the battery pack, please consider its replacement if the battery run time drops below about 60% of the original run time and/or the battery charge time increases significantly.

## 4 Using your NGP1 Computing Platform

### 4.1 Booting the system

When the system starts up, the selected splash screen is displayed and prior to that, indications of BIOS and FW versions area shown on the top right corner. The CMOS menu setup is locked and allowed only to service personnel.

### 4.2 Connecting external peripherals

The computing platform is offering a large deal of connectivity through a series of interfaces that are compliant with the most popular IT standards.

All the connectors are placed on the sides of the Computing platform and are hidden and sealed by silicon rubber door, that are guaranteeing the IP21 property of the device when closed.

A series of precautions are needed when connecting external devices.



The operator shall avoid to touch the patient and the metal parts of the interface ports simultaneously



When there is an external peripheral connected, the NGP1 Computing Platform should not be used in wet environments or cleaned with liquids.



When connecting external equipments to any door , follow the IEC 60601-1-1 requirements in order to guarantee patient or bystander safety. If not aware of the requirement, verify the current leakages

#### 4.2.1 External Monitor Connection

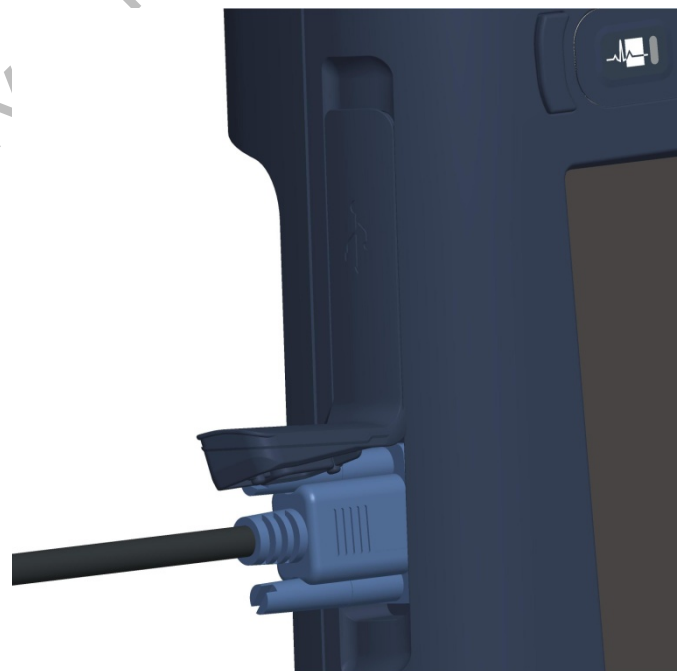
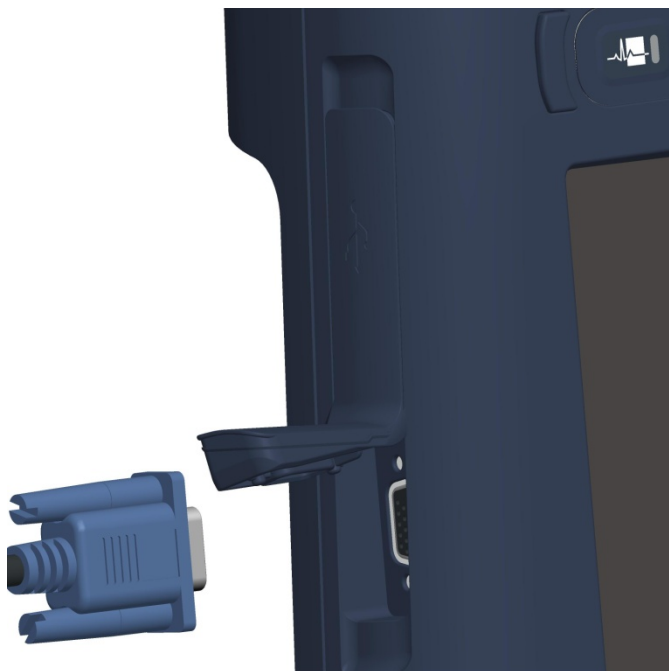
On the left side of the Computing platform , under the specifically designated rubber door, there is a D-sub connector meant for an analog video connection to an external VGA monitor.



This VGA output is permanently enabled in clone mode, so the output format is 1024 x 768 dots @. 60 Hz – 16 million colors



**Warning:** The IP 21 performance requires that the VGA door is fully closed. When there is an external monitor connected, the NGP1 Computing Platform is losing its IP21 grade.





When connecting external equipments to the VGA door , follow the IEC 60601-1-1 requirements in order to guarantee patient or bystander safety.

Verify the current leakages

#### 4.2.2 USB doors

The NGP1 Computing Platform has two USB 2.0 standard Type A connection, located at its left side, under the same rubber element that covers the VGA connector.

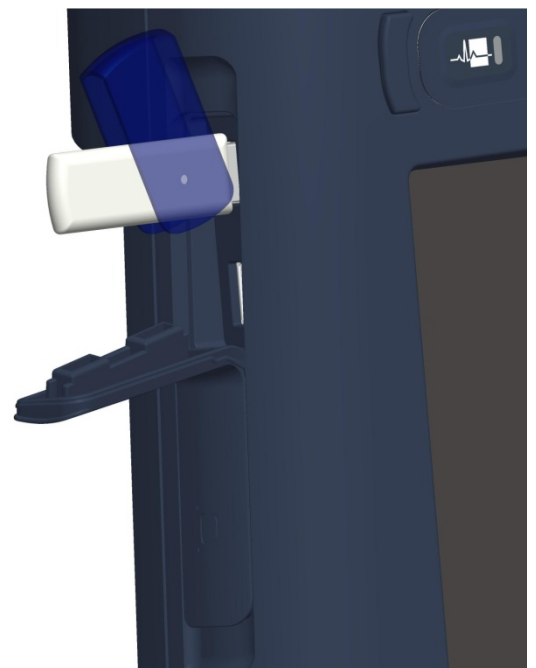
These USB connections can deliver power to the plugged device according to the USB specifications: 0.5 Ampere max on a +5V supply line. A multiplicity of types of peripherals are supported by the standard.



**Warning:** Even if the doors are sufficiently spaced and the connectors strength is very robust, it is advised to use extension cables in case of bulky or heavy USB peripherals .



**Warning:** The IP 21 performance requires that the Express Card door is fully closed. When there is an external USB device inserted, the NGP1 Computing Platform is losing its IP21 grade.





When connecting external equipments to the USB ports , follow the IEC 60601-1-1 requirements in order to guarantee patient or bystander safety.

Verify the current leakages



USB and VGA ports requires a check of the total patient leakage current also using a device meeting the IEC 60601-1 requirements

#### 4.2.3 Ethernet connection

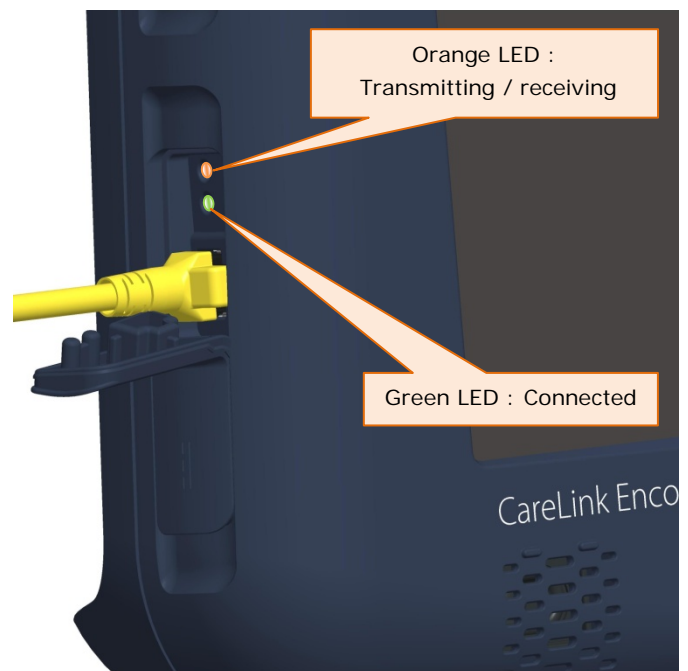
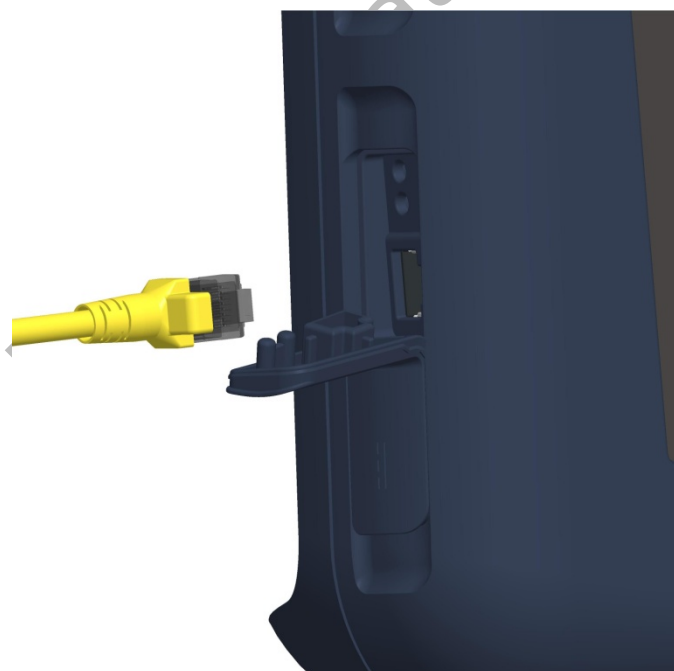
On the top left side of the Computing platform , under the specifically designated rubber door, there is 8 pin RJ45 LAN door (10/100 Mbit) that supports standard Ethernet cables.



Under the same door also two LED indicators are provided. They are showing the presence of a connection (Green indicator) and the data transmission / reception activities (Orange indicator - blinking)



**Warning:** The IP 21 performance requires that the LAN door is fully closed. When there is an external cable, the NGP1 Computing Platform is losing its IP21 grade.





When connecting external equipments to the LAN jack , follow the IEC 60601-1-1 requirements in order to guarantee patient or bystander safety.

Verify the current leakages

#### 4.2.4 Express Card slot

On the top right side of the Computing platform , under the specifically designated rubber door, there is a slot for Express Card 34 devices.



Several types of peripherals are supported by the standard ( Phone cards, Storage media, etc.).

After opening the door, you need to gently insert the device till you feel that the slide in movement becomes contrasted and then reaches the end.



**Warning:** The IP 21 performance requires that the Express Card door is fully closed. When there is an external ExpressCard34 based device inserted, the NGP1 Computing Platform is losing its IP21 grade.





## 5 NGP1 Computing Platform features

### 5.1 Display

Your NGP1 Computing Platform has a sturdy 12.1" XGA TFT LCD display with the following features:

- highly readable LCD (liquid crystal display) panel with a wide viewing angle ( typical +/-50° on both horizontal and vertical directions).
- resolution of 1024 x 768 pixels
- Minimum output brightness ( with control set at 100%) of 400 cd/m2
- Long life LED backlight

### 5.2 Touch screen

Above the LCD display , a resistive touch screen panel allows both finger and passive stylus pen input. High resolution and fast refresh rate are allowing precise and fast on screen selection, dragging, scrolling.

Depending on the OS support or application, also right click features may be available.

The touch screen panel has a 4H hardness and it comes already fully calibrated. Due to the specific 8 wire technology, long lasting precision is guaranteed and no user calibration is required.

The touch screen has an effective anti-glare and anti-reflection treatment acrylic screen, with minimum impact on screen sharpness and light output.

### 5.3 Using your stylus pen

#### 5.3.1 Pen characteristics

To be added

### 5.4 Using the RF-ID reader

The NGP1 Computing Platform has an integrated 13.56 MHz RF-ID (Radio Frequency Identification) reader that you can use to retrieve information from RF-ID tags.

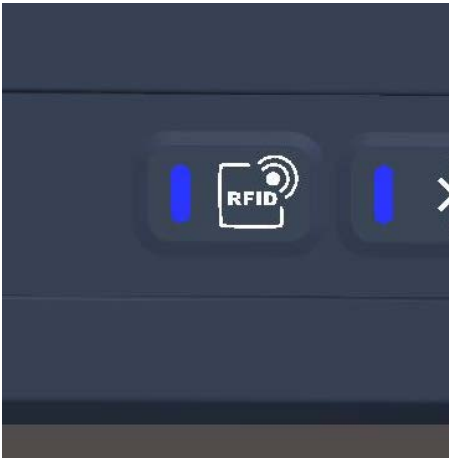
RF-ID technology makes use radio frequency (RF) transmissions to identify products or persons. RF-ID does not require direct contact or line-of-sight scanning, and can be scanned through many materials, including plastics, clothes, carton boxes etc., with the exception of metal.

An RF-ID tag can store much more data than a typical bar code, and some RF-ID tags can both transmit and record data. RF-ID can be used for asset tracking, identification, process control, health care, and pharmaceutical applications.

The RF-ID reader supports the following formats (proximity and vicinity ranges = 0 to 6 cm):

- ISO/IEC 15693
- ISO/IEC 18000-3

If supported by specific applications, the NGP1 Computing Platform allows you also to write tags, provided that they are supporting the above standards. Using your RF-ID reader is rather simple.



When the RF-ID button is pressed then the blue LED turns ON and the RF-ID section is energized. Depending on the supporting SW application . you may have a screen notification or hear also a start sound

Aim the RF-ID tag at the front of the unit, ensuring that the tag is 2 to 4 cm from the RF-ID antenna scan area (in case of large tags, having dimension of a credit card size, the scanning distance can be up to 6-8 cm)

In case of a good read or at the end of the scan time, depending on the supporting SW application the LED turns off, there is a stop sound and the tag contents are displayed.



The use of wireless devices in medical environments may be restricted and must be evaluated and authorized by the Hospital authority. If you are uncertain about the policy that applies to the use of this device, please ask for authorization to use it prior to turning it on.



The use of the FCP - NGP1 wireless devices during the pacemaker programming phase must be evaluated and authorized by the final Programmer vendor, within their SW applications and within the prescribed operating instructions.

## 5.5 Using the Wi-Fi (802-11 ABGN)

The NGP1 Computing Platform has an on-board 802.11a/b/g/n PCIe\* Mini Card network adapter that operates in both the 2.4 GHz and 5.0 GHz spectra.

The on board module is a highly integrated wireless local area network (WLAN) solution to let users data content exchange through the latest wireless technology without using the extra cables and cords. It enables a high performance, cost effective, low power, compact solution.

Compliant with the IEEE 802.11a/b/g/n standard, The module uses Direct Sequence Spread Spectrum (DSSS), Orthogonal Frequency Division Multiplexing (OFDM), DBPSK, DQPSK, CCK and QAM baseband modulation technologies.

A high level of integration and full implementation of power management functions specified in the IEEE 802.11 standard minimize system power requirements.

It features:

- IEEE 802.11a/b/g and n quad-mode
- Advanced security via 802.11i
- WEP 64-bit and 128-bit encryption
- WPA(Wi-Fi Protected Access)
- WPA2 with AES CCMP



Besides a possible application software control, depending on it, the Wi-Fi can be enabled or disabled via the button located on the keyboard.

You have to touch the Wi-Fi button for enabling or disabling the Wi-Fi functionality and the corresponding LED will be turned on.



**Note:** The Wi-Fi control on the keyboard, if enabled, is a fast way for disabling it if you are entering in areas where the radio emissions are controlled or not allowed.

Furthermore wireless devices consume power. Then, in order to reduce power consumption and lengthen the battery life, disable the Wi-Fi module device, when not in use.



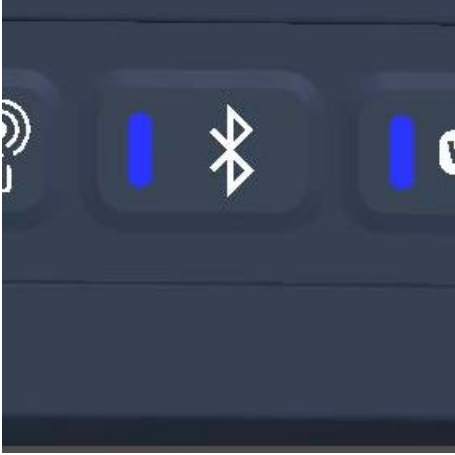
The use of wireless devices in medical environments may be restricted and must be evaluated and authorized by the Hospital authority. If you are uncertain about the policy that applies to the use of this device, please ask for authorization to use it prior to turning it on.



The use of the FCP - NGP1 wireless devices during the pacemaker programming phase must be evaluated and authorized by the final Programmer vendor, within their SW applications and within the prescribed operating instructions.

## 5.6 Using the Bluetooth

The NGP1 Computing Platform delivers a built in Bluetooth module designed according the Bluetooth wireless technology 2.1 specifications, and including AFH (advanced frequency hopping), EDR (enhanced data rate) functions, "HID Proxy" boot-time keyboard support mode (if enabled) and other capabilities.



You have to touch the Bluetooth button for enabling or disabling the Bluetooth functionality, as this is not put under control of a SW application. The corresponding LED will be turned on..



**Note:** The Bluetooth control on the keyboard, if enabled, is a fast way for disabling it if you are entering in areas where the radio emissions are controlled or not allowed.

Furthermore wireless devices consume power. Then, in order to reduce power consumption and lengthen the battery life, disable the Bluetooth device, when not in use.



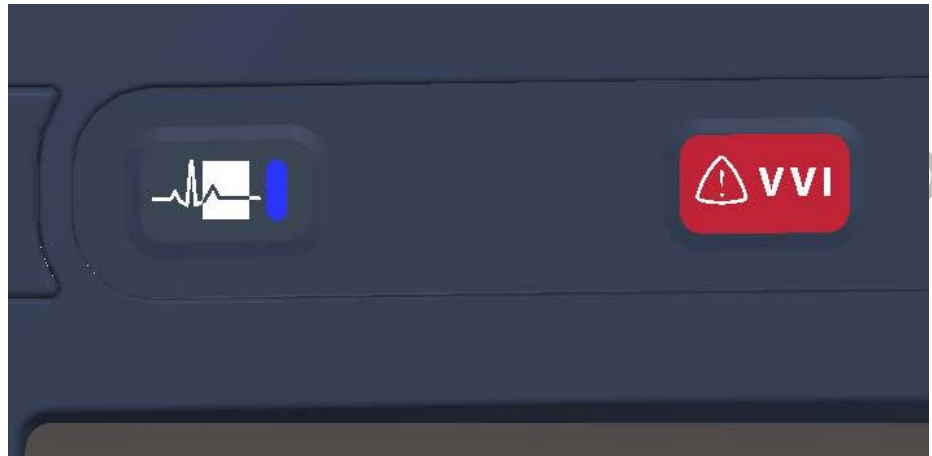
The use of wireless devices in medical environments may be restricted and must be evaluated and authorized by the Hospital authority. If you are uncertain about the policy that applies to the use of this device, please ask for authorization to use it prior to turning it on.



The use of the FCP - NGP1 wireless devices during the pacemaker programming phase must be evaluated and authorized by the final Programmer vendor, within their SW applications and within the prescribed operating instructions.

## 5.7 Using the Waveform Viewer (WFV) button and the Emergency Hot Key (EHK)

These two buttons are under direct control of the Customer SW application and /or are directly managed by the piggy-bagged MPI HW.



## 5.8 Audio solution

The NGP1 Computing Platform has a built-in high definition audio solution. The system uses a couple of 2Watt speakers with a IP65 grade. There is no embedded microphone or microphone input on the NGP1 Computing Platform. It is recommended to use a cordless Bluetooth headset to enable voice processing applications such as telephony, voice dictation or speech recognition.



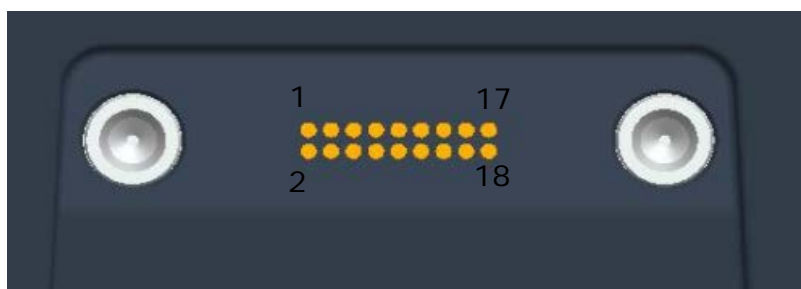
Keep the volume at the lowest level possible for a comfortable hearing. Avoid noisy environments where you may be inclined to turn up the volume. Avoid long, continuous exposure to maximum sound pressure level as this could impair your ability to hear other sounds. Furthermore your ears may become accustomed to the sound level, which may result in permanent damage to your hearing without any noticeable discomfort. Mute the audio if the prolonged hearing is causing discomfort

## 5.9 Docking connector

Even though the NGP1 Computing Platform has no docking station planned at the moment, it offers docking provisions. In fact a docking connector is present on the bottom of the NGP1 computing platform, sided by two metal docking / ground pins.

The NGP1 Computing Platform can be docked on its docking unit without any locking mechanism. This allows a “grab and go” one hand removal when you have to take the NGP1 Computing Platform seated in the docking station (please refers to the future Docking station manual).

When the unit is docked all the functionalities of the system are anyhow available. Here below the connector pin-out for future references.



Pin	Signal	Pin	Signal
1	GND	10	DC - VCC
2	GND	11	DC - VCC
3	USBP3-	12	DC - VCC
4	USBP3+	13	Not Connected
5	Not Connected	14	PDL_Dock
6	Detect#_Dock	15	USBP4+
7	SUSC	16	USBP4-
8	SUSB	17	GND
9	DC - VCC	18	GND

Table 6 - Connector layout specifications



**Note:** the docking connector is “enabled” only when the NGP1 Computing Platform is fully docked. There are no voltages present on the connector when the NGP1 Computing Platform is undocked.



As the mating of the NGP1 Computing Platform and its docking station connectors needs to be very accurate, please, be sure that the NGP1 Computing Platform is fully seated in its prescribed position, including:

- change of the screen brightness
- battery LED indicators that starts indicating that the NGP1 Computing Platform battery is charging
- USB connection plug and play “sound” and icon shown in the icon tray (if enabled on the used OS)



The NGP1 Computing Platform must be used in conjunction only with its future docking station. Do not attempt to connect or manipulate the connections of the docking connector as this may results in risks for the user, bystander or patient

## 5.10 Security

### 5.10.1 Built-in features

Your NGP1 Computing Platform includes several features that are dedicated to increase the level of security of your data. Among them:

- BIOS is accessible only by authorized personnel
- TPM (Trusted Platform Module) 1.2.

The Trusted Platform Module (TPM) is a specific protection against malware intelligent attacks.

The nature of this security chip ensures that the information like keys, password and digital certificates stored within is made more secure from external software attacks and physical theft. With the handful of keys it stores, all cryptographic functions are performed on the chip.

TPM provides the ability for a computing system to run applications more secured, allows secured remote access, performed electronic transactions and communication more safely. These features are available but not activated in your NGP1 Computing Platform. They are usually set up by your system administrators.

## 5.11 Power adapter

Your NGP1 Computing Platform is delivered with a full range, IEC 60601-1 medical approved, 100W full range (100-240V @ 50-60 Hz) AC power adapter APS 100EM-190530 . This adapter is meant for safely supplying the most power demanding NGP1 Computing Platform configuration.

In fact the adapter can be used also for powering the NGP1 Computing Platform docking station with the following configuration:

- NGP1 Computing Platform docked and fully ON
- NGP1 Computing Platform battery charger loaded and active
- docking station(refer to 5.9) battery charger loaded and active
- USB doors (NGP1 Computing Platform + docking station) loaded with Bus powered devices
- LAN (on docking station) connected and active



**Note:** The AC adapter supplied with the NGP1 Computing Platform has no Power-on LED indication.

But, as also shown in "Table 5 - Status and battery conditions vs. NGP1 Computing Platform status ", once the NGP1 Computing Platform is connected to the AC adapter, there will be always a battery or Power LED active, even with the NGP1 Computing Platform off.

In case of incorrect use, the AC adapter, as well as the NGP1 Computing Platform and its docking station, have power limiting, over-current and short circuits protection.

Nonetheless, we recommend to follow the below warnings



Use only the APS 100EM- 190530 AC adapter and power cord delivered with the NGP1 Computing Platform or its accessories. Use of another type of AC adapter or power cord may risk fire or explosion.

Your NGP1 Computing Platform will be shipped with the right power cord in use in all the countries. Power cord sets for use in other countries must

meet the requirements of those countries.



Provide the right cord-set. In US and Canada "hospital grade" cord-set has to be used, provided with instructions to indicate that grounding reliability can be achieved only when the equipment is connected to an equivalent receptacle marked hospital only or hospital grade. These instructions need to be marked either on the equipment or on a tag on the power cord.



When in use, place the AC adapter in an open and ventilated area, such as on a desktop or the floor (do not use on wet surface). Do not cover the AC adapter with items that will reduce cooling. Pay attention that the adapter cable and the power cord are routed far from places where they can be tripped over or stepped on.



Disconnect power cords and cables by grabbing the plug and not by pulling on the cable itself. As you pull out the connector, keep it evenly aligned to avoid bending any connector pins. Before you connect a cable, make sure both connectors are correctly aligned.



If you use an extension cord with your AC adapter, ensure that the total ampere rating of the products plugged into the extension cord does not exceed the ampere rating of the extension cable. When using your power cord, make sure to position it around objects so it will not be cut or punctured.



Anybody connecting additional equipment to medical electrical equipment configures a medical system and is therefore responsible that the system complies with the requirements for medical electrical systems. Attention is drawn to the fact that local laws take priority over the above mentioned requirements. If in doubt, consult your local representative or the technical service department



To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth



The internal electrical power source has to be used if the integrity of the protective earth conductor or the protective earthing system in the installation is in doubt.

## 5.12

### Battery

The NGP1 Computing Platform comes with a lithium ion rechargeable main battery having a capacity of 4000mAh at an output voltage of 11.1 V (P/N 4519 208 81321). The first instructions on how insert and charge the battery are given in section 3.1.1 The NGP1 Computing Platform has three battery indicators that show the charge/discharge status. Refers to 3.1.5.





Note: The NGP1 Computing Platform OFF status is actually a minimum power quiescent state that anyhow draws energy from the battery. If the NGP1 Computing Platform is left OFF on battery for more than two weeks, it is possible that the completely charged battery can be found depleted. In this case the NGP1 Computing Platform must be turned ON with the AC adapter or with a charged battery pack



Note: A totally depleted battery will recharge with an initial period of pre-charge, during which the Windows Power Meter indicator of the remaining battery charge (see 3.1.4 ) will remain at 0%. This period may range between 5 and 15 minutes.



Replace the battery pack only with the replacement battery designed for the NGP1 Computing Platform to avoid the risk of fire or explosion resulting in personal injury.

Do not use the battery pack in combination with other types of battery packs (such as dry-cell battery packs) or battery packs with different capacities or brands. This can result in it being over discharged during use or overcharged during recharging, possibly leading it to leak, overheat, emit smoke, burst and/or ignite.



**CAUTION:**

- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended the manufacturer.

Li-ion batteries include special circuitry to protect the battery from damage due to overcharging or undercharging. As Lithium-ion batteries also require sophisticated chargers that can carefully monitor the charge process; put them in a charger not designed for Lithium-ion batteries create a potentially dangerous situation.

- To charge the battery follow the instruction in this User's Manual.



Do not disassemble or modify the battery pack. If disassembled, the battery pack could leak, overheat, emit smoke, burst and/or ignite. Do not connect the positive (+) and negative (-) terminals with a metal object such as wire. Short-circuiting may occur leading the battery pack to leak, overheat, emit smoke, burst and/or ignite.

Do not pierce the battery pack with a sharp object, strike it with a hammer, step on it, or throw it. These actions could damage or deform it, internal short-circuiting can occur, possibly leading it to leak, overheat, emit smoke, burst and/or ignite.

The battery pack enclosure should be checked upon collision damage; please refer to qualified service personnel.



If the battery pack leaks, gives off a bad odour, generates heat, becomes discoloured or deformed, or in any way appears abnormal during use, recharging or storage, immediately remove it from the NGP1 Computing Platform or charger and stop using it. If this is discovered when you first use the battery, return it to your Supplier.



Do not transport the lithium ion batteries used in your NGP1 Computing Platform in checked baggage. You may take up to two spare batteries in carryon luggage in addition to the one in your NGP1 Computing Platform. Transporting batteries in checked baggage or transporting more than two spare batteries in carry-on baggage violates transportation law. Remember to remove battery packs from the battery charger before transporting it in carry-on or checked baggage

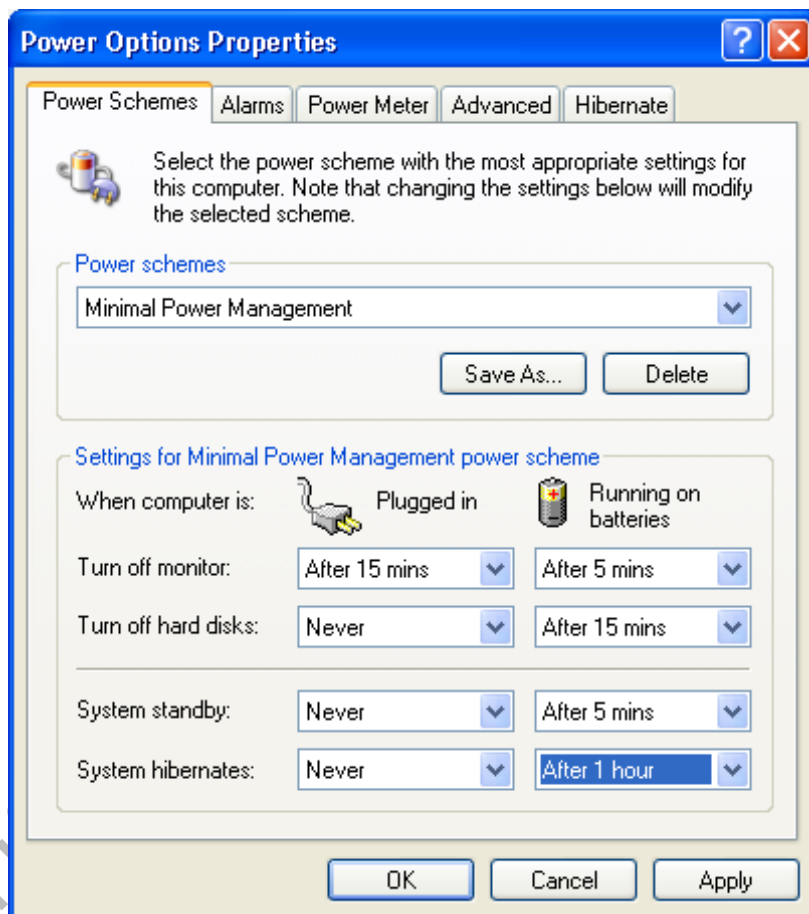
### 5.12.1 Storing main batteries

In case of long inactivity of the battery packs not inserted in the NGP1 Computing Platform, it is preferable to store them neither fully charged nor totally empty. As the battery will lose gradually its charge, it is recommended to recharge if the charge drops below 20% or after a few months and possibly re-use it for a few recharge cycles.

### 5.12.2 Battery and energy management.

As already mentioned in paragraph 3.1.1, the battery charge can be wisely used and extended by means of a few precautions. With a standard use, the typical battery life is around two and half hours.

If a Windows OS is used, under Control panel / Power Options / Power schemes, you can chose among Power management that matches the typical usage of the system while maximizing the battery life and minimizing the waste of energy.



As example, turning off the display when the NGP1 Computing Platform is not used, can help increasing the battery life of typically 10%.

Remember that the display, processor, wireless cards, and accessory drives all draw on the battery, so adjust properties and disable unused accessories while running on battery power.

# 6 NGP1 Computing Platform Maintenance

## 6.1 Cleaning

The NGP1 Computing Platform is designed for being subjected to periodic cleaning and disinfection, as typical for infection control, in a healthcare environment, Materials and shapes as such that the unit can be cleaned with sprays and liquids.

Recommended cleaning solutions have to follow specific institutional recommendations and are depending on the environmental situations in which the NGP1 Computing Platform is used.



Turn the system off and disconnect the AC adapter before cleaning.

### 6.1.1 Tested substances

Liquids in hospitals, expected to contact/affect equipment can be divided in the following groups:

- Disinfection / cleaning products on alcohol basis;
- Disinfection / cleaning products on alkali basis;
- Disinfection / cleaning products on water basis;
- Disinfection / cleaning products on chlorine basis;
- polluting agents;
- physiological fluids.

The NGP1 Computing Platform has been tested against rubbing force, long term exposure and contrast liquid tests, with the following agents:

Liquids or fluids
Isopropanol 100% - CAS 67-630
Haemosol 1% in 1 litre water – 00-238-1
Chlorine 250 ppm in 1 litre distilled water
Chlorehexidine 0,5% in 70% Ethanol – 00-125
Ethanol 70% - 70-CAS 64-17-5
Cidex- Phthalaldehyde solution – 00-237
Iodine 1% in 70% Ethanol – 06-318-1
Artificial sweat (5% KCL, pH=3) – 00-422-1
NaCl solution 0.9% – sodium chloride 00-236
Hexabrix 320
Coffee with milk and sugar
Alcohol 95%

Table 7 - Table of tested substances



WARNING: Small stain /affection has been observed after long exposure test due to Iodine, Haemosol and Hexabrix 320. Clean the product immediately if exposed to this substances to avoid halos and discoloration.

### 6.1.2 To clean the screen

To removes dust and other particles, wipe the screen with a clean, soft, lint-free cloth.

For heavy duty cleaning, wipe the screen with a soft, clean cloth lightly sprayed with prescribed cleaning or disinfectant material that should not contain wax or abrasives. Preferably apply the cleaner to the cloth, not the screen.

If the display has become greasy, use isopropyl alcohol.

### 6.1.3 To clean the cabinet:

For normal cleaning, use a soft cloth wetted or sprayed with disinfectant

For heavy duty cleaning, also a small brush can be used for cleaning the ventilation apertures.

### 6.1.4 To clean the fan

The fan is not removable by the user. The clean of the fan could be done only by the authorized Service Personnel.



WARNING: If the is cleaned with liquids, allow the right time for a complete drying



WARNING: use of products on phenol base and fluids like ether, white spirit, turpentine, trichlorethylene and perchlorethylene and iodine, can cause damage to constituents of equipment (e.g. coated materials, plastics, etc.)

## 6.2 Disposal

### 6.2.1 General warning

Your product is designed and manufactured with high quality materials and components, which can be recycled and reused. Please inform yourself about the local separate collection system for electrical and electronic products, including those marked by the crossed-out wheel bin symbol.

### 6.2.2 For Countries in the European Union

This symbol indicates that this product (including the cables, plugs and accessory) must not be disposed of with the other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the cling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, or your supplier's office.

### 6.2.3 For countries outside the European Union

Disposal of electrical products in countries outside the European Union should be done in line with local regulations.

Please act according to your local rules and do not dispose of your old products with your normal household waste.

### 6.2.4 Disposal of your NGP1 Computing Platform

Do not dispose of this device with general unsorted household waste.

### 6.2.5 Dispose of Lithium ion battery (Li-ion)



Lithium-ion battery should never be incinerated or disposed in fire in order to avoid the risk of explosion.

Do not disassemble batteries as this can generate a gas that may irritate the throat and lungs. If the battery is opened, lithium in the battery may react with moisture and generate heat or fire, which could result in injury.

Special precautions must be taken to avoid Li-ion battery fire up or explosion that can cause serious injuries. Never try to extinguish such a fire with water but only with suitable extinguisher.

Contact your local waste disposal agency for the address of the nearest battery deposit site.

### 6.2.6 Dispose of coin battery inside of the NGP1 Computing Platform (Mounted on main board):

The coin battery contain Perchlorate Material-special handling may apply, See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).

# 7 Troubleshooting

## 7.1 My NGP1 Computing Platform is not turning ON.

Make sure that the battery is properly inserted and latched or the AC adapter is fully connected or that the unit is well docked.

Plugging the AC adapter into the DC in jack located under the protective cover on the bottom of the unit, makes sure that the Adapter is also plugged into the wall socket.

If running with battery only, be sure that the inserted battery pack has some capacity left.

## 7.2 My NGP1 Computing Platform Power on LED is ON, but nothing happens.

Make sure that the unit is not in stand-by by tapping on the screen.

As a last resort remove the power cord and the battery, wait ten seconds then insert again the battery and power cord, restarting a power on procedure.

## 7.3 My NGP1 Computing Platform does not run smoothly

Simultaneous opening of too many applications will cause deterioration in application performance.

To free up memory, close applications that are not in use, especially if they are CPU or memory intensive (e.g. video playback)

If networked, Check wireless signal quality:

When the WLAN icon indicator in the icon tray is green, a wireless signal is available. If you position your pointing device over it, you can get info about the current connection and the related signal strength.

Otherwise, double taps the Network icon on the bar at the bottom of the screen. Choose the Wireless Information tab to show the current connection Access Point, or try repositioning the antenna of the access point.

## 7.4 How do I turn off my NGP1 Computing Platform

To end operation, press the Power / Stand-by on the NGP1 Computing Platform right side. Or tap the "START Menu" and then choose "Shut Down" to turn off the pad (if Windows is installed).



**Note:** Pressing the Power button of the device for more than five seconds will make a hard turn OFF preventing the Operating System to perform the correct shutdown procedure. This is an extreme remedy in case the device is not responding.

## 7.5 When I use the touch screen.

### 7.5.1 the cursor is not following the pen movement.

If you have just booted the system, allow more time for the touch functions to come up.

### 7.5.2 the system does not respond to taps.

Be sure that you are tapping on a target (e.g. an icon) . If there is a misalignment between pen tip and Windows indicator, please perform a new calibration, once that you have realized that this is not due to the viewing angle with which you are operating the system



**Note:** You might need to practice a couple of times in to operate your screen with taps. Please customize the pen action:

# 8 Specification

## 8.1 System Specifications

• CPU	Intel® Atom™ Z530P
• CPU Speed	1.6 GHz
• RAM Size	2 GB DDR2 SDRAM
• Solis State Disk size	32 GB SSD
• Operating System	Microsoft® Windows® XP Embedded (not supplied)

## 8.2 Display

• Touch panel	Touch Sensor
• Screen Type	Transmissive TFT LCD
• Screen Size	12.1 inch / 310 mm diagonal
• Screen Resolution	XGA, 1024 x 768 (4:3 aspect ratio)
• Active Screen Area	245.7 mm x 184.3 mm
• Brightness	450 cd/m <sup>2</sup> (typical)
• Contrast Ratio	600:1 (typical)
• Display Color	256k colors (18 bits)
• Backlight	LED

## 8.3 Connectivity and Controls

• I/O Interfaces	USB ports (x 2) VGA output 100 Mbps wired LAN on RJ-45 18 - 26.5 VDC Power Input Jack Express card 1.2 Docking connector
• Embedded Devices I/Os	IEEE 802.11 a/b/g/n WLAN Bluetooth 2.0+ EDR 2W speakers
• Peripherals:	RFID reader 2D Barcode imager (optional)
• Controls	Touch screen Waveform Viewer activation Button VVI Emergency activation Button (Barcode activation Button) RFID activation Button Bluetooth activation Button WiFi activation Button Power ON/OFF Button
• Indicators	Battery Status LEDs (x 3) Power status LED Buttons LEDs (x 5) LAN LED's (x2)

## 8.4 Docking Station Connectivity

- I/O Interfaces
  - USB ports (x 2)
  - 18 - 26.5 VDC Power Input Jack
  - TBD

## 8.5 Power

- AC/DC Adapter In
  - 100-240 VAC 1.5 A @ 50/60 Hz
- AC/DC Adapter Out
  - 19 VDC 5.3 A
- Battery type
  - Li-ion, rechargeable
- Battery capacity
  - 4000 mAh
- Charge duration
  - Stand-by 15 days
  - Operating 2hrs (min.)

## 8.6 Physical Characteristics

- Dimensions
  - Width: 353.0 mm
  - Height: 357.0 mm
  - Depth: 102 mm
- Weight
  - 3.3 kg ()
- Shock Resistance (non operating)
  - according to Medtronic
- Dust/Water Protection
  - IP21 (Vertical position, rubber doors closed)

## 8.7 Optional Configurations

- Barcode Scanner
  - Intermec Mod. EA15

## 8.8 Environmental Specifications

- Temperature (operating)
  - 0°C to 40°C
- Temperature (transport and storage)
  - 20 °C to 60°C
- Altitude (operating)
  - 70 - 110 kPA
- Altitude (transport and storage)
  - 70 - 110 kPA
- Humidity (operating)
  - 15% to 93%
- Humidity (transport and storage)
  - 15% to 93%



## 8.9 Applicable International Standards

- Safety
  - ANSI/AAMI ES 60601-1:2005
  - EN / IEC 60601-1
- EMC
  - CAN/CSA-C22.2 nr. 601-1-M90
  - FCC CFR 47 P.15 Sub B - Class A
  - CISPR 22 - Class A
  - EN / IEC 60601-1-2
  - EN 55011/ CISPR11 - Class A
- Radio
  - FCC CFR 47 P.15 Sub C
  - EN 301 489-3
  - EN 300 330-2
- Marks
  - RSS-210, SAR, IC ID
  - C-UL-US, CE, DEMKO, FCC

For verification only - NOT RELEASED

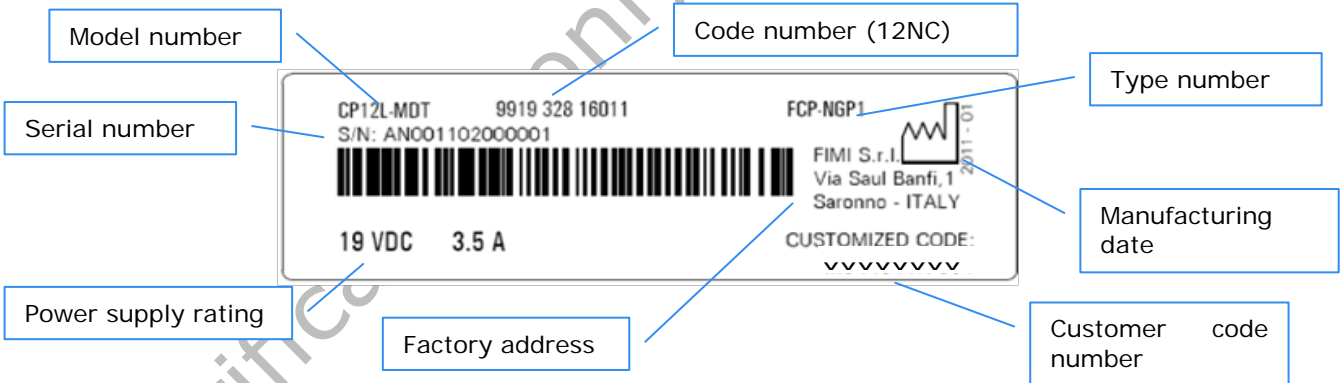


# 11 Labels and stickers

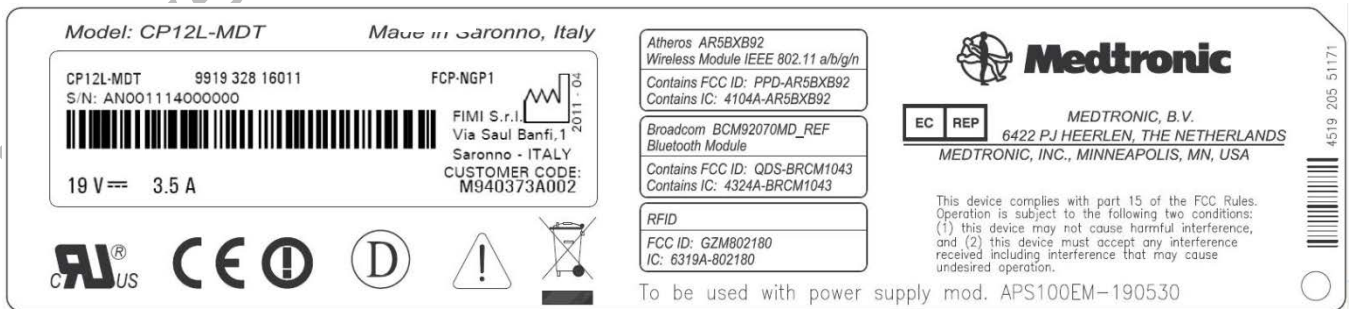
A group of labels is placed on the lower part of the back of the unit.



The identification label, detailed below, is placed under a transparent window:



Here below the details of the rating label:



## 12 Your notes

For verification only - NOT RELEASED

FIMI S.r.l.  
Via Saul Banfi 1  
21047 Saronno (VA). Italy

Note:

This Product has been designed to make it able to withstand certain mechanical stresses and/or to withstand exposure to harsh, wet and dusty environment in accordance to the applicable industrial standards (IP grade). These measures are taken to enhance its durability. However, it cannot be guaranteed that this Product will not be damaged when dropped or when subjected to liquid spill or alike. Therefore the user is required to take appropriate care of the Product and to apply the following recommendations:

- (i) Do not drop the Product, do not hit the touch screen and do not place heavy objects on the Product;
- (ii) Do not expose the Product to moisture, dust and liquid sprays;
- (iii) Do not scratch the touch screen with sharp edges and only use the provided tools (stylus pen);
- (iv) Use a dry soft cloth to clean the Product and, specifically, the touch screen;
- (v) Do not use the Product in environments exceeding the specified temperature and humidity range.

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