TABLET COMPUTER

DS13

USER'S GUIDE
(Preliminary Version)

BC

Notice

Trademarks

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.

RF exposure warming

This equipment must be installed and operated in accordance with provided instructions and antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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.

Federal Communications Commission regulatory compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:
This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

● Reorient or relocate the receiving antenna.

● Increase the separation between the equipment and receiver.

● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

● Consult the dealer or an experienced radio/TV technician for help.

I**mportant:**
Changes or modifications to this product not authorized by MilDef could void the electromagnetic compatibility (EMC) and wireless compliance and negate your authority to operate the product.
In order to maintain compliance with FCC regulations, compliant peripheral devices and shielded cables must be used with this equipment.

CE Declaration of Conformity

C E ①

The device is hereby 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 Directive (2014/30/EC) and Complies with the essential requirements of Article 3 of the R&TTE 2014/53/EC Directive, if used for its intended use and that the following standards have been applied:

1. **Health (Article 3.1(a) of the R&TTE Directive)**
   Applied Standard(s):
   EN 50566

   EN 62479:2010

   IEC 62209-2:2010

2. **Safety (Article 3.1(a) of the R&TTE Directive)**
   Applied Standard(s):
   EN 60950-1:2006 /A11:2009 /A1:2010 /A12:2011 /A2:2013

3. **Electromagnetic compatibility (Article 3.1 (b) of the R&TTE Directive)**
   Applied Standard(s):
   EN 301 489-1 V2.1.1/ -17 V3.1.1

4. **Radio frequency spectrum usage (Article 3.2 of the R&TTE Directive)**
   Applied Standard(s):
   EN 300 328 V2.1.1

5. **Electromagnetic Compatibility Directive (2004/108/EC)**
   EN 55032: 2012

   EN 55022:2010

   EN 55024:2010+A1:2015

   EN 61000-3-2:2014

   EN 61000-3-3:2013

Power Conservation

This computer consumes less power compared to conventional consumer computers. The power consumption may be further reduced by properly configuring the Power Management Setup.

It is recommended that the power saving features be enabled even when not running on battery power. Power Management features can conserve power without degrading system performance.

Power Safety

There are specific power requirements for your computer:

- Only use an approved AC adapter designed for this computer.
- There is a 3-prong grounded plug for the AC adapter. The 3rd prong is an important mechanism for ensuring product safety. Please do not neglect the importance of this mechanism. If you are unable to access a compatible outlet, please hire a qualified electrician to install a compatible outlet for you.
- When unplugging the AC power cord, please make sure to disconnect the cord by pulling from the plug head instead of pulling from the wire to prevent wire damage.
- Make sure the power outlet and any other extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, please make sure it is disconnected from any external power source.

> ⚠️ *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 to prevent your computer from accidentally turning on.*

Battery Precautions

- Only use batteries designed for this computer. Using incompatible battery types may cause explosion, leakage or damage to the computer.
- Do not remove the battery from the computer while the computer 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 charger designed for this computer to recharge the battery. Incorrect recharging may cause the battery to explode.
- Do not try to repair a battery by yourself. For battery service or replacement, please contact with your service representatives.
- Please dispose damaged battery promptly and carefully. Explosion or leakage may occur, if the battery is improperly handled or discarded.

Notice:

For safety, charging will stop if the internal temperature of the battery is out of range(<0°C; >50°C). Please note that charging could have stopped before the ambient temperature reaching these boundaries because the internal temperature of the battery does not equal to the ambient temperature.

⚠️ *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 with 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 reuse or recycle most of the materials in a safe way after the product's service life.

- For more information on collection, reuse and recycle of materials, please consult local or regional waste administrations 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 1 - Getting Started

Unpacking

The following components come with your computer. If anything is missing or damaged, please notify the dealer immediately.

- Computer unit
- AC Adapter
- AC Power Cord
- Utility DVD
- Quick Guide
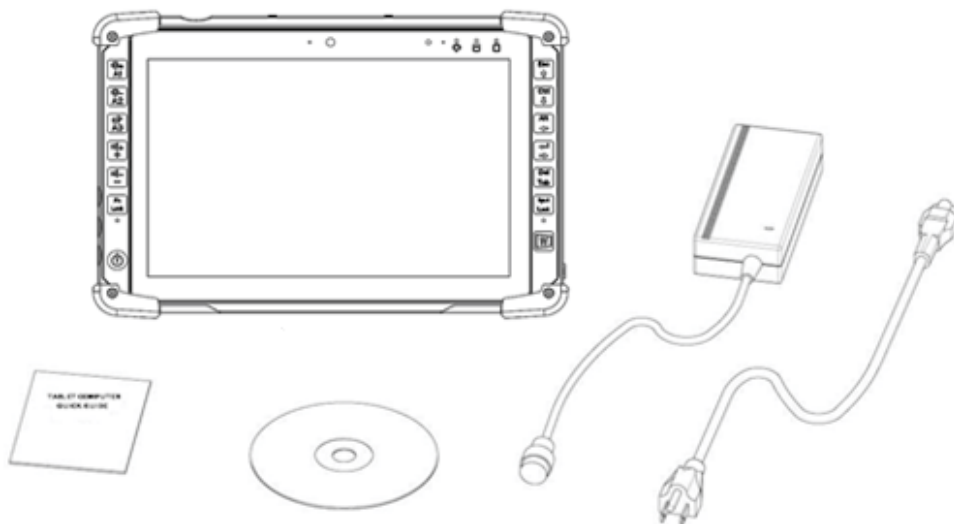
Appearance Overview

Front
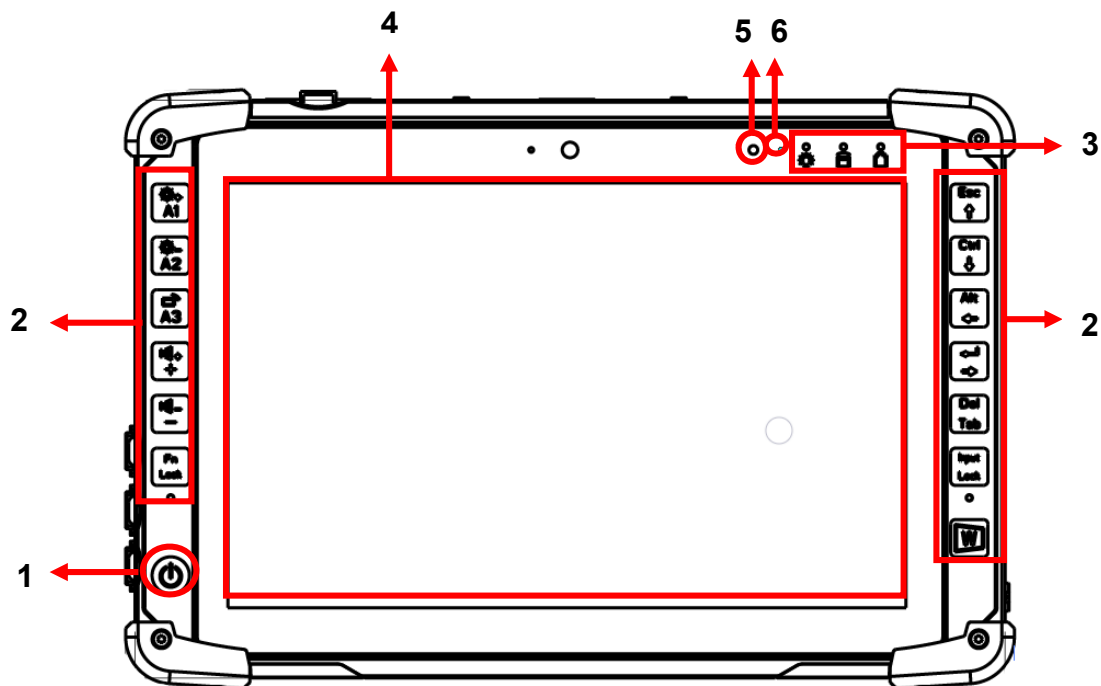
1. Power Button
2. Function keys & Input Lock Key
3. LED Indicators
4. Touch Screen
5. Light sensor
6. Embedded digital Mic

Rear
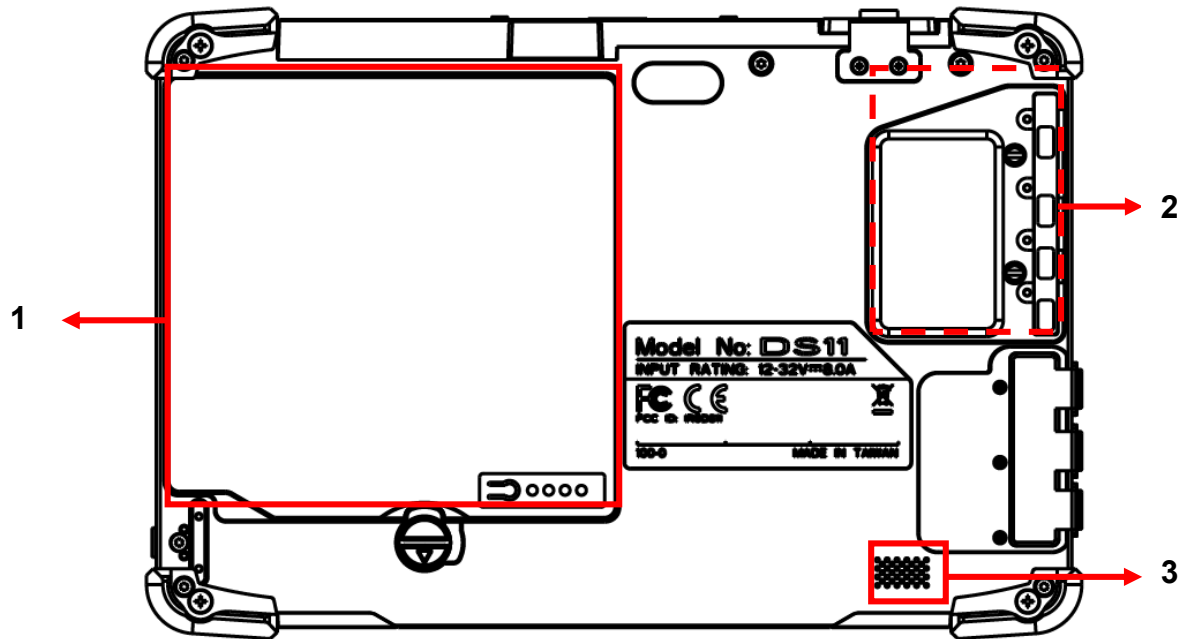
1. Removable battery pack

2. Removable mSATA SSD

3. HD Audio & mono Speaker

Left
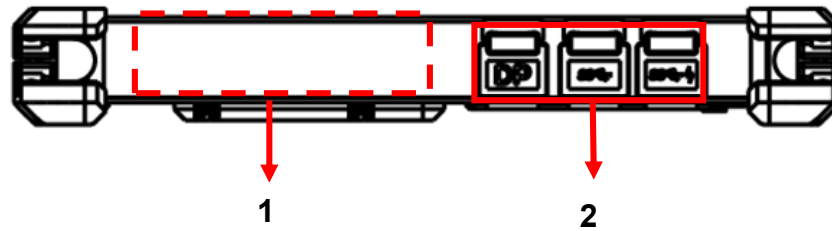
1. Optional Fischer I/O (From left to right X4, X3, X2, X1)

   Choose 1~4 out of 6 as below:
   - USB 2.0 x1
   - COM x 2 (RS232 x 2 or RS232 x1/RS422 x 1)
   - 2nd GLAN x1
   - Audio x1
   - Sealed Headset (Headphone out/Mic-in Combo) x1

2. Standard: Mini DisplayPort x 1/USB3.1 x 2

   Optional: Mini DisplayPort x 1/USB3.1 x 1/ GLAN x 1

Right
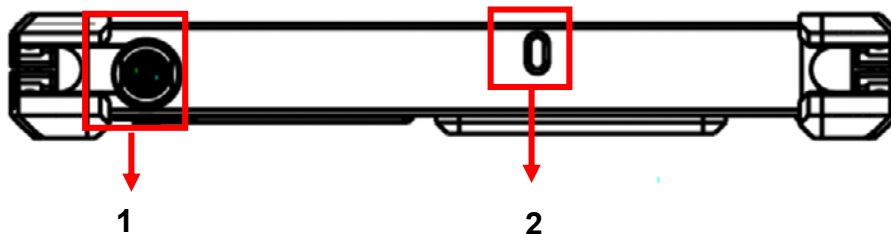
1. DC-In 12~32V
   - Default: Fischer 3-pin connector
2. Kensington cable lock slot

Top
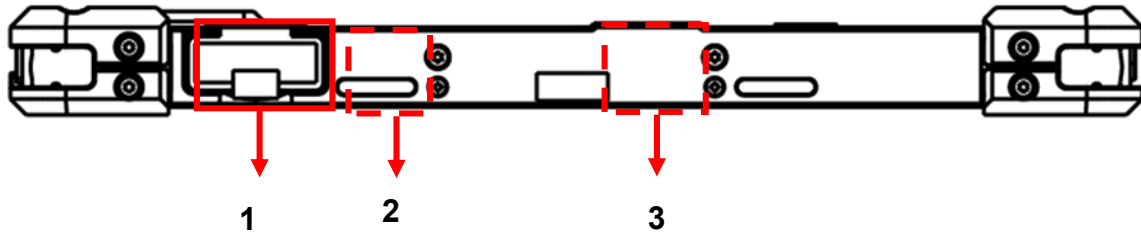
1. Micro SD Card Slot
2. Optional Built-in Wi-Fi Antenna
3. Optional Built-in GPS Antenna

Bottom
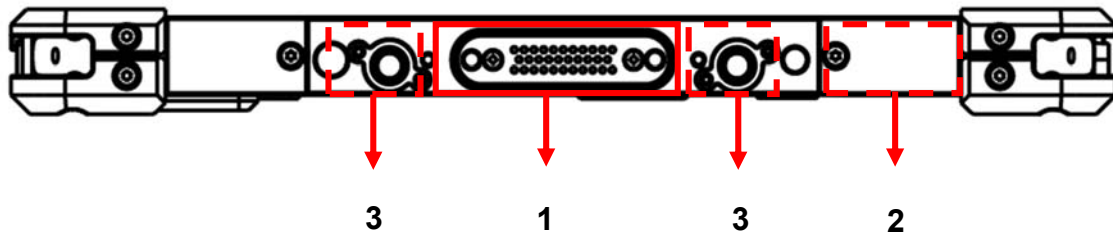
1. Docklite connector
2. Optional Built-in Wi-Fi/BT Antenna
3. Ext. Antenna signal

Ready for Use

After taking a quick look at your tablet computer, the following illustrations will get you ready for using it.

1. Mounting the Battery

A. Mount the battery into the battery bay.

B. Turn the battery lock counter-clockwise and lock firmly with a flat-head screwdriver or a coin.
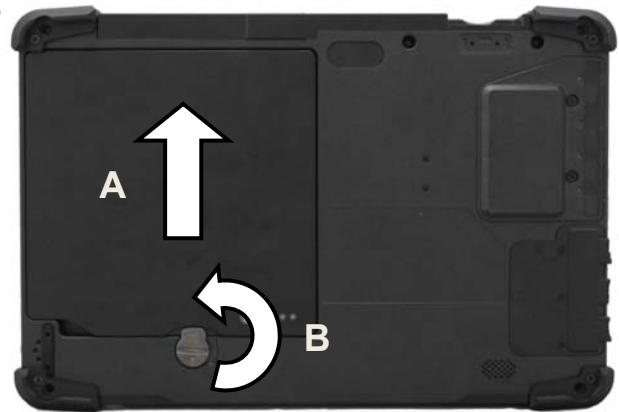
2. Connecting the AC Adapter

A. Insert the DC Jack firmly.

Note:
- ➤ *When unplugging the Fischer conn. from the DC Jack, please always hold on the outer sleeve of the plug, as the image shows, to unlock and pull out:*

B. Plug the AC cord into the AC adapter.

C. Plug the AC power plug into an electrical outlet.

3. Turning ON the Power

A. Make sure the battery is securely mounted. Connect all power cords properly.

B. Turn on the power of your tablet computer by pressing and holding the **Power Button** (approx. 2 seconds) **until the SSD/ Heater Indicator lights on (Color: orange)**.

> *Note:*
> ➢ *The computer is able to turn ON without any battery mounted once all the power cords are connected.*

4. Turning Off the Power

Directly tap "Shut down" from your OS to turn OFF the power of your tablet computer. If your tablet computer stops responding, press and hold the power button for 4~5 seconds to "Force Shut down" your tablet computer.

> *Note:*
> ➢ *Directly turning off the power of your tablet computer by "Force Shut down" will cause all unsaved data to be lost and is not recommended.*

Chapter2 - Operating Information

Start Using Your Tablet Computer

Always turn on your tablet computer by using the power button. This is the standard operating procedure to start using your tablet computer. After turning on the power of your tablet computer, it will start with the Operating System (OS) installed.

Boot Up

When you turn on the power, your computer will start to load the OS into the system memory. This start-up procedure is called "boot up".

Power On Self-Test (POST)

Each time your computer is turned on, the BIOS will automatically perform a self-test of CPU, memory, hardware devices, and so on.

Stop Using Your Tablet Computer

Each time when you finish working with your tablet computer, there are several ways to stop your tablet computer from operating.

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 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.

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 cursor 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 computer again, you need to press and hold the power button (approx. 2 sec.) until the SSD/Heater indicator lights on. Under Windows 8, you can enter "Hibernate" mode by directly clicking:

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

Force Shut Down

In the event that your tablet 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.

Working with Power Button (Heater Kit)

DS11 M-model is equipped with a heater kit to enable work under low temperature. The heater will heat up the LCD to the temperature for booting up the system. Also, the heater will constantly monitor LCD temperature. Once the temperature becomes lower, the heater will heat up again to maintain the temperature for operation.

Note:

● When ambient temperature is under -15 °C (the default setting for your tablet computer), the system may not boot up immediately. System will beep with Heater LED light flashing orange to indicate that the heater is in operation. After 3~10 minutes (depending on the ambient temperature), the system will boot up automatically.

● In emergency situations, you can skip the heating process by pressing and holding the power button for 9~11 seconds then release. The speaker will beep with a special sound to signify that the heating process has been skipped (Please note that not all devices are guaranteed to work properly in this case).

● Press the power button again during the heating process will shut down the computer.

The following is a list of functions associated with your tablet computer's power button:

1. Press and hold for 9 ~ 11 seconds:

    The system will skip heating process and force boot up.

2. Press and hold for 5 ~ 8 seconds:

    Enable/Disable the sound of Heater.

3. Press and hold the power button for 4 seconds under OS:

    Shut down the system.

4. Press the power button for functions including:

    a. Power on the system.

    b. Force Shut Down.

    c. Sleep/Hibernate (Dependent on OS settings).

Installing Operating System

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

> *Note:*
> ➢ *A USB hub may be required during installation to connect with an external USB-interface ODD, as the System USB port may not supply enough power. Please connect your USB hub with extra power supply to complete the installation.*

Indicators and Function keys

LED Indicators

LED Indicator	Description
	Power/ S3 Indicator: Green/ Flashing Green
	mSATA SSD/ Heater Indicator: Green/ Orange
	Charger/ Battery Low Indicator: Orange/ Flashing Orange

Function Keys

Function Lock key ![Fn Lock] is used to switch function of the other buttons. Press the function Lock key to switch between 2 layers. The indicator under the function Lock key will light up if the other buttons are in 2nd layer and it will be turned off if in 1st Layer.

Button	1st Layer	2nd Layer
☀+ A1	Brightness Up	A1 (User settable)
☀− A2	Brightness Down	A2 (User settable)
A3	Rotation Lock	A3 (User settable)
🔊+ +	Volume Up	+
🔊− −	Volume Down	-
Fn Lock	Function Lock	
Esc ↑	Esc	↑
Ctrl ↓	Ctrl	↓
Alt ←	Alt	←
↵ →	Enter	→
Del Tab	Del	Tab
Input Lock	Input Lock	
W	Windows Key	

Setting Function for Buttons A1~A3

Hotkey Manager is an app which could be used to quickly set up and change between multiple functions for A1, A2 and A3. Please follow these procedure to use it.

1. Operate the Hotkey Manager then a menu will show up.
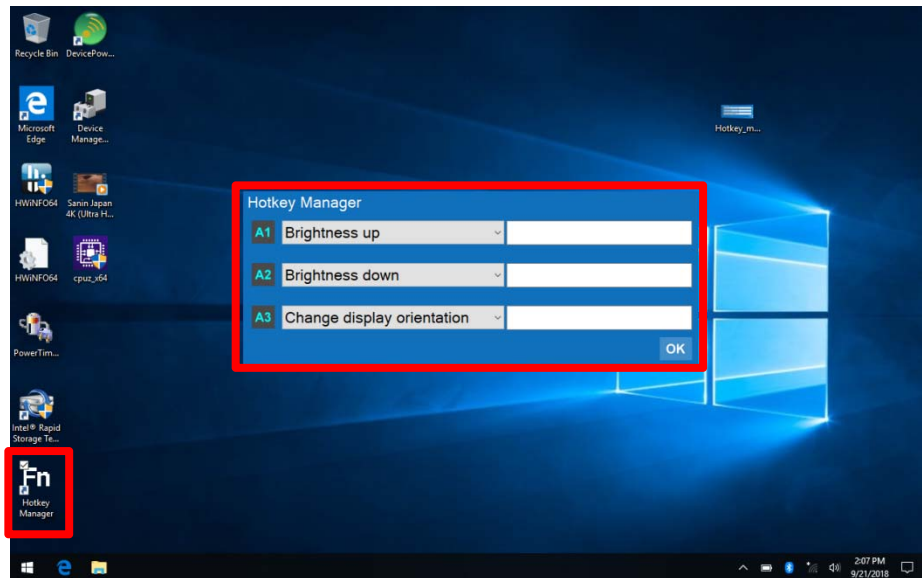
2. Scroll down to select function for each key.
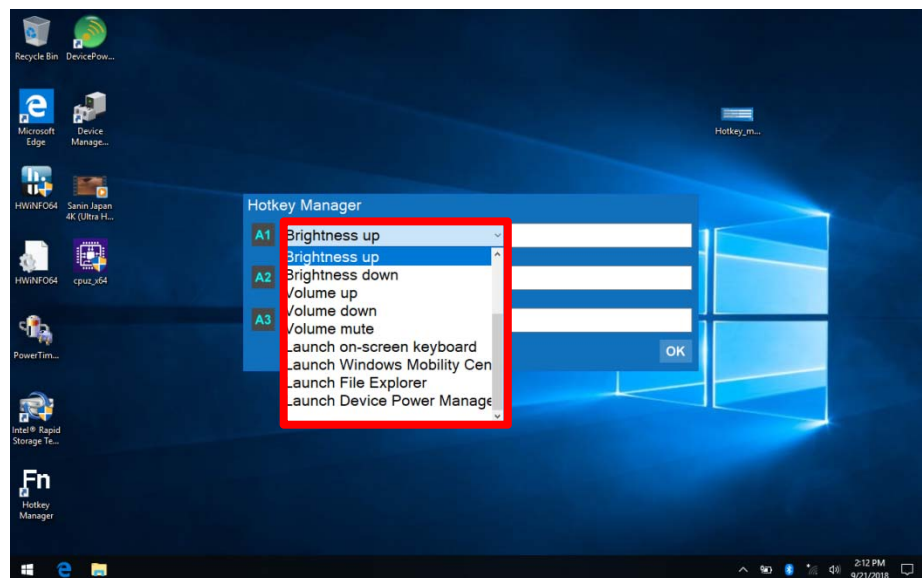
3. Click and the setting will be saved automatically.

4. The blank could be filled with related parameter according to the selected function.
E.g. Fill in the address to use the function "Open URL in default browser".
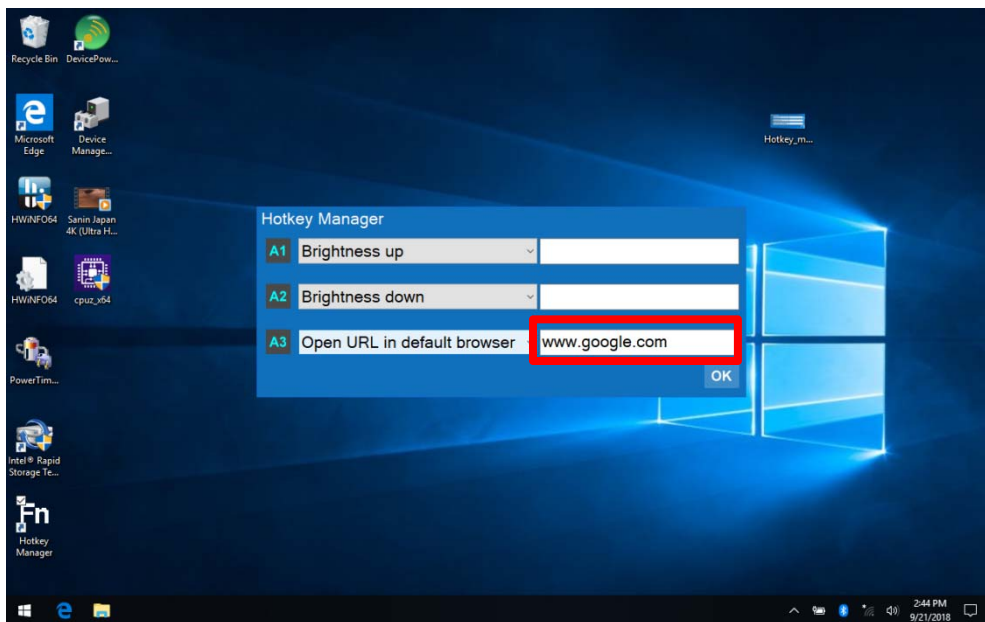
Available Function Items List

None
Open/ Execute a selected file
Open URL in default browser
Change display output
Brightness up
Brightness down
Volume up
Volume down
Volume mute
Launch on-screen keyboard
Launch Windows Mobility Center
Launch File Explorer
Launcher Device Power Manager

Input Lock key

To prevent from unexpected input by buttons and touch screen, you can press Input Lock key. When Input Lock function is on, the input from devices including buttons and touch screen will be locked. To cancel the input lock function, just press the Input Lock key again and the indicator will be turned off.

Calibration of Touch Screen

Calibration

If you find that the touch screen doesn't respond accurately, you may try to fix the problem with the embodied calibration function. However, if the touchscreen type of your tablet is **capacitive** rather than **resistive**, the calibration might cause interference and make the inaccuracy problem worse.

To calibrate your touch screen, please follow the instruction below.
Control panel→Tablet PC Settings→Calibrate
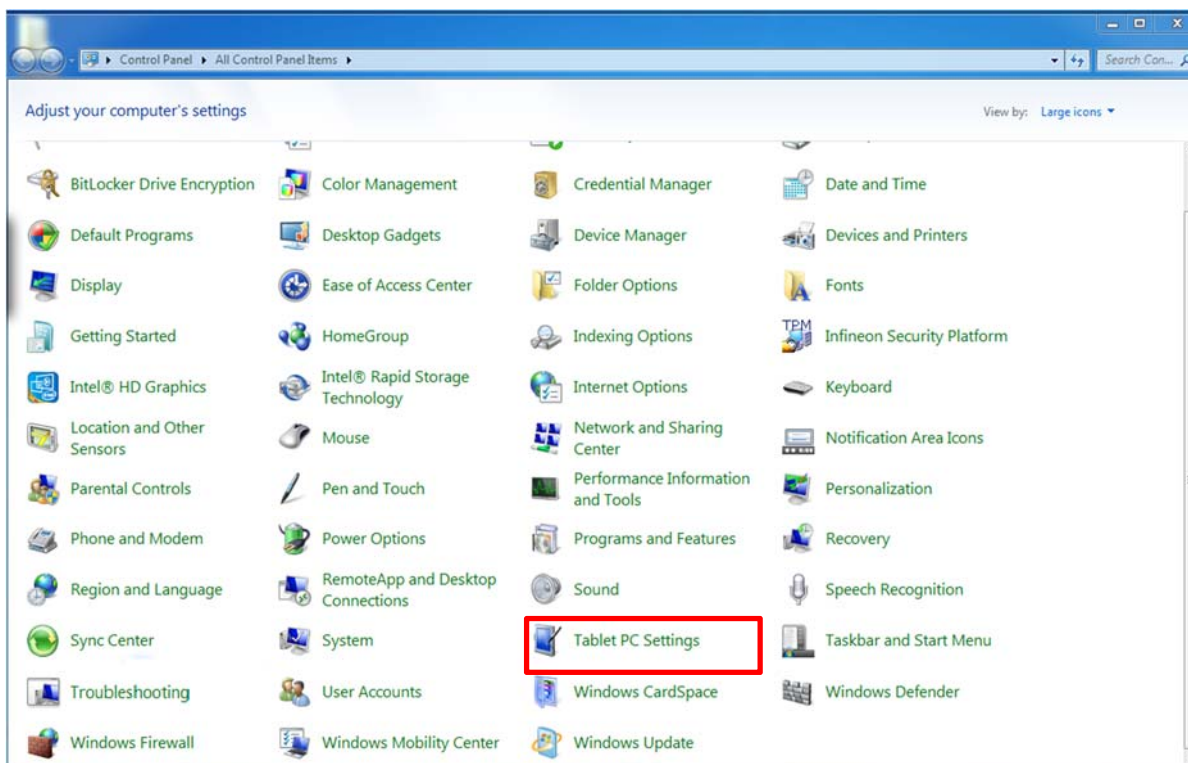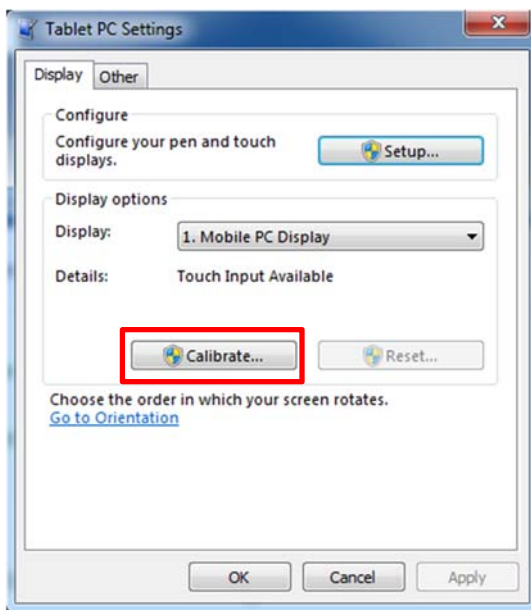
> **Note:**
> ➢ *If you are unaware of the type of your touch screen, calibration should be avoided.*
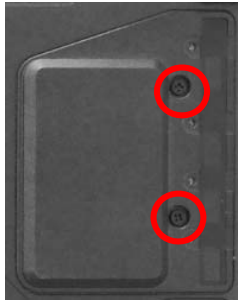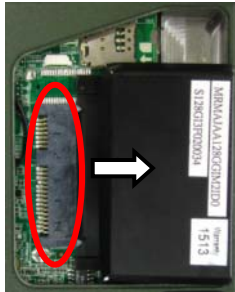
Reset

In case the calibration is operated accidently and results in interference and inaccuracy, you can choose reset in the same page.
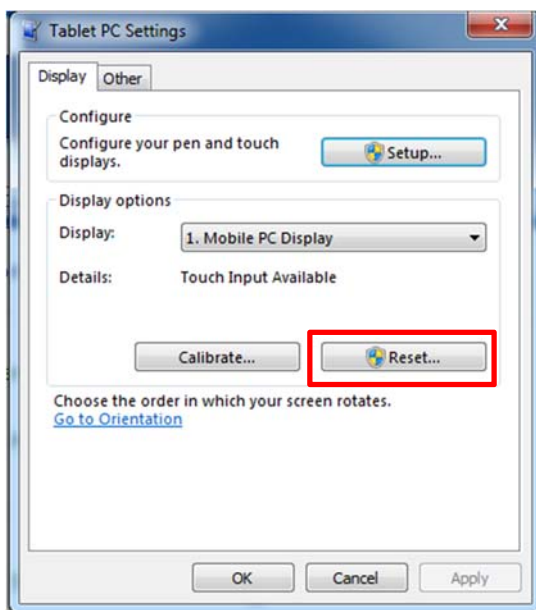
Using mSATA SSD

Your tablet is equipped with mSATA SSD for data storage. The mSATA SSD is removable for convenience. It can **ONLY** be removed while power is **OFF**. To remove the mSATA SSD module, please follow the steps below:

1. Loosen the screws on Back Door Cover, and then remove the cover.	
2. Hold the two ends of the mSATA SSD module.	
3. Remove the mSATA SSD module from the connector.	

Note:

➢ *Do not expose mSATA SSD directly to high temperature, high humidity, and other hazardous environment. NEVER try to disassemble the module. Static discharge may destroy your device and data.*

Using micro SD Cards

Your tablet computer is equipped with a micro SD card slot. The slot supports SDHC, SDXC, UHS-1 type micro SD cards. To avoid damages caused by misinsertion, please insert your micro SD card into the card slot properly with the connectors facing **down**, as shown below.
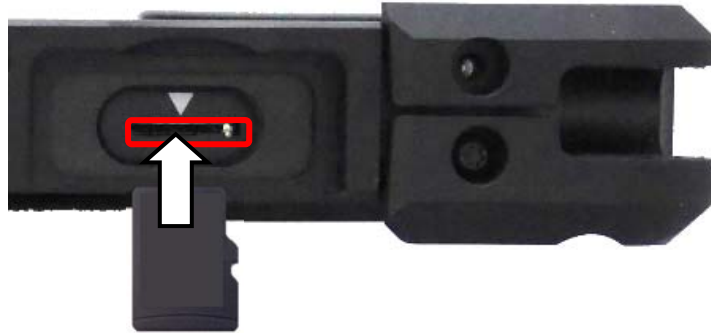
Operating Wireless Devices

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 tablet 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 on UAC, please uninstall Device Power Manager and reinstall it again.*

Bluetooth (Option)

The Bluetooth module provides your tablet computer with a short-range wireless communication protocol to connect with other compatible devices via the pre-installed embedded antenna. To activate your Bluetooth functions, please follow the instructions below.

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 tap "Bluetooth" to enable the Bluetooth function (tap 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.

Tap "Bluetooth" to enable the Bluetooth function (tap again to disable).

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

Wireless LAN (Option)

Wireless LAN is an optional wireless communication module for your tablet computer. An embedded antenna will be pre-installed in your tablet computer to access the internet wirelessly. To activate your Wireless LAN function, please follow the illustrations below:

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 tap "Wireless LAN" for enabling the Wireless LAN function (tap again to disable).

Tap "Wireless LAN" to enable the Wireless LAN function (tap 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.

GPS (Option)

GPS is an optional module for your tablet computer. This GPS module supports both GPS and GLONASS systems. An embedded antenna is pre-installed in your tablet computer to support the functions of your GPS and GLONASS.

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.

Tap "GPS" to enable the GPS function (tap again to disable).

2. **Navigation & Mapping Software Installation**

    Please install your 3rd party navigation and mapping software after installing your GPS driver. Refer to your navigation and mapping software manual for installation and procedures on application setup and access.

Once the GPS function starts up, the wireless device LED indicator will turn on (color blue).

Note:

➢ *Wireless devices can be turned ON/OFF through BIOS. Once a device is turned off through BIOS, its button on the Device Power Manager will be colored in yellow and with a prohibition marker. For example, the following illustration shows that WLAN 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.*

Using Light Sensor

Light sensor can detect the ambient light and adjust the brightness of your tablet computer, hence improving user experience and power savings. Please enable the function from the setting below:

Chapter3- 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 (110V or 220V) 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.

Connect 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.

AC Adapter Indicator
The green LED indicates that AC power is ready.

Battery

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

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.

- Turn the computer into standby (by Sleep or Power button) when it is temporarily not in use.

- Shut down the computer when it will not be in use for longer period of time.

Battery Low

When the battery is nearly exhausted, the computer gives the following "Battery Low" warnings:

- Windows battery low warning.

- The power LED flashes.

Once the "Battery Low" warning occurs, please:

- Save and close the files you are currently working on then shut down the computer.

- Plug in AC or vehicle adapter to recharge the battery.

Charging the Battery

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

Charge indicator turns ON when the battery is charging and turns OFF when the battery charging is completed.

Battery Level

You may check battery status from Operating System. In Windows, you can click the power/battery icon to reveal the battery gauge window. The following is the illustration of Battery Gauge in Windows OS.

An alternative way to check the battery level is by viewing the battery gauge on the battery pack. By pressing the [ ] button, indicators will be on. There are four indicators, and the more indicators are on, the more power remains in the battery. In other words, if the capacity of the battery pack is full, all indicators will be on, and if the capacity is nearly drained, no indicator will be on.

Note:

➢ *Battery characteristic varies depending on factors such as ambient temperature, charging method, load current, aging, etc. For example, the chemicals of the battery are more inactive at low temperature, thus decreases the output power.*

➢ *The battery gauge should only be used as a reference. Please do not expect it to show the exact amount of the power remaining. There is no memory effect on Lithium Ion battery cells. However, discharge the battery to nearly empty every month will help calibrating the internal gauge.*

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 the "Start Battery Recalibration" pop-up appears, press "Yes" to continue. (Before you run the battery calibration, please make sure that the battery level must be LOWER than 95% ; otherwise, the calibration cannot work.)

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.*

ACPI Support

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

Sleep:

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

Hibernate:

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

Shut down:

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

USB Fast Charging

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

Mode		USB 3.0 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

Chapter 4 - BIOS Setup

Press **[F2]** or **[Delete]** 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		Choose the system default language
BIOS Vendor		
Core Version		
Compliancy		
Project Version		
Build Date and Time		→←: Select Screen
EC Version		↑↓: Select Item
		Enter: Select
System Language	[English]	+/−: Change Opt.
		F1: General Help
System Date	[Tue 06/02/2015]	F2: Previous Values
System Time	[16:19:20]	F3: Optimized Defaults
		F4: Save & Exit
Access Level	**Administrator**	ESC: Exit

> *Note:*
> - *The contents may vary depending on computer configurations.*
> - *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 system date Month, Day, Year.
System Time	HH:MM:SS	Set the system time Hour, Minute, Second.

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 Configuration
► EC Thermal Control
► AC IN BOOT Control
► USB CHARGE Control
► Battery Recalibration
► Intel (R) Smart Connect Technology
► Network Stack Configuration
► Intel 82574L 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	Security Device Suppott
SATA Configuration	SATA Mode Selection SATA Test Mode Aggressive LPM Support SATA Controller Speed	SATA Mode Selection: IDE, AHCI, RAID
Intel (R) Rapid Start Technology	Disabled Enabled	Enable or disable Intel (R) Rapid Start Technology.
USB Configuration	Disabled Enabled	Legacy USB Support USB3.0 Support XHCI Hand-off EHCI Hand-off
Super IO Configuration	Serial Port 0~3 Configuration	
RF Device Control	Disabled Enabled	GSM, GPS, BLUETOOTH, WLAN
EC Thermal Control		Thermal cooling trip point
AC IN BOOT Control	Disabled Enabled	Enabled to boot the device by connecting power (Auto Power-On)
USB Charge Control	Disabled Enabled	
Intel Smart Connect Technology	Disabled Enabled	Enable/Disable ISCT Configuration
Network Stack Configuration	Disabled Enabled	Enable/Disable UEFI Network Stack
Intel 82574L Gigabit Network Connection		Click to configure the network device port

Trusted Computing Sub-Menu

Aptio Setup Utility		
Advanced		
Configuration Security Device Support	[Disable]	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	**Empty**	
Software Preserve	**Unknown**	
Serial ATA Port 1	**Empty**	→←: Select Screen
Software Preserve	**Unknown**	↑↓: Select Item
Serial ATA Port 2	**SATA SSD (120.0**	Enter: Select
Software Preserve	**SUPPORTED**	+/−: Change Opt.
		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	Determine how SATA controller(s) operate
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	Indicates 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]	Enables 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		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
USB Devices:		
1 point		
Legacy USB Support	[Enabled]	
USB3.0 Support	[Enabled]	
XHCI Hand-off	[Enabled]	
EHCI Hand-off	[Disabled]	→←: 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	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.
Usn3.0 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.

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
Wireless LAN	Disabled	Wireless Lan Control
	Enabled	Enabled Wireless function
WWAN	Disabled	WWAN Control
	Enabled	Enabled WWAN function
GPS	Disabled	GPS Control
	Enabled	Enabled GPS function
BlueTooth	Disabled	BlueTooth Control
	Enabled	Enabled Blue Tooth function

EC Thermal Control Sub-Menu

Aptio Setup Utility	
Advanced	
EC Thermal Control **Thermal cooling trip point [79 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

EC Thermal Control Sub-Menu Selections

You can make the following selections on the EC Thermal Control sub-menu.

Feature	Options	Description
Thermal cooling trip point	71 C 79 C 87 C	

AC IN BOOT Control Sub-Menu

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

Note:

➢ *The device will automatically boot whenever it is connecting to the AC power once "AC IN BOOT Control" is enabled.*

➢ *Default value is set as "disabled", the change will be activated after reboot.*

USB CHARGE Control Sub-Menu

Aptio Setup Utility	
Advanced	
USB CHARGE	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:

➢ *USB Charge control is for turn On /Off the USB charge function under S5 state (Power off) when connecting to AC Adapter*

➢ *When enable USB CHARGE control in BIOS, please cold boot your computer to enable the function.*

Chipset Menu

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

► **PCH-IO Configuration**
► System Agent (SA) Configuration

PCH Parameters

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

Chipset Menu Selections

You can make the following selections on the Chipset sub-menu.

Feature	Options	Description
PCH-IO Configuration		PCH Parameter
System Agent (SA) Configuration		System Agent (SA) Parameters

PCH-IO Configuration Sub-Menu

Aptio Setup Utility	
Chipset	

Intel PCH RC Version　　1.6.0.0
Intel PCH SKU Name　　QM77
Intel PCH Rev ID　　04/C1

► PCI Express Configuration
► USB Configuration
► PCH Azalia Configuration

PCI Express
Configuration settings

→←: 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 Selections

You can make the following selections on the PCH-IO Configuration sub-menu.

Feature	Options	Description
PCI Express Configuration	Disabled Enabled	PCI Express Configuration settings
USB Configuration	Disabled Enabled	USB Configuration settings
PCH Azalia Configuration	Disabled Enabled	PCH Azalia Configuration settings

Boot Menu

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

Boot mode select   [Legacy]

Boot Option Priorities
Boot Option #1   [Hard Disk:...]
Boot Option #2   [CD/DVD]
Boot Option #3   [USB Hard Disk]
Boot Option #4   [USB CD/DVD]
Boot Option #5   [USB Key]
Boot Option #6   [USB Floppy]
Boot Option #7   [Network]

► CSM parameters

► Hard Disk Drive BBS Priorities
► Network Device BBS Priorities

Set boot mode LEGACY/UEFI

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

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		Sets the system boot order
Boot Option #2		Sets the system boot order
CSM parameters		OpROM execution, boot options filter, etc.
Hard Drive BBS Priorities		Set the Boot Device Priority sequence from available Hard Disk Drives

Security Menu

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

Password Description	Set Administrator Password
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.	→←: Select Screen
The password length must be in the following range;	↑↓: Select Item
Minimum length 3	Enter: Select
Maximum length 20	+/–: Change Opt.
	F1: General Help
Administrator Password	F2: Previous Values
User Password	F3: Optimized Defaults
	F4: Save & Exit
Secure Boot Menu	ESC: Exit
HDD Security Configuration:	
PO: .xxx	

Security Menu Selections

You can make the following selections on the Security Menu.

Feature	Options	Description
Administrator Password	Enter New Password Confirm New Password	Controls detection of Processor Serial No. System must be reset or restarted from power-on for settings to take effect.
User password	Enter New Password Confirm New Password	Supervisor Password controls access to the setup utility.
Secure Boot Menu	Secure Boot Control Secure Boot Mode	Customizable Secure Boot settings

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
PO: XXX
IBA GE Slot 0200 v1398

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 5 – 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.

Chapter 6 – Specifications

Platform

Intel® Kaby Lake-Y Platform

CPU

Intel® Ivy Bridge i7-7Y75 Processor ,4 MB Cache

Memory

16GB System Memory
- Industrial grade
- LPDDR3 1866MHz

Touch Screen

Type: 10.1" WUXGA (16:10)
Resolution: 1920 x 1200 pixels
Optional Invisible mode on/off
M model:
Resistive Single Touch Screen
Brightness (min.~ typ.): 650~765 nits
I model:
Capacitive Multi Touch Screen
Brightness (min.~ typ.): 780~910 nits

> *Note:*
> ➢ *Invisible Mode On/Off controls all light sources on/off, including LCD B/L, LED Indicators & Keypad B/L. Invisible Mode trades-off with Fischer conn. x 1.*

Storage

- Removable mSATA SSD

- 128GB/256GB/512GB

- Industrial Grade

Buttons/Function Keys

- Power button (front side)
- Membrane Function Keys with LED Backlight

Audio

- HD Audio and mono Speakers
- Embedded Digital Mic

I/O Ports

Left:
- Standard: Mini DisplayPort x 1/USB3.1 x 2 (the rightmost USB port, with a lightening mark on the cap, supports fast charging function)
- Optional: Mini DisplayPort x 1/USB3.1 x 1 /GLAN x 1
- Optional Fischer I/O:

  Choose 1~4 out of 6 as below:
- USB 2.0 x 1
- COM x 2 (RS232 x 2 or RS232 x 1/RS422 x 1)
- GLAN x 1
- Audio X 1
- Sealed Headset (Headphone out/Mic-in Combo) x 1

> *Note:*
> ➤ *Sealed headset trades-off with invisible mode switch.*
> ➤ *Mini DisplayPort version: DisplayPort 1.1a.*
> ➤ *DS13 does not support Dual-Mode DisplayPort(DP++) so an active DisplayPort adapter is necessary.*

Bottom:
- Docklite Connector: 32-pin POGO (Hot Swappable)
- Ext. ANT Signals x2

Expansion ports:
- Standard Micro SD card slot

Case

- CNC milled Aluminum

- Color: Black, NATO Green

Dimensions and Weight

- Dimensions (mm):

  286 (L) x 193 (W) x 27 (H) (with Bumpers)

- Weight: 1.39kg (With battery)

  1.09kg (Without battery)

> *Note:*
> ➢ *Weight varies depending on system configurations.*

Power

Battery Pack:

Type:	Prismatic Lithium Ion Cell
Capacity:	11.1V/ 4200mAh (3S2P)
Dimensions:	138 mm (W) x 136 mm (D) x 9.7 mm (H)
Weight:	Approx. 300 gram (0.66 lb.)

AC Adapter

Input Voltage:	AC 100 - 240V
Frequency:	50/60 Hz
Output Voltage:	DC 19V
Maximum Power:	90 Watts
Dimensions:	133 mm (W) x 58mm (D) x 30mm (H)
Weight:	Approx. 400 g (0.88 lb.)

DC-In:

12~32V

- Fischer 3 pin Connector

Environmental, Safety & EMC

CE, FCC, WEEE, REACH, RoHS, IP65, MIL-STD-810G, MIL-STD-461G

Operating & Storage Temperature

Operating Temp.:
-   Standard: -20 °C ~ +60 °C*
-   Optional: -30 °C ~ +60 °C*
*LCD with Heater

Storage Temp.: -40 °C ~ +70 °C

Materials and Recycling

Materials of the computer are as follows:

Magnesium case: AL6061T6

PCB: FR-4, UL 94V0

Battery: Rechargeable Lithium Ion cells

Packing: Carton: Unbleached paper

                    Cushion: Recyclable PE

                    Carrying bag: Recyclable PE Fiber

                    Quick Guide: Paper

Please recycle the parts according to local regulations.

Chapter 7 – Optional Devices

Communication

- WiFi/Bluetooth:
    - Intel Dual Band wireless- AC 8265
    - Board Form Factor: M.2 2230 E-key Card
    - Wi-Fi Certified: 802.11 a/b/g/n/ac
    - Bluetooth: Supports BT 4.2 (Backward compatible)
    - Interface: PCIe (WiFi)/USB (BT)
- GPS:
    - U-blox M8N (USB interface)

Security

BIOS password and Kensington cable lock slot are available to safely secure your computer. Optional TPM (Trusted Platform Module) version 2.0 is also supported, preventing unauthorized access to your computer.

AMG Sensor Module

AMG Sensor Module is designed for automatic screen rotation when you turn the tablet computer from landscape to portrait and back. It is especially convenient for you to turn to an appropriate view when using different apps.

Mil. Fischer Connector

Optional Fischer connectors provide solutions for users to operate the device in harsh environments. Signals designed for usage include USB2.0, VGA, RS232 or RS422, GLAN, and Audio.

External Vehicle Adapter

The External Vehicle Adapter, EVA1275, is designed to directly connect equipment to the vehicle power system, converting the input voltage 12~32V to output 19V. Fischer 3-pin plug is available designed for DS11.

External USB Keyboard

An optional 89-key external USB keyboard with LED backlight and IP rating of IP54 is available for your tablet computer. The detailed specification is provided below:

- 89-key layout emulates 101/102-key KB
- Life: >1 million times, water/dust protection up to IP54
- Back-light illumination (backlight device: green LED)
- PS/2 compatible Trackpoint and mouse buttons
- Dimensions: 323.4 mm (W) x 172 mm (D) x 25 mm (H)
- Weight: 1.1 kg

Track point

The track point is functionally equivalent to a mouse. Pushing the track point may move the cursor on the screen. The 2 buttons act same as mouse buttons.

Backlight

Press **[I-O]** key for approximately 1 second turns keyboard backlight ON or OFF.

Mini Keyboard KBD

Mini Keyboard KBD is designed for all models. KBD also brings convenience of use through multi-language keyboard versions and USB interface. The detailed specification is provided below:

● USB interface with 30 cm USB cable

● 66-Key design with function keys to simulate standard keyboards.

● StickPointer to simulate mouse and keypad

● Currently support versions:

English (UI), English (UK), German (DE), Swedish (SV) and Russian (RU) 5 versions.

● LED Backlight

● Caps Lock, Number Lock, Scroll Lock, and Smart Card Reader LED Indicators

● Magnesium Alloy Case (Black)

● Operating Temperature: -20 ~ 50ºC (-4 ~ 122ºF)

● Storage Temperature: -40 ~ 70ºC (-40 ~ 158ºF)

● Optional Built-in Smart Card Reader

● Dimensions: 190 mm (W) x 90 mm (D) x 12 mm (H)

● Weight: 170 g

● IP55

Chapter 8 – 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.

Troubleshooting

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

- Power Problems:

When I turn on the Tablet computer, it does not respond.

- If you are using battery power, check if the battery is charged

- If you are using AC power, ensure that the connection of AC adapter is correct.

I cannot return from Hibernation while on battery power

- The battery might be drained. Please plug the tablet into AC power.

- Hard reset the device by pressing the power button for 4 seconds

Unexpected or improper shutdown causes BIOS to reset to Optimized Default

- This could be a power problem. Please connect the AC power adapter to fix the abnormal shutdown problem.

- Minimize the configuration, i.e. remove extra peripherals and devices.

- Remove the modules one by one (SSD, Battery, etc.).

- Remove the software suspected.

- Set BIOS fail-safe default.

- Re-install operating system and application software.

RMA Service

If troubleshooting solutions are unsuccessful, consult your dealer for RMA.

Shipping instructions:

1. Remove any personal add-on devices 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 including: The operating system, the add-on device installed (if any), the application software, the failure phenomenon, etc.

   - A list of the hardware/software configuration, if applicable.

5. Clearly mark the outside of the shipping box with the RMA #. If an 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.