NOTEBOOK COMPUTER

RV11

User's Guide

Notice

The company reserves the right to revise this publication or to change its contents without any notice. Information contained herein is for reference only and does not constitute a commitment on the part of the manufacturer or any subsequent vendor. They assume no responsibility or liability for any errors or inaccuracies that may appear in this publication nor are they in anyway responsible for any loss or damage resulting from the use (or misuse) of this publication.

Any of the software described in this manual is sold or licensed "as is". Should the programs prove defective following purchase, the buyer (and not the manufacturer, its distributor, or its dealer) assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any software defects.

Brand and product names mentioned in this publication may or may not be copyrights and/or registered trademarks of their respective companies. They are mentioned for identification purposes only and are not intended as an endorsement of that product or its manufacturer.

Copyright © 2014 MilDef Crete Inc.

Trademarks

All other brand and product names are trademarks or registered trademarks of their respective companies.

Revision History:

Revision	Date	Changes	Author
1.0.4	2017/02/21	Correct RTC info	Ben Lin
		Add DURS info	
		Correct Appearance Overview	
		Add Setting Wake on LAN info.	
		Update BIOS section.	
		Add battery recalibration.	John Wang
		Update driver section.	
		Update BIOS section.	
1.0.3	2015/10/23	Update Fischer conn. info.	Pablo Tseng
1.0.2	2015/07/20	Add more touchpad driver info.	Pablo Tseng
1.0.1	2015/01/22	Update weight info.	Pablo Tseng
		Update Processor info.	
1.0.0	2014/08/26	Initial Release	Pablo Tseng

FCC (Federal Communications Commission) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant 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 radiates radio frequency energy. If not being installed and used in accordance with the instructions, it 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:

● Re-orient 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

● This device may not cause harmful interference.
● This device must accept any interference received, including interference that may cause undesired operation.

> ⚠️ *FCC Caution:*
>
> *To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).*

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Regulatory Information/ Disclaimers

Installation and use of this computer must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines**.**

CE

Products with the CE Marking comply with both the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

EN55022   CISPR 22 Radio Frequency Interference

EN55024   EN61000-4-2,   EN61000-4-3,   EN61000-4-4,   EN61000-4-5,
EN61000-4-6,   EN61000-4-8,   EN61000-4-11,   EN61000-3-2,
EN61000-3-3, Generic Immunity Standard

LVD   EN 60950-1: 2006+ A11: 2009+ A1: 2010+ A12: 2011
IEC 60950-1: 2005+AM1:2009

R&TTE (CE) Manual Regulatory Requirement

WLAN - IEEE 802.11a/b/g/n

802.11a/b/g/n Restrictions:
European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835 GHz.

CE Declaration of Conformity

C E ⓪

It is confirmed to comply with the requirements set out in the Council Directive on the approximation of the laws of the member states relating to Electromagnetic Compatibility (2004/108/EC), Low-voltage Directive (2006/95/EC), the Amendment Directive (93/68/EEC), and the procedures given in European Council Directive (99/5/EC and 2004/108/EC).

The equipment was passed, and the equipment test was performed according to the following European standards:

EN 300 328 V1.8.1 (2012)
EN 301 893 V1.7.1 (2012)
EN 301 489-1 V1.9.2 (2011)
EN 301 489–3 V1.4.1 (2002)
EN 301 489-17 V2.2.1 (2012)
EN62311 2008
EN300440-1 V1.6.1 2010
EN300440-2 V1.4.1 2010

UL, TÜV
AC Adapter (TÜV includes **LVD EN60950**)

Power Conservation

This computer consumes much less power than conventional computers. However, power consumption may be further reduced by configuring the Power Management Setup.

It is recommended to enable power-saving functions when operating this computer, as Power Management functions do not impact system performance while saving power.

Power Safety

There are specific power requirements for this computer:
- Only use an approved power adapter for this computer.
- There is a 3-prong grounded plug of the power adapter. The third prong serves as Ground and is an important safety feature. If a compatible outlet is not available, consult qualified electricians for installation.
- When unplugging the power cord, please be sure to unplug from the plug head instead of pulling from the wire.
- Make sure the socket and any other extension cords you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies.

> ⚠️ *Warning:*
> *Before any upgrade procedures, make sure the power is turned off, and all the cables are disconnected. Also, it is advisable to remove your battery in prevent from turning the computer on accidentally.*

Battery Precautions

- Only use batteries designed for this computer. Wrong and incompatible batteries may cause explosion, leakage or damage to the computer.
- Do not remove the battery from the computer while it is powered on.
- Do not continuously use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer is able to continuously work with a damaged battery, the circuit damage may occur and possibly cause fire.
- Always use the notebook's system or charger to recharge the battery. Incorrect recharging may cause the battery to explode.
- Do not try to repair a battery pack by yourself. Refer to any battery pack repair or replacement, please contact with to your service representative or qualified service personnel.
- Please dispose damaged battery promptly and carefully. Explosion or leakage may occur, if the battery is exposed to fire, improperly handled or discarded.

⚠️ *Battery Disposal & Caution:*

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its service life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal. Danger of explosion may possibly occur, if the battery is incorrectly replaced. Replace only with the same or the equivalent battery recommended by the manufacturer. Discard the used battery according to the manufacturer's instructions.

Environmental Information, Material Safety & Recycling

All materials used in the manufacturing of this equipment are recyclable or environmentally friendly.

Please recycle the packing materials in accordance to local regulations at the end of the product's service life.

Notice:
- The equipment may contain insignificant amount of hazardous substances for health and environment below control level.
- To avoid spreading such substances into the eco system, and to minimize the pressure on the natural environment, you are encouraged to use the appropriate take-back for reusing or recycling most of the materials in a safe way after the product's service life.
- The crossed-bin symbol indicates proper disposal is required.
- For more information on collection, reuse and recycling, please consult the local or regional waste administration for more information.
- You can also contact your dealer for more information on the environmental details of the equipment.
- The symbol of the crossed-out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Please check local regulations for disposal of electronic products.

TABLE OF CONTENTS

Chapter One - Getting Started

Unpacking

The following components are shipped along with your computer. If any component is missing or damaged, please notify the dealer immediately.

- Computer Unit
- AC Adapter
- AC Power Cord
- Utility DVD
- Quick Guide
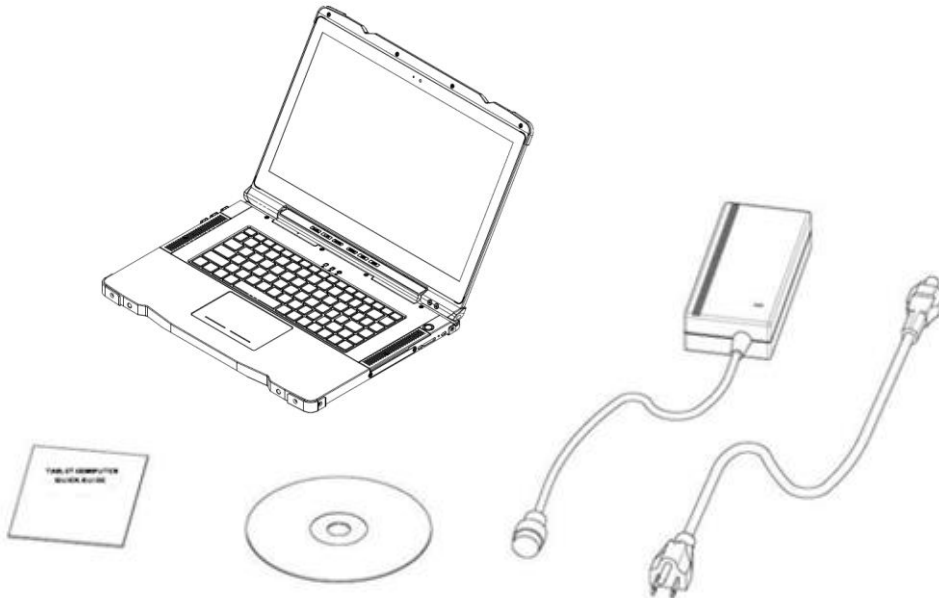
Quick Operation

● Mount the battery and tighten the battery screws. Notice that the middle screw should be tightened first and then the other sides, as the illustration shows below.

Tighten the middle screw first (the circled one).	
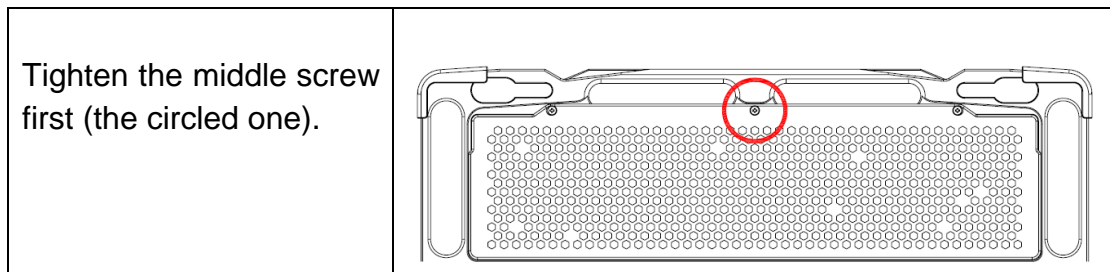
● Connect the AC adapter with the computer and start charging the battery for at least 10 minutes.
● Turn ON the computer by pressing the power button.

Note:
➢ *Drivers or applications installation may be necessary for further operation.*

Appearance Overview

LCD Panel Open
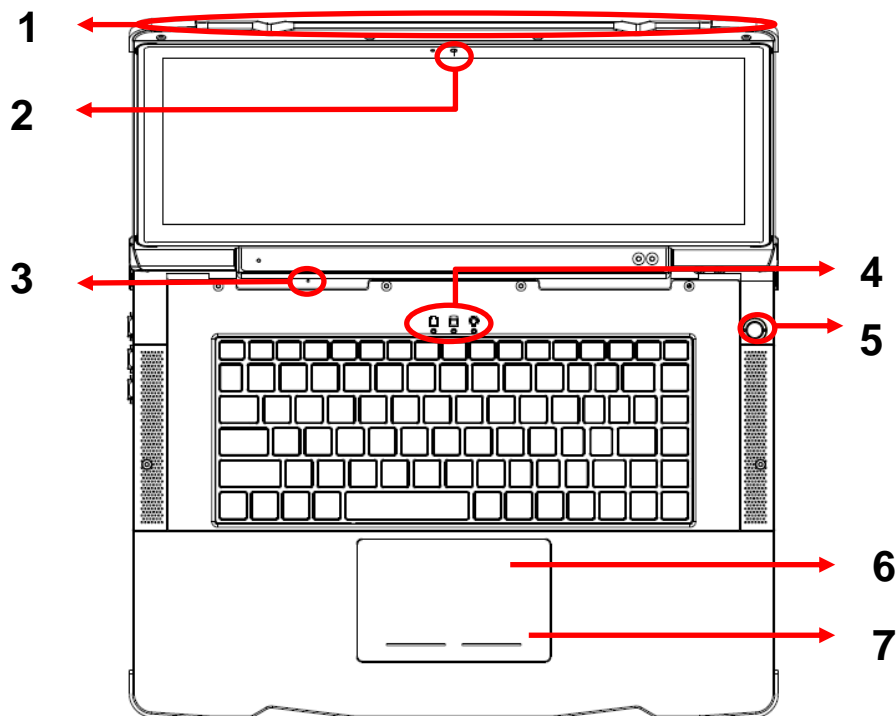
1. Embedded Antennas (Optional):
   GPS, WWAN, WiFi/Bluetooth x 2
2. Optional WebCam
3. Embedded Mic
4. LED Indicators

	Power Indicator (Dual LED): Green (Power) Flashing Green (S3)		Charger/Battery low: Orange (Charging) / Flashing Orange (Battery low)
	SSD/Heater Indicator: Green (SSD) / Orange (Heater)		

5. Power Button
6. Touchpad
7. Touchpad Right and Left buttons

> **Note:**
> ➢ *For details, please refer to "Touchpad" section.*

Right View
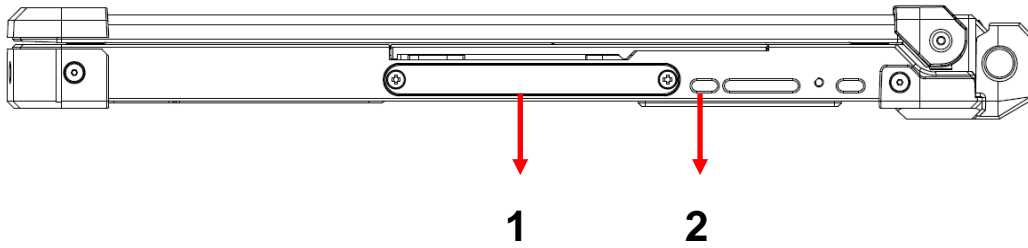
1. 2.5" SATAIII 7mm SSD
2. Kensington lock slot

Left View
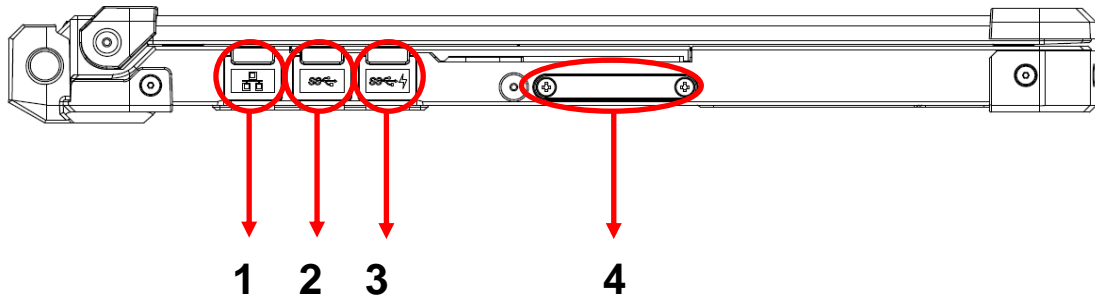
1. GLAN RJ45

2. USB 3.0 x 1

3. USB 3.0 x 1 with Fast Charger

4. SD Card Slot x 1 + SIM Card Slot x 1

Rear View
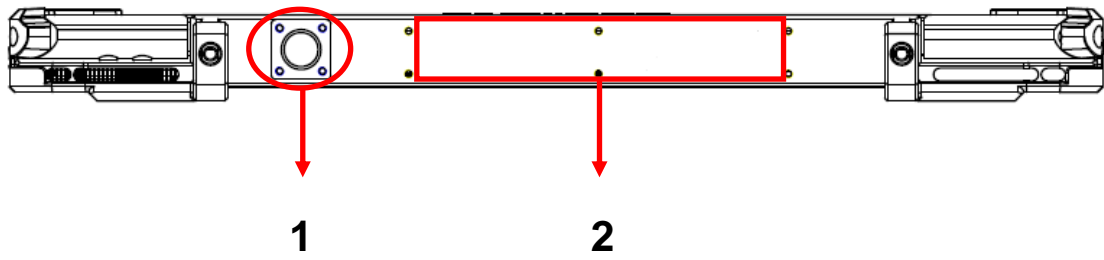
1. DC Power Jack

   (Std.: DC-in 2-pin; optional: Military 3-pin)

2. Optional Fischer connectors can include 5 functions:

 - USB2.0 x 1

 - VGA x 1

 - RS232 x 1

 - GLAN x 1

 - Audio x 1

Bottom View
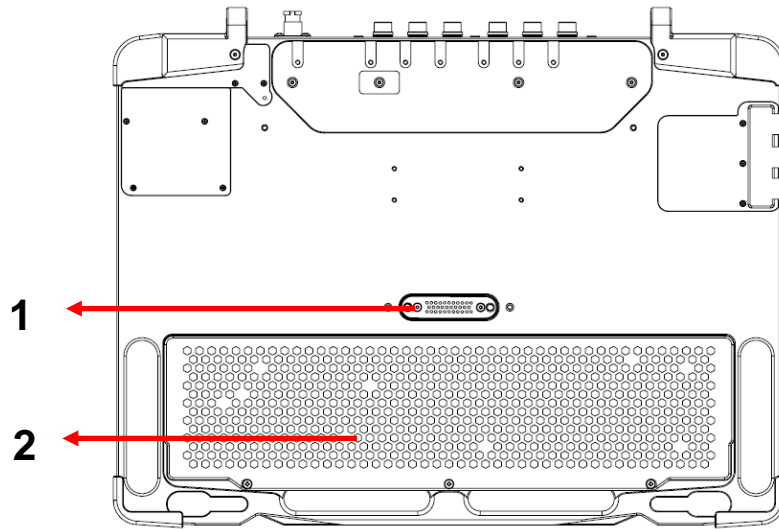
1. D/U port

2. Battery pack

Chapter Two - Operating Information

Workplace

A clean and moisture-free environment is preferred. Make room for air circulation. Remember to avoid areas from:

● Sudden or extreme changes in temperature.
● Extreme heat.
● Strong electromagnetic fields (near television set, motor rotation area, etc.).
● Dust or high humidity.

If it is necessary to work in a hostile environment, please regularly maintain your notebook computer by cleaning dust, water, and etc. to keep it in an optimal condition.

Ruggedness

This notebook computer is designed with rugged features such as vibration, shock, dust, and rain/ water protection. However, it is still necessary to provide appropriate protection while operating in harsh environments.

The notebook computer is also designed to withstand rainfall from top with mild wind blowing only. Please keep the keyboard facing up, i.e. normal operating direction, to maintain water resistance. NEVER immerse the unit in water, or spray water at an upside-down system. Doing so may cause permanent damage.

All connectors will be corroded if being exposed to water or moisture. Corrosion is accelerated if the power is ON. Please take proper water-resistant measures for cable connections. The DC jack and cables are sealed and may be operated with water splashing while attached. All port covers should be in place when no cable is attached.

Installing Operating System

Your computer is designed to operate with Microsoft Windows 7 / 8 32 / 64-bit Operating System. Please connect your computer with an external USB-interface drive, such as an ODD or a USB thumb drive, and start the OS installation.

Boot Up and POST

Boot up
The computer turns ON and loads the operating system (such as Windows) into the system memory. This start-up procedure is called "boot up".

The ROM BIOS Power on Self-Test (POST)
Each time when the computer powers on, it automatically performs a self-test of its memory and hardware devices.

Shut down

Directly click "Shut down" from your OS to turn OFF the power of your computer. Before shutting down, please do remember to save any unfinished works and close your applications to prevent your SSD from suffering possible data loss or damage. "Shut down" will turn OFF power of your computer. If you want to start your computer again, you need to turn it ON again by pressing the power button.

Force Shut Down

In the event that your notebook computer hangs or stops responding, you can perform a force shut down by pressing and holding the power button for 4~5 seconds. Please note that any unsaved work or data will be lost this way.

Sleep/Hibernate

Sleep

Under "Sleep" mode, the system will temporarily save your work into the computer's RAM. If you want to start your computer again, please press the power button to resume. Under Windows 8, you can enter this mode by directly clicking:

Move your mouse to the upper-right or lower-right corner of the screen, and then click "Settings" => Click "Power" => Click "Sleep".

Hibernate

Under "Hibernate" mode, the system will save your work into SSD. If you want to start your notebook computer again, you need to press the power button. Under Windows 8, you can enter "Hibernate" mode by directly clicking:

Move your mouse to the upper-right or lower-right corner of the screen, and then click "Settings" => Click "Power" => Click "Hibernate".

Intel® Rapid Start Technology

Your notebook computer can operate Intel® Rapid Start Technology when SSD is installed. This technology enables your system resume time not only to be as fast as wake-up time from S3 (Sleep) mode, but also to be more energy saving.

Before using Intel® Rapid Storage Technology, please check the following system requirements:

System Requirement:

- Intel QM77 Express Chipset-based desktop board
- Intel Ivy Bridge i7-3667U
- Solid State Drive (SSD)
- Operating system
  - Microsoft Windows 7 or 8 (32- or 64-bit edition) in Legacy mode
  - Microsoft Windows 7 or 8 (64-bit edition) in UEFI mode

Note:
- *Intel® Rapid Storage Technology Driver should be installed and can be found in Utility DVD.*
- *Please refer to the User Guide from Intel official website for setting up the function. There are two kinds of User Guide, "Intel® Rapid Start Technology User Guide for UEFI Mode" and "Intel® Rapid Start Technology User Guide." The former is for UEFI mode, while the latter is for legacy mode.*
- *Please remember to enable Rapid Start Technology from BIOS Advanced Menu.*
- *To cancel the Rapid Start Technology, please disable the function from BIOS Advanced Menu.*

Touchpad

The touchpad features large-area, multi-touch, and Windows 8 supported. It can be enabled/disabled by pressing **[Fn] + [F12],** and a disable icon 🚫 will be shown on system tray when it is disabled. For usage details, please see the following table.
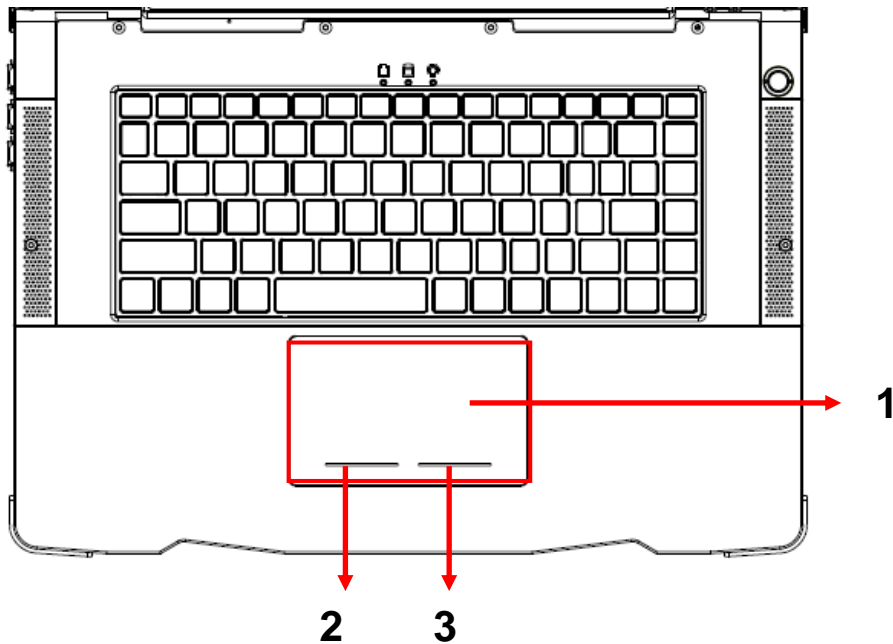
No.	Item	Description
1.	**Touchpad**	Multi-touchpad features in click, scroll, swipe, rotate, and pinch.
2.	**Left-click button**	Similar to left button of mouse
3.	**Right-click button**	Similar to right button of mouse

Note:
> *Please install the touchpad driver for complete functions. Without installing the driver, you can still use single-touch functions, but the functions of multi-touch and touchpad icons on system tray are not available. In addition, if the driver is not installed, the touchpad disable status will not be remembered after S3/S4/reboot/turn off.*

Keyboard

The keyboard is functionally equivalent to a full size desktop keyboard. A sample layout is shown as below.

Function Key Combinations

Key	Description
[Fn] + [F3]	Decrease LCD brightness
[Fn] + [F4]	Increase LCD brightness
[Fn] + [F5]	Mute
[Fn] + [F6]	Volume down
[Fn] + [F7]	Volume up
[Fn] + [F9]	Decrease keyboard backlight
[Fn] + [F10]	Increase keyboard backlight
[Fn] + [F12]	Touchpad lock

Managing Solid Static Drive (SSD)

The Solid Static Drive (SSD) is a 2.5" type/ 7mm height standard **SATAII/III interface** data storage device. Some functions, such as Rapid Start Technology, are required to use SSD for operation.

Using SD Card / SIM Card

The card slots are located at the bottom-right side of your notebook computer. To remove the card slot cover, please use an appropriate screwdriver and turn counterclockwise to unlock.
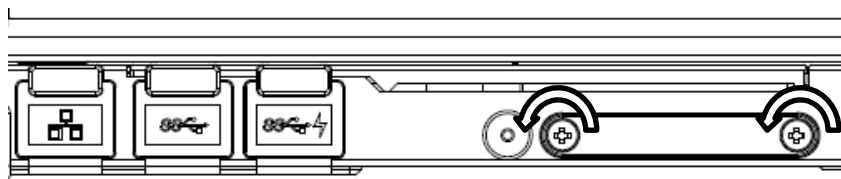
The SIM card slot occupies the top side of the expansion cards compartment. The SD card slot is located at the bottom.
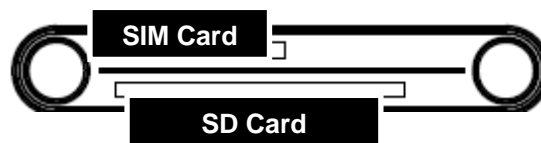
Please take note of the card slot differences to prevent insertion of incompatible card types, and do not attempt to force the cards into wrong card slots to prevent from damaging your computer.

The design of SIM card and SD card slots are foolproof; if you encounter difficulty in inserting the cards, please turn/reverse the cards and try again. When inserting SIM card and SD card, the connector pins of your cards should be **facing down**, as the following illustration shows.

> *Note:*
> ➤ *Please always turn off the computer before inserting or rejecting SIM Card.*

Insert SIM Card:
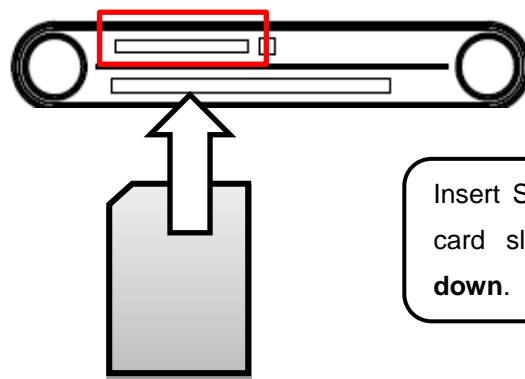
Insert SIM card into the top card slot with pins facing **down**.

Insert SD card:
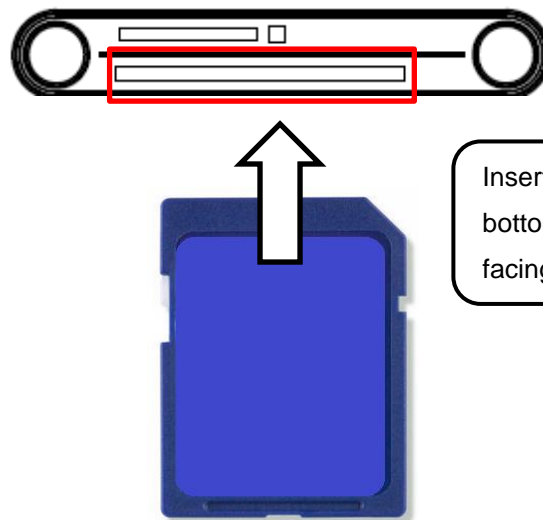
Insert SD Card into the bottom card slot with pins facing **down**.

RTC

Battery backed up RTC (Real Time Clock/Calendar) is built in an on-board CMOS (Complementary Metal Oxide Semiconductor) chip. The RTC keeps track of the time and date while the computer is off. The CMOS chip also stores system setup information.

RTC battery is also recharged when AC adapter is attached. RTC battery can work without being recharged for over a year. That is to say, with regular use, users don't need to recharge it on purpose. However, during long term storage, it is still suggested to recharge the computer every six months to ensure RTC working normally.

Save Guard the Computer

The Kensington lock slot is on the right side of the computer. Plug the Kensington lock into the slot and lock it. Both the computer and SSD are secured.

> *Note:*
> ➢ *Kensington lock is a widely available 3rd party product.*

Wireless Devices (Option)

For your ease of operations, you can turn on/off your wireless devices through the proprietary software application - "**Device Power Manage**r".

> *Note:*
> ➢ *Depending on the configuration of your notebook computer, your Device Power Manager menu may appear differently from the screenshots provided in this section.*
> ➢ *When you adjust User Account Control (UAC), a security feature in Windows, the setting value of Device Power Manager will be affected. So, once there is any adjustment in UAC, please uninstall Device Power Manager and reinstall it again.*

Wireless LAN

1. **Driver & Application Installation**
   a. Install the Chipset Driver first. Read from the Utility DVD and find the directory listed in the readme file to finish installation.
   b. Then, install the Device Power Manager application. Read from the Utility DVD and find the directory listed in the readme file to finish installation.

2. **Launch the Device Power Manager**
   After launching the utility, please click "Wireless LAN" for enabling the Wireless LAN function (click again to disable).

Click "Wireless LAN" to enable the Wireless LAN function (click again to disable).

Once the Wireless LAN function starts up, the wireless device LED indicator will turn on (color blue) and the Wireless LAN icon will appear in the OS accordingly.

Bluetooth

1. **Driver & Application Installation**

   a. Install the Bluetooth driver first. Read from the Utility DVD and find the directory listed in the readme file to finish installation.

   b. Install the Device Power Manager application. Read from the Utility DVD and find the directory listed in the readme file to finish installation.

2. **Launch the Device Power Manager**

   After launching the utility, please click "Bluetooth" to enable the Bluetooth function (click again to disable). Once the Bluetooth function starts up, the wireless LED indicator (color blue) will turn on and the Bluetooth icon will show up in the operating system accordingly.

Click "Bluetooth" to enable the Bluetooth function (click again to disable).

WWAN

1. **Driver & Application Installation**
    a. Please Install the WWAN driver first. For detailed instructions on installation procedures, please read from the Utility DVD and find the directory listed in the readme file. Follow the installation instructions to finish the driver installation.
    b. Install the Device Power Manager application. Read from the Utility DVD and find the directory listed in the readme file to finish installation.

2. **Insert the SIM card:**
    a. Turn OFF your computer.
    b. Remove the SIM card slot cover.
    c. Insert the SIM card into the SIM card slot. To avoid damaging the SIM card slot, please make sure that the golden contact area on the SIM card is facing downward and the beveled corner is facing towards the machine.

3. **Launch the Device Power Manager**
    After launching the application, please click "WWAN" for enabling the WWAN function (click again to disable). Once the WWAN function starts up, the wireless device LED indicator will turn on (color blue).

Click "WWAN" to enable the WWAN function (click again to disable).

4. Enter into OS (Windows 8 as the example)

a. Click "Network" icon on the taskbar.
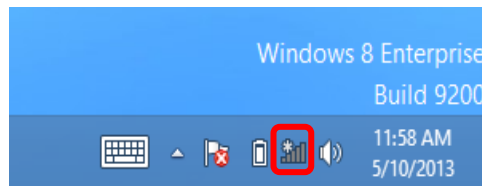
b. Click Mobile broadband for the telecom.
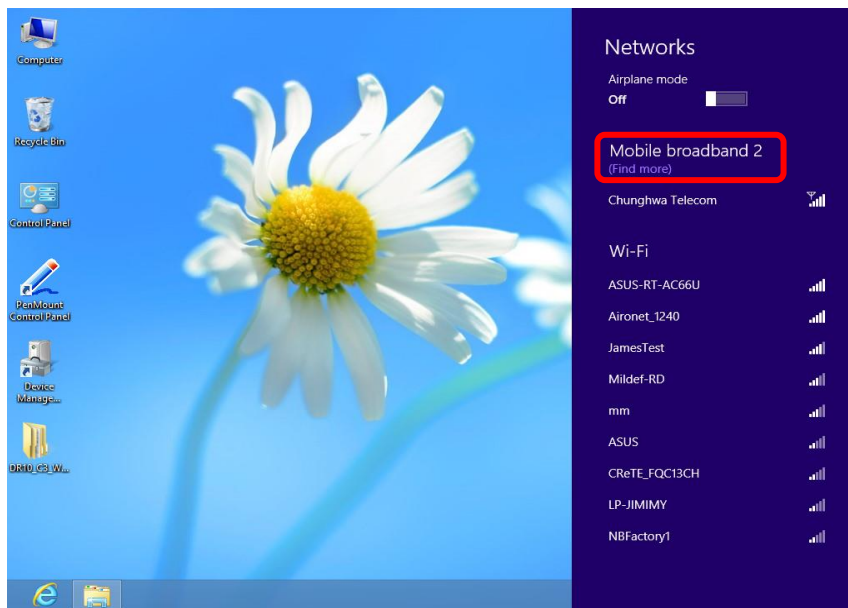
c.   Click "Connect" for connection.
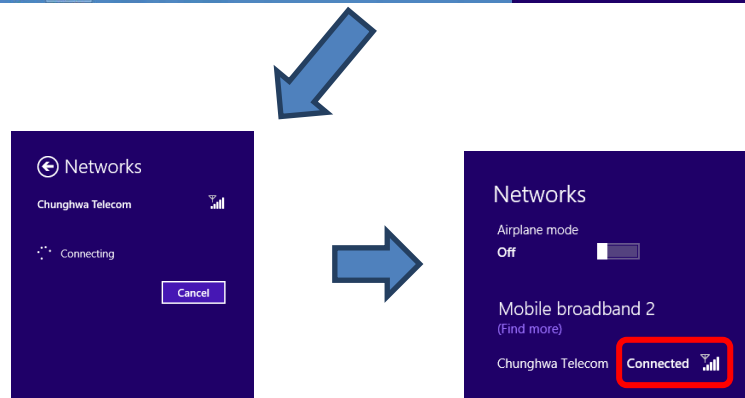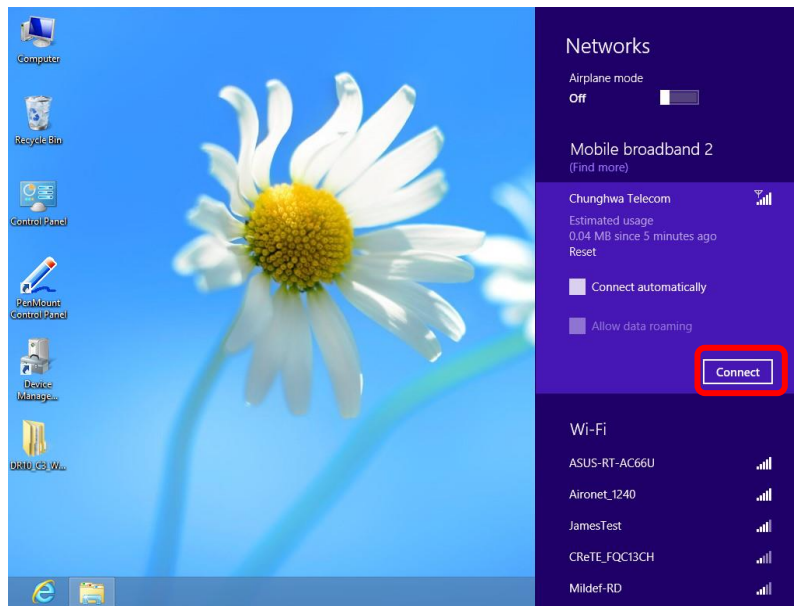
d.   Click "Disconnect" to end the connection
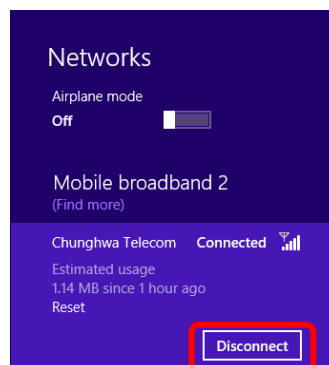
GPS

1. Driver & Application Installation

    a. Install the Device Power Manager application:

       Read from the Utility DVD and find the directory listed in the readme file to finish installation.

    b. Install the GPS driver:

       GPS (Driver): Read from the Utility DVD and find the directory listed in the readme file to finish installation.

Click "GPS" to enable the GPS function (click again to disable).

Note:

Wireless devices can be turned ON/OFF through BIOS. Once a device is turned off through BIOS, its button displayed on the Device Power Manager will turn out to be yellow with a prohibition marker. For example, the following illustration shows that WWAN and GPS devices are disabled through BIOS. To turn on, please enter into BIOS and enable the functions. For more information on BIOS setting, please refer to RF Device Control Configuration Sub-Menu section.

Setting Wake on LAN

Wake-on-LAN (WoL) is an Ethernet or Token ring computer networking standard that allows a computer to be turned on or awakened by a network message. Follow instructions to set WoL.

1. Enter BIOS set up →Advanced → Intel (R) 82579LM Gigabit Network Connection→NIC Configuration → Set Wake on LAN enabled → Save and Exit BIOS

Aptio Setup Utility	
Advanced	
PORT CONFIGURATION MENU NIC Configuration Blink LEDs (range 0-15 seconds) 0 PORT CONFIGURATION INFORMATION UEFI Driver: Intel PRO/1000 5.0.12 Adapter PBA: FFFFFF-OFF Chip Type: Intel PCH2 PCI Device ID 1502 PCI Bus:Device:Function: 0:25:0 Link Status [Disconnected] Factory MAC Address: 88:88:88:88:87:88	Click to configure the network device port →←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

2. Control panel → System → Device Manager → Network adapters→ double click "network adapters cards"

3. Power Manager → check "Allow this device to wake computer" and "Only allow a magic pocket to wake computer"

4. With MAC address of the target computer, you can send Magic Packet to wake up your computer by suitable software.

Chapter Three - Managing Power

AC Adapter

The AC adapter performs two functions:

● It powers the computer from an external AC source.
● It charges the computer battery.

The adapter automatically detects the AC line voltage (100V or 240V) and adjusts accordingly.

The following are recommended when using the AC adapter:

● Use a properly grounded AC outlet.
● Use one AC outlet exclusively for the computer. Having other appliances on the same line may cause interference.
● Use a power strip with built-in surge protection.

Connecting the AC adapter:

● Plug the AC cord to the adapter.
● Plug the other end of the AC cord into the wall outlet. Make sure the green LED on the adapter turns on.
● Attach the DC plug into the power jack of the computer; turn the lock ring clockwise to secure it.

AC Adapter Indicator:

The green LED indicates that AC power is ready.

> *Note:*
> ➢ *To ensure system stability, please connect your computer to an external power source when operating at -20 °C ambient temperature.*

Battery

The power source will automatically switch to battery when the external power source (AC adapter or optional vehicle adapter) is disconnected.

Battery Low

When the battery is nearly exhausted, the computer gives the following "Battery Low" warnings:
● Windows battery low warning (when operating system is Windows).
● The battery charger LED flashes.

Once the Battery Low warning occurs, please:
● Save and close the files you are currently working on.
● Plug in the AC adapter to recharge the battery.

Charging the Battery

Plug in the AC adapter or vehicle adapter to start the battery charging. If the battery is already full, the sense circuitry will stop high current charge within several minutes.

The LED Indicator turns ON when the battery is charging and turns OFF when the battery charge is completed.

Battery Gauge

You may check battery status from battery gauge in Windows. Click the power/battery icon to reveal the battery gauge window.

Battery Power Saving Tips

The computer comes with an intelligent power-saving feature. You may extend the battery life by:
● Setup power saving functions in Operating System Power Management options (e.g. Windows Power Options).
● Lower the intensity of the display by brightness control.
● Use standby option when computer is temporarily not in use.
● Shut down the computer when it will not be for a long-time use.

Replacing Battery

When the battery is nearly exhausted, there are two ways to keep your computer working. Connect the AC adapter and the power cord designed for this notebook computer to start charging is one method; directly replace a charged battery designed for this notebook computer may be the other one.

> *Note:*
> ➢ *Always remember to turn OFF the power before replacing the battery.*

Battery Recalibration

Battery recalibration allows users to maintain the battery in a healthy condition. To perform battery recalibration, please follow the steps as below:

1. Update BIOS & EC to the latest version.
2. Insert the battery to the computer, and connect it to AC adapter.
3. Enter the BIOS => Choose "Advanced menu" => Choose "Battery Recalibration" => Press "Enter".
4. When "Start Battery Recalibration" pop-up appears, press "Yes" to continue.
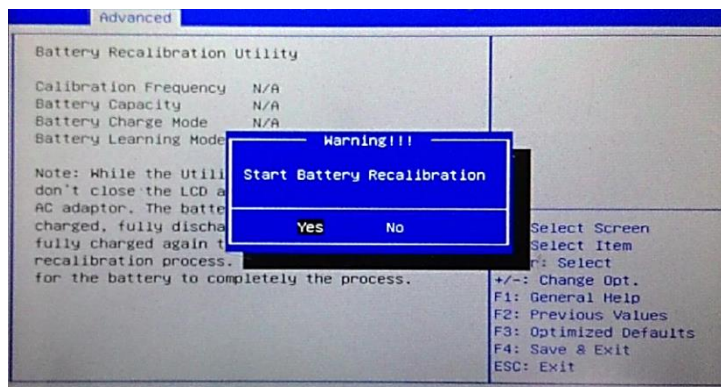
5. The recalibration is now processing. You can see the following recalibration status on the screen:

  - Calibration Frequency: How many times the calibration is processed

  - Battery Capacity: Current battery capacity

  - Battery Charge Mode: Charge/Discharge

  - Battery Learning Mode: Normal (charge)/Learn (discharge)

6. A pop-up appears when the calibration is completed. Then click "OK".
7. Press "Yes" to reboot the computer when "Reset Without Saving" pop-up appears.

> *Note:*
> ➢ *Do not turn off the LCD and do not remove AC adapter during the calibration.*
> ➢ *One cycle of recalibration process indicates "Charge to Full => Start Learn Mode => Discharge => Complete Learn Mode => Charge to Full". It will take approx. eight hours for a cycle.*
> ➢ *It requires five cycles to complete the battery recalibration. Then the recalibration will stop automatically.*
> ➢ *If you want to terminate the calibrating, simply shut down the computer by pressing Power Button or just press "CTRL+ALT+DEL" to restart.*

Power Conservation

This computer consumes much less power than conventional computers. However, power consumption may be reduced by configuring the Power Management Setup properly.

It is recommended the power saving functions to be enabled even when not running on battery power. Power Management will not degrade performance while saving power.

Supporting ACPI

Your notebook computer supports ACPI (Advanced Configuration and Power Interface) for power management. With ACPI and an ACPI-compliant operating system such as Windows, the feature will allow you to reduce the power consumption for energy saving. By supporting ACPI, the AC adapter LED and the Power indicator LED will show in different ways. The followings are the detailed description.

Sleep:
AC adapter LED is ON (while connecting with power)
Power LED indicator is flashing; other LED indicators are OFF

Under Hibernation:
AC adapter LED is ON (while connecting with power)
Power LED indicator is OFF; other LED indicators are OFF

Shutdown:
AC adapter LED is ON (while connecting with power)
Power LED indicator is OFF; other LED indicators are OFF

USB Fast charging

Your computer supports USB fast charging feature, enabling to quickly charge your fast-charging compatible devices. But note, fast charging is not supported for all power modes. The following table shows details for USB Charging information:

Mode		USB3.0 Charging Features
Power off	AC	Fast charging supports
	Battery	No charging
Power on	AC	Normal charging
	Battery	Normal charging
S3	AC	Fast charging supports
	Battery	Fast charging supports

Note:
➢ *When enable USB fast charging from USB CHARGE control in BIOS, please cold boot your computer to enable the function.*

Chapter Four - BIOS Setup

Press **[F2]** at boot up to enter BIOS setup. Use arrow keys to select options and **[+/-]** to modify them. When finished, move to "**Exit**" and press **[Enter]** then confirm save by pressing **[Y]**.

Main Menu

Aptio Setup Utility					
Main	**Advanced**	**Chipset**	**Boot**	**Security**	**Save & Exit**

BIOS Information
BIOS Vendor
Core Version
Compliancy
Project Version
Build Date and Time
EC Version

System Language   [English]

System Date   [Mon 05/20/2013]
System Time   [16:19:20]

Access Level   **Administrator**

Choose the system default language

→←: Select Screen
↑↓: Select Item
Enter: Select
–/+: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

> *Note:*
> ➢ *The contents may vary depending on computer configurations.*
> ➢ *You can check your BIOS/EC Version on the main menu.*
> ➢ *Incorrect settings may cause system malfunction. To correct it, restore the Optimized Defaults with F3.*

Main Menu Selections
You can make the following selections on the Main Menu. Use the sub-menus for other selections.

Feature	Options	Description
System Date	MM/DD/YYYY	Set the Date. Use Tab to switch between Date elements
System Time	HH:MM:SS	Set the Time. Use Tab to switch between Time elements.

Advanced Menu

Aptio Setup Utility					
Main	**Advanced**	**Chipset**	**Boot**	**Security**	**Save & Exit**

► Trusted Computing
► SATA Configuration
► Intel (R) Rapid Start Technology
► USB Configuration
► Super IO Configuration
► RF Device Control
► EC Thermal Control
► USB CHARGE Control
► Battery Recalibration
► Intel (R) Smart Connect Technology
► Network Stack Configuration

► Intel (R) 82579LM Gigabit Network Connection

Trusted Computing Setting

→←: Select Screen
↑↓: Select Item
Enter: Select
–/+: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

Advanced Menu Selections

You can make the following selections on the Advanced Menu.

Feature	Options	Description
Trusted Computing	Disabled Enabled	TPM Support
SATA Configuration	SATA Mode Selection SATA Test Mode Aggressive LPM Support SATA Controller Speed	SATA Mode Selection: IDE/AHCI/RAID SATA Test Mode: Enabled/Disabled Aggressive LPM Support: Enabled/Disabled SATA Controller Speed: Gen1/Gen2/Gen3
Intel (R) Rapid Start Technology	Disabled Enabled	Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.
USB Configuration	Disabled Enabled	Legacy USB Support USB3.0 Support XHCI Hand-off EHCI Hand-off Generic Storage Device 0.00
Super IO Configuration	Serial Port 0 Configuration Serial Port 1 Configuration Serial Port 2 Configuration Serial Port 3 Configuration	Set Parameters of Serial Port o (COMA)
RF Device Control	Disabled Enabled	GSM/GPS/BLUETOOTH/WLAN
EC Thermal Control		Thermal cooling trip point
AC IN BOOT Control	Disabled Enabled	
USB CHARGE Control	Disabled Enabled	

Feature	Options	Description
Battery Recalibration		Start Battery recalibration function
Intel Smart Connect Technology	Disabled Enabled	Intel Smart Connect Technology Settings
Intel 82579LM Gigabit Network Connection	NIC Configuration Blink LEDs (range 0/15 seconds) Link Status	Configure Gigabit Ethernet device parameters

Trusted Computing Sub-Menu

Aptio Setup Utility		
Advanced		
Configuration Security Device Support	[Disabled]	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.
Current Status Information SUPPORT TURNED OFF		
		→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

SATA Configuration Sub-Menu

Aptio Setup Utility		
Advanced		
SATA Mode Selection	[AHCI]	Determine how SATA controller(s) operate.
SATA Test Mode	[Disabled]	
Aggressive LPM Support	[Enabled]	
SATA Controller Speed	[Gen3]	
Serial ATA Port 0	**HGST HTS725050 (500.1GB)**	
Software Preserve	**SUPPORTED**	→←: Select Screen
Serial ATA Port 0	**Empty**	↑↓: Select Item
Software Preserve	**Unknown**	Enter: Select
Serial ATA Port 0	**Empty**	–/+: Change Opt.
Software Preserve	**Unknown**	F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit

SATA Configuration Sub-Menu Selections

You can make the following selections on the SATA configuration sub-menu.

Feature	Options	Description
SATA Mode Selection	IDE AHCI RAID	
SATA Test Mode	Disabled Enabled	Enable or Disable Test Mode
Aggressive LPM Support	Disabled Enabled	Enable PCH to aggressively enter link power state.
SATA Controller Speed	Gen1 Gen2 Gen3	Indicate the maximum speed the SATA controller can support.

Intel (R) Rapid Start Technology Sub-Menu

Aptio Setup Utility	
Advanced	
Intel (R) Rapid Start Technology [Disabled]	Enable or disable Intel (R) Rapid Start Technology
	→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

USB Configuration Sub-Menu

Aptio Setup Utility	
Advanced	
USB Configuration **USB Devices:** **2 Hubs** Legacy USB Support [Enabled] USB3.0 Support [Enabled] XHCI Hand-off [Enabled] EHCI Hand-off [Enabled]	Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. Disable option will keep USB devices available only for EFI applications
	→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

USB Configuration Sub-Menu Selections

You can make the following selections on the USB configuration sub-menu.

Feature	Options	Description
Legacy USB enabled	Disabled Enabled Auto	Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.
USB3.0 Support	Disabled Enabled	Enable/Disable USB3.0 (XHCI) Controller support.
XHCI Hand-off	Disabled Enabled	This is a workaround for OSes without XHCI hand-off support. This XHCI ownership change should be claimed by XHCI driver.
EHCI Hand-off	Disabled Enabled	This is a workaround for OSes without EHCI hand-off support. This EHCI ownership change should be claimed by EHCI driver.

Super IO Configuration Sub-Menu

Aptio Setup Utility	
Advanced	
Super IO configuration	Set Parameters of Serial Port 0 (COMA)
Super IO Chip **IT8760**	
►Serial Port 0 Configuration	
►Serial Port 1 Configuration	
►Serial Port 2 Configuration	
►Serial Port 3 Configuration	→←: Select Screen
	↑↓: Select Item
	Enter: Select
	–/+: Change Opt.
	F1: General Help
	F2: Previous Values
	F3: Optimized Defaults
	F4: Save & Exit
	ESC: Exit

Super IO Configuration Sub-Menu Selections

You can make the following selections on the IT8783F super IO configuration sub-menu.

Feature	Options	Description
Serial Port	Disabled Enabled	Enable or Disable Serial Port (COM)
Change Settings	Auto IO=3F8h; IRQ=4; IO=3F8h; IRQ=3,4,5,6,7,10,11,12; IO=2F8h; IRQ=3,4,5,6,7,10,11,12; IO=3E8h; IRQ=3,4,5,6,7,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,10,11,12;	Select an optimal setting for Super IO device.

RF Device Control Configuration Sub-Menu

Aptio Setup Utility		
Advanced		
RF Device Control		RF Device Control Setting
GSM STATUS	**Present**	
GSM	[Enabled]	
GPS STATUS	**Present**	→←: Select Screen
GPS	[Enabled]	↑↓: Select Item
BT STATUS	**Present**	Enter: Select
BLUETOOTH	[Enabled]	–/+: Change Opt.
WLAN STATUS	**Present**	F1: General Help
WLAN	[Enabled]	F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit

RF Device Control Configuration Sub-Menu Selections

You can make the following selections on the RF Security Control sub-menu.

Feature	Options	Description
GSM	Disabled Enabled	RF Device Control Setting
GPS	Disabled Enabled	RF Device Control Setting
BLUETOOTH	Disabled Enabled	RF Device Control Setting
WLAN	Disabled Enabled	RF Device Control Setting

EC Thermal Control Sub-Menu

Aptio Setup Utility	
Advanced	
EC Thermal Control Thermal cooling trip point [87 C]	EC Thermal Control Setting
	→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

AC IN BOOT Sub-Menu

Aptio Setup Utility	
Advanced	
AC IN BOOT Control AC IN BOOT Control [Disabled]	AC IN BOOT Setting
	→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

USB CHARGE Control Sub-Menu

Aptio Setup Utility	
Advanced	
USB CHARGE Control	USB CHARGE Setting
USB CHARGE Control [Disabled]	
	→←: Select Screen
	↑↓: Select Item
	Enter: Select
	–/+: Change Opt.
	F1: General Help
	F2: Previous Values
	F3: Optimized Defaults
	F4: Save & Exit
	ESC: Exit

Note:

➢ *After enabling USB fast charge function, please cold boot your computer.*

Battery Recalibration

Aptio Setup Utility	
Advanced	
Battery Recalibration Utility	
Calibration Frequency Battery Capacity Battery Charge Mode Battery Learning Mode	
Note: For Primary battery (left hand side) only, while the Utility is executing, please remove secondary battery (right hand side) and don't close the LCD and don't disconnect the AC adapter. The battery is first fully charged, dully discharged, and then it will be fully charged again to complete the battery recalibration process. About 8hrs is needed for the battery to completely the process.	→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Intel Smart Connect Technology Sub-Menu

Aptio Setup Utility		
Advanced		
ISCT Configuration	[Disabled]	Enable/Disable ISCT Configuration
		→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Intel 82579LM Gigabit Network Connection Sub-Menu

Aptio Setup Utility	
Advanced	
PORT CONFIGURATION MENU NIC Configuration Blink LEDs (range 0-15 seconds)　　0 PORT CONFIGURATION INFORMATION	Click to configure the network device port
UEFI Driver:　　　　Intel PRO/1000 5.0.12 Adapter PBA:　　　　FFFFFF-OFF Chip Type:　　　　Intel PCH2 PCI Device ID　　　　1502 PCI Bus:Device:Function:　　0:25:0 Link Status　　　　[Disconnected] Factory MAC Address:　　88:88:88:88:87:88	→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

INTEL 82579LM Gigabit Network Connection Sub-Menu Selections

You can make the following selections on the RF Security Control sub-menu.

Feature	Options	Description
NIC Configuration	LINK Speed	Change link speed and duplex for current port.
	Wake on LAN	Enable this option to wake the system with a magic packet.
Blink LEDs (range 0-15 seconds)		Blink LEDs for the specified duration (up to 15 seconds).

Network Stack Configuration Sub-Menu

Aptio Setup Utility		
Advanced		
		Wait time to press ESC key to abort the PXE boot
Network Stack	[Enabled]	
Ipv4 PXE Support	[Enabled]	
Ipv6 PXE Support	[Enabled]	
PXE boot wait time	0	
		→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Network Stack Configuration Sub-Menu Selections

You can make the following selections on the Network stack configuration sub-menu.

Feature	Options	Description
PXE boot wait time	0~5	Wait time to press ESC key to abort the PXE boot

Note:
➢ *The value of PXE boot wait time can be set from 0~5.*

Chipset Menu

Main	Advanced	Chipset	Boot	Security	Save & Exit

► PCH-IO Configuration ► System Agent (SA) Configuration	PCH Parameter
	→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

PCH-IO Configuration Sub-Menu

Intel PCH RC Version	1.6.0.0	PCI Express Configuration settings
Intel PCH SKU Name	QM77	
Intel PCH Rev ID	04/C1	
► PCI Express Configuration		→←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
► USB Configuration		
► PCH Azalia Configuration		
PCH LAN Controller	[Enabled]	

PCI Express Configuration Sub-Menu

Aptio Setup Utility	
Advanced	
	Enable or disable PCI Express Clock Gating for each root port
PCI Express Configuration	
PCI Express Clock Gating [Enabled]	
DMI Link ASPM Control [Enabled]	
DMIO Link Extended Synch Control [Disabled]	
PCIe-USB Glitch W/A [Disabled]	
Subtractive Decode [Disabled]	→←: Select Screen
	↑↓: Select Item
► PCI Express Root Port 1	Enter: Select
► PCI Express Root Port 2	–/+: Change Opt.
► PCI Express Root Port 3	F1: General Help
► PCI Express Root Port 4	F2: Previous Values
► PCI Express Root Port 5	F3: Optimized Defaults
PCIE Port 6 is assigned to LAN	F4: Save & Exit
► PCI Express Root Port 7	ESC: Exit
► PCI Express Root Port 8	

USB Configuration Sub-Menu

Aptio Setup Utility		
Advanced		
		Enable or disable XHCI Pre-Boot Driver support
USB Configuration		
XHCI Pre-Boot Driver	[Enabled]	
xHCI Mode	[Smart Auto]	
HS Port #1 Switchable	[Enabled]	
HS Port #2 Switchable	[Enabled]	
HS Port #3 Switchable	[Enabled]	
HS Port #4 Switchable	[Enabled]	→←: Select Screen
xHCI Streams	[Enabled]	↑↓: Select Item
		Enter: Select
EHCI1	[Enabled]	–/+: Change Opt.
		F1: General Help
EHCI2	[Enabled]	F2: Previous Values
		F3: Optimized Defaults
USB Ports Per-Port Disable Control	[Disabled]	F4: Save & Exit
		ESC: Exit

PCH Azaliz Configuration Sub-Menu

Aptio Setup Utility		
Advanced		
PCH Azalia Configuration		Control Detection of the Azalia device.
Azalia	[Auto]	
Azalia Docking Support	[Disabled]	
Azalia PME	[Disabled]	
Azalia Interbal HDMI Codec	[Enabled]	
Azalia HDMI codec Port B	[Enabled]	→←: Select Screen
Azalia HDMI codec Port C	[Enabled]	↑↓: Select Item
Azalia HDMI codec Port D	[Enabled]	Enter: Select
		–/+: Change Opt.
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit

Boot Menu

<table>
<tr><td colspan="6" align="center">**Aptio Setup Utility**</td></tr>
<tr><td>**Main**</td><td>**Advanced**</td><td>**Chipset**</td><td>**Boot**</td><td>**Security**</td><td>**Save & Exit**</td></tr>
<tr><td colspan="4">**Boot mode select**　　　　　[UEFI]</td><td colspan="2">Select boot mode LEGACY/UEFI</td></tr>
<tr><td colspan="4">**FIXED Boot ORDER Priorities**</td><td colspan="2"></td></tr>
<tr><td colspan="4">Boot Option #1　　　[Hard Disk: Windows B…]</td><td colspan="2">→←: Select Screen</td></tr>
<tr><td colspan="4">Boot Option #2　　　[CD/DVD]</td><td colspan="2">↑↓: Select Item</td></tr>
<tr><td colspan="4">Boot Option #3　　　[USB Hard Disk]</td><td colspan="2">Enter: Select</td></tr>
<tr><td colspan="4">Boot Option #4　　　USB CD/DVD]</td><td colspan="2">–/+: Change Opt.</td></tr>
<tr><td colspan="4">Boot Option #5　　　[USB Key]</td><td colspan="2">F1: General Help</td></tr>
<tr><td colspan="4">Boot Option #6　　　[USB Floppy]</td><td colspan="2">F2: Previous Values</td></tr>
<tr><td colspan="4">Boot Option #7　　　[Network]</td><td colspan="2">F3: Optimized Defaults</td></tr>
<tr><td colspan="4"></td><td colspan="2">F4: Save & Exit</td></tr>
<tr><td colspan="4">►CSM parameters</td><td colspan="2">ESC: Exit</td></tr>
<tr><td colspan="4"></td><td colspan="2"></td></tr>
<tr><td colspan="4">►UEFI Hard Disk Drive BBS Priorities</td><td colspan="2"></td></tr>
<tr><td colspan="4">►UEFI NETWORK Drive BBS Priorities</td><td colspan="2"></td></tr>
</table>

The system will try to boot from device on top then the 2nd and so on. If there is more than one device in each category, only the device on top of sub-menu can boot up.

Boot Menu Selections

You can make the following selections on the Boot menu.

Feature	Options	Description
Boot mode select	LEGACY UEFI	Select boot mode LEGACY/UEFI
Boot Option #1	Hard Disk: Windows Boot Manager CD/DVD USB Hard Disk USB CD/DVD USB Key USB Floppy Network Disabled	Sets the system boot order

Boot Option #2	Hard Disk: Windows Boot Manager CD/DVD USB Hard Disk USB CD/DVD USB Key USB Floppy Network Disabled	Sets the system boot order
Boot Option #3	Hard Disk: Windows Boot Manager CD/DVD USB Hard Disk USB CD/DVD USB Key USB Floppy Network Disabled	
Boot Option #4	Hard Disk: Windows Boot Manager CD/DVD USB Hard Disk USB CD/DVD USB Key USB Floppy Network Disabled	
Boot Option #5	Hard Disk: Windows Boot Manager CD/DVD USB Hard Disk USB CD/DVD USB Key USB Floppy Network Disabled	
Boot Option #6	Hard Disk: Windows Boot Manager CD/DVD USB Hard Disk USB CD/DVD USB Key USB Floppy Network Disabled	

Boot Option #7	Hard Disk: Windows Boot Manager CD/DVD USB Hard Disk USB CD/DVD USB Key USB Floppy Network Disabled	
CSM parameters	Launch CSM Boot option filter Launch PXE OpROM policy Launch Storage OpROM policy Launch Video OpROM policy Other PCI device ROM priority	OpROM execution, boot options filter, etc
UEFI Hard Disk Drive BBS Priorities	Boot Option #1 [Windows Boot Manager] Boot Option #2 [Windows Boot Manager]	Sets the system boot order
UEFI NETWORK Drive BBS Priorities	Boot Option #1 [UEFI: IP6 Intel] Boot Option #2 [UEFI: IP4 Intel]	Sets the system boot order

Note:
➢ *IPv6 is supported only under UEFI mode, while IPv4 can be supported under both UEFI and Legacy mode.*

Security Menu

	Aptio Setup Utility				
Main	**Advanced**	**Chipset**	**Boot**	**Security**	**Save & Exit**

Password Description **If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup**. **If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights.** **The password length must be in the following range;** **Minimum length 3** **Maximum length 20** Administrator Password User Password Secure Boot menu HDD Security Configuration: PO: INTEL SSDSC2	Set Administrator Password →←: Select Screen ↑↓: Select Item Enter: Select –/+: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Save & Exit Menu

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit

Save Changes and Exit
Discard Changes and Exit
Save Changes and Reset
Discard Changes and Reset

Save Options
Save Changes
Discard Changes

Restore Defaults
Save as User Defaults
Restore User Defaults

Boot Override
Windows Boot Manager

Exit system setup after saving the changes

→←: Select Screen
↑↓: Select Item
Enter: Select
–/+: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

Chapter Five - Drivers and Applications

The Utility DVD includes all the drivers for the devices installed in your tablet computer. Please consult your dealer if there are any driver missing. Also, you could update the driver or check if there any driver need to be installed by "Windows device manager". Please check the "readme.txt" file on Utility DVD to get the information for driver installation.

> *Note:*
> ➢ *Please install the chipset driver first.*
> ➢ *Please choose the corresponding drivers according to your OS. For example, if you have Windows 8.1 OS, please install the drivers for Windows 8.1.*
> ➢ *If the system requests for a reboot after installing, please restart your notebook computer before installing any other drivers.*

Chipset

Please refer to the "readme.txt" file from the Utility DVD for the Chipset driver installation.

VGA

Please refer to the "readme.txt" file from the Utility DVD for the VGA driver installation.

Audio

Your computer equipped with a high definition audio device. To activate this function, please refer to the "readme.txt" file from the Utility DVD for the Audio driver installation.

Intel ME

Please refer to the "readme.txt" file from the Utility DVD for the Intel ME driver installation.

Intel Rapid Storage Technology

Please refer to the "readme.txt" file from the Utility DVD for the Intel Rapid Storage Technology driver installation.

Wireless Power Manager

Please refer to the "readme.txt" file from the Utility DVD for the Wireless Power Manager installation.

Touch Pad

Please refer to the "readme.txt" file from the Utility DVD for the Touch Pad driver installation.

Turbo Boost Monitor

Please refer to the "readme.txt" file from the Utility DVD for the Turbo Boost Monitor installation.

Gigabit LAN (Intel 82579)

Please refer to the "readme.txt" file from the Utility DVD for the Gigabit LAN installation.

2nd Gigabit LAN RTL8111E(Optional)

Please refer to the "readme.txt" file from the Utility DVD for the 2nd Gigabit LAN driver installation.

WiFi (Option)

Launch the "Wireless Power Manager" to turn on the WIFI device, and then please refer to the "readme.txt" file from the Utility DVD for the WiFi driver installation.

Bluetooth (Optional)

Launch the "Wireless Power Manager" to turn on the Bluetooth device, and then please refer to the "readme.txt" file from the Utility DVD for the Bluetooth driver installation.

GPS (Optional)

Launch the "Wireless Power Manager" to turn on the GPS device, and then please refer to the "readme.txt" file from the Utility DVD for the GPS driver installation.

WWAN (Optional)

Launch the "Wireless Power Manager" to turn on the WWAN device first, and then please refer to the "readme.txt" file from the Utility DVD for the GPS driver installation.

TPM (Option)

Please make sure that TPM device is enabled in the BIOS, and then please refer to the "readme.txt" file from the Utility DVD for the TPM driver installation.

USB3.0 (For Windows 7)

Please refer to the "readme.txt" file from the Utility DVD for the USB3.0 driver installation.

> *Note:*
> ➢ *USB3.0 driver is required if the OS is Windows 7.*

Chapter Six - Specifications

Platform

● Intel® Chief River Platform

CPU

● Intel® Core™ i7-3517UE 1.7GHz Processor with Turbo Boost Technology up to 2.8GHz
(4MB Intel® Smart Cache Memory)

CPU runs at multiple speeds depending on the CPU type and operating system. Also, CPU speed switches automatically by detecting AC adapter/ battery operation and busy state.

PCH

● Intel® Panther Point QM77

Memory

● 4/8GB System Memory
● DDR3 SO-DIMM 1600MHz x 1

Display

● Type: 15.6" Widescreen (LED Backlight)
● Resolution: 1920 x 1080
● Brightness: 225~270 nits (min.~typ.)
● AG Glass
● Optical Bonding

Keyboard

● Number of keys: 87 Keys (standard 87-key with backlight)
● Key Travel: 1.4 ± 0.2 (mm)
● Caps Lock LED (Green)

Touchpad

- Type: Capacitive Touchpad with Multi-touch
- Interface: PS/2

Solid State Drive (SSD)

- Type: 2.5" (Removable)
- Height: 7mm
- Interface: SATA II/III SSD

I/O Ports

Left:
- SD Card Slot x 1*
- SIM Card Slot x 1

Std.
- GLAN RJ45 (on board Intel GLAN)
- USB 3.0
- USB 3.0**

Bottom:
- Multi Bay port x 1***

Rear:
- DC-in Connector x 1 (Standard 2-pin; optional Military 3-pin)
- Optional DC-in 12~32V with BVA & Surge Protector
- Optional Fischer connectors can include 5 functions:
    - USB2.0 x 1
    - VGA x 1
    - RS232 x 1
    - GLAN x 1
    - Audio x 1

> *Note:*
>
> ➢ **SD card slot supports SD/SDHC/SDXC/UHS-I format.*
>
> ➢ ***1 x USB3.0 with USB-IF BC V1.2 for 1.5A fast charger*
>
> ➢ ****The Multi Bay will be installed under the base. Signals include: PCI-e x 1, USB3.0 x 1, USB2.0 x 1, Power (VBTA/1A & 5V/1A)*

Power

Battery (BRSB3A):
- Type: Removable Li-ion Polymer Battery Pack
- Capacity: 11.1V 6040mAh
- Dimension: 327.4 mm (W) x 90.7 mm (D) x 15.2 mm (H)
- Weight: 448g

AC Adapter:
- AC Input: 100 - 240V
- Frequency: 50/60Hz
- DC Output: 19V
- Maximum Power: 90 Watts

DC-in 19V:
- Standard: DC-in 2 pin
- Optional: Military 3 pin

Optional DC-in 12~32V with BVA & Surge Protector:
- Need to choose the optional BVA & Surge Protector Module

System Unit Dimensions and Weight

- Dimensions (mm):
  386 (L) x 299 (W) x 32 (H) (with Bumper)
  382 (L) x 295 (W) x 25 (H) (without Bumper)

- Weight: 3.7kg

Note:
➢ *Weight includes battery, SSD, and RF modules. Weight varies depending on system configurations.*

Materials and Recycling

Materials of the computer are as follows:
- Plastic Case: Recyclable UL grade PC + ABS GE C2800 or C6200
- Aluminum Case: AL6061T6
- Bracket: Aluminum 5052, Steel with nickel plating, stainless steel S304
- Cushion Pad/Button: Natural Rubber
- PCB: FR-4, UL 94V0
- Battery: Rechargeable Li-polymer
- Packing: Carton- Recycled/Recyclable Paper (unbleached)
                        Cushion- Recyclable EPE
                        Quick Guide- Recycled/Recyclable Paper

Please recycle the parts according to the local regulations.

Environmental Specifications

- Temperature: Std. -20 ~ +60ºC (-4 ~ +140ºF)   operating
                  Opt. -30 ~ +60ºC (-22 ~ +140ºF)*   operating
                  -40 ~ +70ºC (-40 ~ +158ºF)   storage
- Humidity: 5~95% Non-condensing   operating
                  95% maximum   storage
- Altitude: 0 ~ 4,572 meters (0 ~ 15,000 feet)   operating

> **Note:**
> ➤ *LCD adds heater for optional operating temperature.*

Certifications

CE, FCC, WEEE, REACH, RoHS2.0, IP65 (Open Port), MIL-STD-810G, MIL-STD-461F, Explosive Atmosphere/Solar Radiation

Chapter Seven - Optional Devices

Communication

- WiFi/Bluetooth:
- Intel® Centrino® Advanced-N 6235, Dual Band
- Board Form Factor: PCIe Half Mini Card
- Wi-Fi Certified: 802.11 a/b/g/n
- Bluetooth: Supports BT 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)
- Interface: PCIe (WiFi)/USB (BT)
- WWAN: Gobi 3000 (USB interface, Mini PCIe form factor)
- GPS: u-blox LEA-6H (USB interface)
- 2nd Gigabit LAN: 1Gbps (internal Mini PCIe Card)

WebCam

An optional WebCam featuring in 1MP, HD 720p can be equipped for camera functions, such as recording videos or shooting images.

Memory

The memory card will expand your memory to facilitate better system performance. Industrial grade DDR3 SO-DIMM x 1 is available, supporting 4GB or 8GB DDR3 1600 memory cards.

Mil. Fischer Connector

Optional Fischer connectors provide solutions for users to operate the device in harsh environment. Signals designed for usage include USB2.0, VGA, RS232, GLAN, and Audio.

Surge Protector/BVA Module

Surge protector and BVA functions are integrated into one module in the computer. The module features in converting power from car lighters or truck batteries to DC +19V and contains the reverse polarity protection and the clamping of high voltage input.

Test Cable

The following shows optional test cables available for usage:

- Optional 1M VGA Test Cable (Fischer 9p to DB15)

- Optional 1M RS232 Test Cable (Fischer 9p to DB9)

- Optional 1M GLAN Test Cable (Fischer 9p to RJ45)

- Optional 20cm USB Test Cable (Fischer 5p to USB)

- Optional 10cm Audio Test Cable (Fischer 5p to Audio Jack 3.5Φ)

Trust Platform Module (TPM)

There is an optional Trust Platform Module (TPM) equipped with this notebook computer for users to strengthen the security.

With TPM, users are able to encrypt the folders and files directly and make the important file be more secure and be with an additional protection. In other words, your TPM-encrypted files are basically protected with two layers. Even if your TPM-encrypted files are hacked, the files can not to be read without passwords and TPM chipset.

DockUnder DURS

DockUnder DURS is designed to utilize for system unit docking. AC adapter is able to attach directly to DockUnder. After docking and switching on DURS, the system power will be charged. You can find all necessary drivers in the Utility DVD to make DURS work correctly.

External Ports	Internal Ports

A. Serial Port DB9 x 2
     Default: RS232
     Optional: RS422, RS485
B. USB 2.0 x 1
C. USB 3.0 x 1
D. VGA x 1
E. MLAN x 1
F. GLAN x 1
	A. PCI slot x1 & mini PCIe slot x 1
	B. PCIe Slot x 1 (Optional) *
	C. SATAⅡ ODD (Optional) **
	
	* Trade-off between A and B
	** PCI cards longer than 21 cm will be unavailable if adopting C.

Chapter Eight - Maintenance and Service

Cleaning

ALWAYS turn OFF the power, unplug the power cord and remove the battery before cleaning.

The exterior of the system and display may be wiped with a clean, soft, and lint-free cloth. If there is difficulty removing dirt, apply non-ammonia, non-alcohol based glass cleaner to the cloth and wipe.

An air gun is recommended for cleaning water and dust. For salty water please clean with fresh water then blow-dry with an air gun. Be sure not to turn the computer upside-down while there is water being applied.

Troubleshooting

Should the computer fail to function properly, the troubleshooting steps below may be followed.

● Check AC/vehicle adapter, battery, and the power source.
● Minimize the configuration, i.e. remove extra peripherals and devices.
● Remove the software suspected.
● Set BIOS fail-safe default.
● Re-install operating system and application software.

RMA Service

If troubleshooting steps are unsuccessful, consult your dealer for RMA. Shipping instructions:

1. Remove any personal disks or other media.

2. Use the original shipping container and packing materials, if possible.

3. If the original packing materials are not available, wrap the equipment with soft material (e.g. PU/PE form) then put the wrapped equipment into a hard cardboard shipping box.

4. Include a sheet with the following information: (Note: Please keep a copy of this sheet for your records)
    - Name
    - Address
    - Unit serial number
    - Place and date of purchase or the original invoice number
    - Date of failure
    - A DETAILED Description of the problems you have encountered
    - A list of the hardware/software configuration, if applicable.

5. Clearly mark the outside of the shipping box with the RMA #. If RMA # is not present on the shipping box, receiving will be unable to identify it and it might be returned.

6. Unless prior arrangements have been made, the customer is responsible for all shipping costs. Unauthorized use of the company's shipping accounts is not permitted.