



**TATUNG**  
**Wireless Thin Client**  
**TWN-5213 CU**



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TATUNG Co.

22 Chungshan North Road, Section 3

Taipei, Taiwan 104

R.O.C.

<http://www.tatung.com>



## Messages

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Messages are used in this document to bring important information to your attention. Different types of messages are defined as follows:

**CAUTION!** *A Caution alert informs you that improper use of equipment or failure to follow safety instructions may cause data loss or equipment damage.*

**WARNING!** *A Warning alert informs you that improper use of equipment or failure to follow safety instructions may cause bodily injury.*

**NOTE!** *A Note is an advice that helps you make the best use of TWN-5213 CU.*

## Safety Instructions

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You must read through all safety instructions before using TWN-5213 CU. The following information contains concepts that you must fully understand in order to avoid property damage or body injury.

### **CAUTION!**

- Always use standard battery packs supplied with the TWN-5213 CU. Other battery packs may have different specifications and cause damages to TWN-5213 CU.
- Do not expose the battery pack to other metal objects.
- Do not use or place TWN-5213 CU near sources of heat or expose it to direct sunlight for an extended period of time. Store it in a cool and dry place.
- Do not push or apply force to the TFT screen.
- Do not use pens or sharp objects to write on the screen. Always use the stylus to tap or draw on the TFT screen.

### **WARNING!**

- Using worn-out or damaged power cords may result in electric shock or fire.
- Avoid keeping a steady position when using TWN-5213 CU for prolonged period of time. Periodic exercises and breaks are recommended to prevent any physical discomfort.
- Always contact an authorized TATUNG service provider for assistance if any repair or adjustment is required.



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## 1. Overview .....

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Welcome to choose TATUNG® Wireless Thin Client™. This wireless device is designed to support customers in building a customizable product for different vertical markets. Both first-time and experienced users can quickly learn how to operate the TATUNG Wireless Thin Client from this guide.



## 2. Equipment Checklist.....

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Carefully unpack the TATUNG Wireless Thin Client from the box. Check to make sure that the following accessories are included in the box. If you find any accessory missing or damaged, please contact TATUNG representatives immediately.

- ☒ TWN-5213 CU
- ☒ Stylus
- ☒ AC Adapter
- ☒ AC Power Cord
- ☒ Battery Pack

### **Embedded Accessories**

- ☒ Backup Battery
- ☒ RTC Battery
- ☒ CompactFlash Storage Card (512MB)

### 3. TWN-5213 CU Product Specification.....

Items		Specification
CPU		Transmeta TM5800 733MHz
Software	OS	Microsoft Windows XP Embedded
	Bundle software	Trail Soft Keyboard
Memory		256MB DDR-SODIMM
Storage		512MB Compact Flash
Display	Type	10.4 inch color LCD
	Resolution	1024 x 768 16bit 65536 color 10.4" Toshiba LCD resolution: 1024x768(XGA) and transmissive display type.
	Life time	10,000 hrs (Lamp MTBF Life)
Touch panel		10-Bits A/D controller with SMK Touch Screen with Stylus Pen
Button		Analog type
Network		802.11b and 10/100BASE-TX(RJ-45)
Audio		Internal speaker (Mono) x 1 Internal microphone(Mono) x 1
I/O	USB	USB2.0 x 2
	Card slot	PCMCIA Type-II (Card Bus type) x 1
	I/O connector	10/100BASE-TX (RJ-45) or RS232C can be used exclusively with optional cable.
	Audio	Headphone terminal x 1 Microphone terminal x 1
Power		Li-ion Battery pack, AC adapter
Main battery	Type	Rechargeable Li-ion battery, 2200mAh, 11.1V
	Operation time	About 2hrs
	Charging time	About 2.5hrs
Back up battery	Type	Rechargeable Ni-MH battery, 40mAh, 7.2V
	Backup time	About 30min ( system in suspend mode)
	Charging time	About 12hrs
RTC battery	Type	Rechargeable Li-battery, 100mAh, 3V
	Charging time	About 50hrs
Size, Weight		290 x 220 x 31(Min)mm, About 1.5kg
Environment	Operation	Temp.:5 to 35 deg. cent., Humidity: 15 to 85%
	Storage	Temp.: -20 to 60 deg. cent., Humidity: 15 to 85%
Certification	Terminal	FCC, CE,CB, UL
	AC adapter	Electrical appliance and Material Safety Law
OS		Windows XP Embedded

## 4. TWN-5213 CU Features.....

# 4.1 Front View of TWN-5213 CU



1. Push function key 1, and you can execute "On Screen Keyboard".
2. Push function key 2, and you can execute "Internet Explorer".
3. Push function key 3, and you can execute "File Manager".
4. Push function key 4, and you can execute "Device setting" utility, which is developed by Tatung. It includes four functions: brightness adduction, double-tap setting, button setting, and touch panel calibration.
5. Direction Key
6. Enter Key
7. Power LED
8. Battery Charge LED
9. RF Strength LED
10. Built-In Microphone
11. Built-In Speaker





**12. TFT Touch-Screen Panel (Perform operations and input data by tapping and writing directly on the screen)**



TWN-5213 CU LED indicators display useful information in the battery's current status and charge level:

LED Indicator LED Color	Power LED	Battery Charge LED	Wireless Signal LED
Off	Power Off or Suspend Mode	Not Charging	Signal Strength =0 (No signal)
Green	Power On	Fully Charged	Signal Strength =4,5 (Excellent)
Amber	Low Battery <=8%	Charging	Signal Strength =2,3 (Good)
Red	Extremely Low Battery (Auto Suspend) <=4%	Charge Error (Or No Battery Installed)	Signal Strength =1 (Very Low)

## 4.2 Top View of TWN-5213 CU

1. I/O Connector
2. Reset Button
3. USB 2.0 Port
4. PCMCIA Card Slot



## 4.3 Left View of TWN-5213 CU

1. PC Card Slot (PCMCIA Type II)
2. Headphone Jack
3. Microphone Jack



## 4.4 Right View of TWN-5213 CU



### **1. Power Button**

(1) Pressing and holding the power button for more than 4 seconds will power off the system.

(2) Quickly tapping and releasing the power button will put the system into suspend mode. Re-tap the power button again to resume operation.

### **2. Stylus**

### **3. USB 2.0 Port**

### **4. DC-In Jack**

## 4.5 Back View of TWN-5213 CU



1. Battery Connector Cover
2. Battery Pack
3. Battery Latch
4. Battery Release Switch
5. IDE Compact Flash Card Slot Cover



1. Backup Battery and RTC Battery Cover
2. Back Stand / Handle



## 5. Quick-Start Procedure .....

# 5.1 Starting TATUNG TWN-5213 CU

TWN-5213 CU has two power sources, battery or AC (using the AC/DC converter).  
To operate the device with AC power, perform the following steps:

**In order to prevent accidental data lost, we strongly suggest you to insert the battery pack.**



- (1) Insert the battery pack into the Battery Slot.



(2) Lock the battery latch.

**NOTE!** The system would not power on if the battery latch was not in the locked position.



(3) Plug one end of the AC adapter into the DC-In jack and plug the other end into an electrical outlet. The power source can range from 100 to 240 Volts at 50 or 60 Hz.





(4) Turn on TWN-5213 CU by pressing the power button.

(5) The system is turned on.

## 5.2 Booting Logo

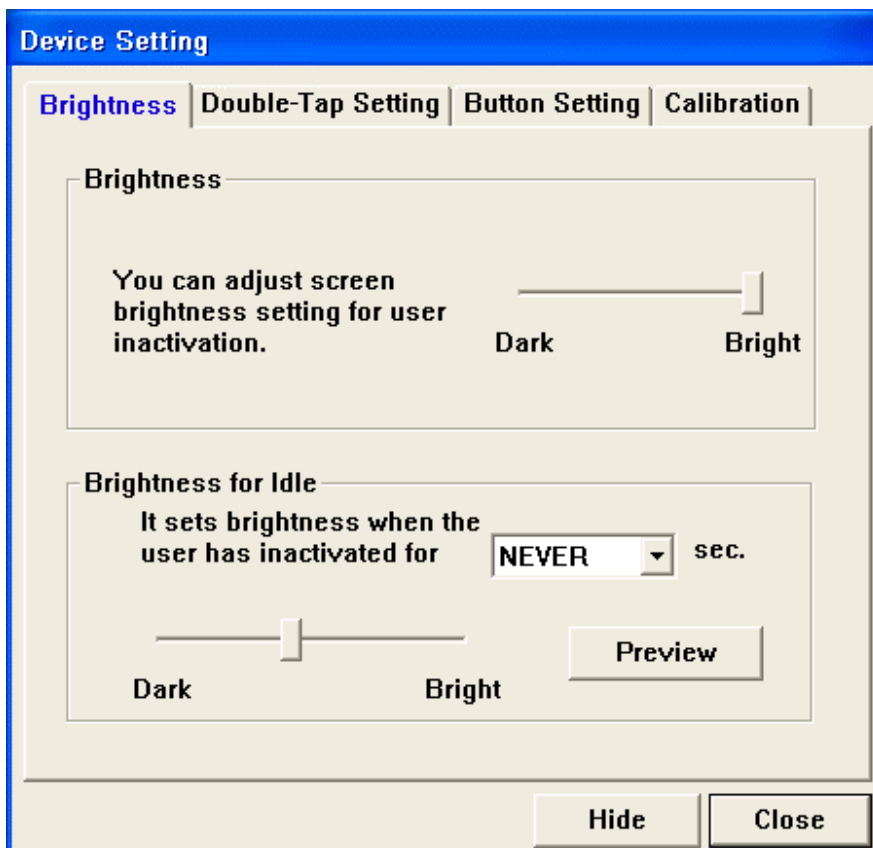
When the user turns on TWN-5213 CU, the Microsoft Windows XP embedded logo is displayed on the screen while the system is booting up.





## 5.3 Device Settings

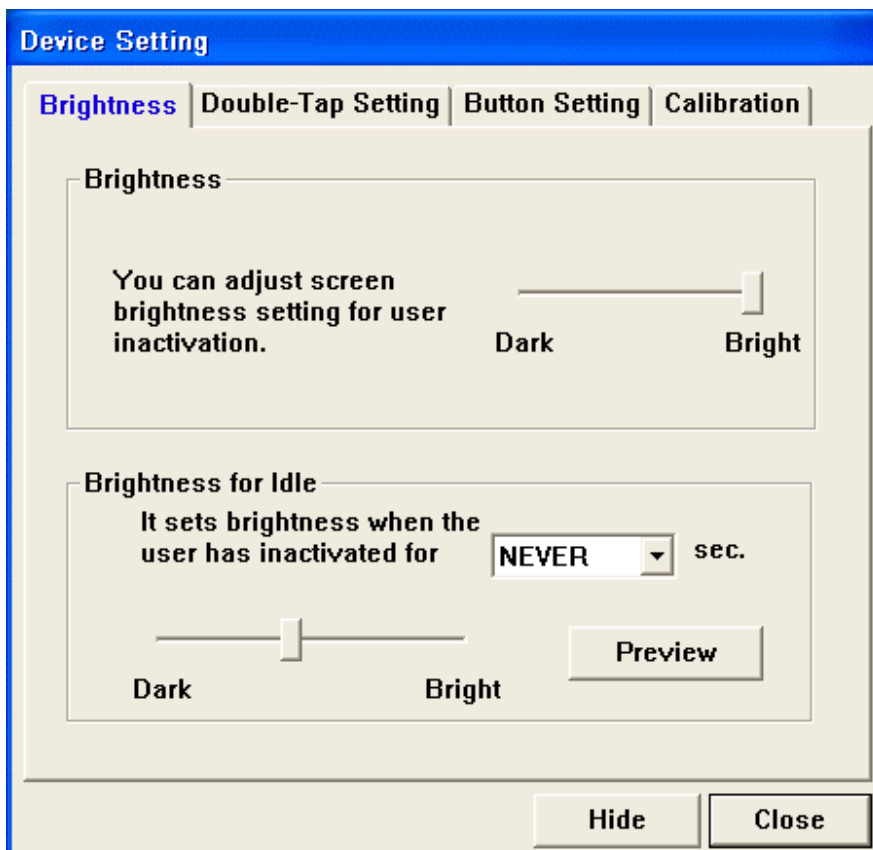
TWN-5213 CU uses the standard Microsoft Windows XP user interface. But we create a new program which will help you to set the TWN-5213 CU easier.



## 5.4 LCD Panel Setting

You can adjust the brightness of the LCD panel by the Device Setting utility program – brightness tab.

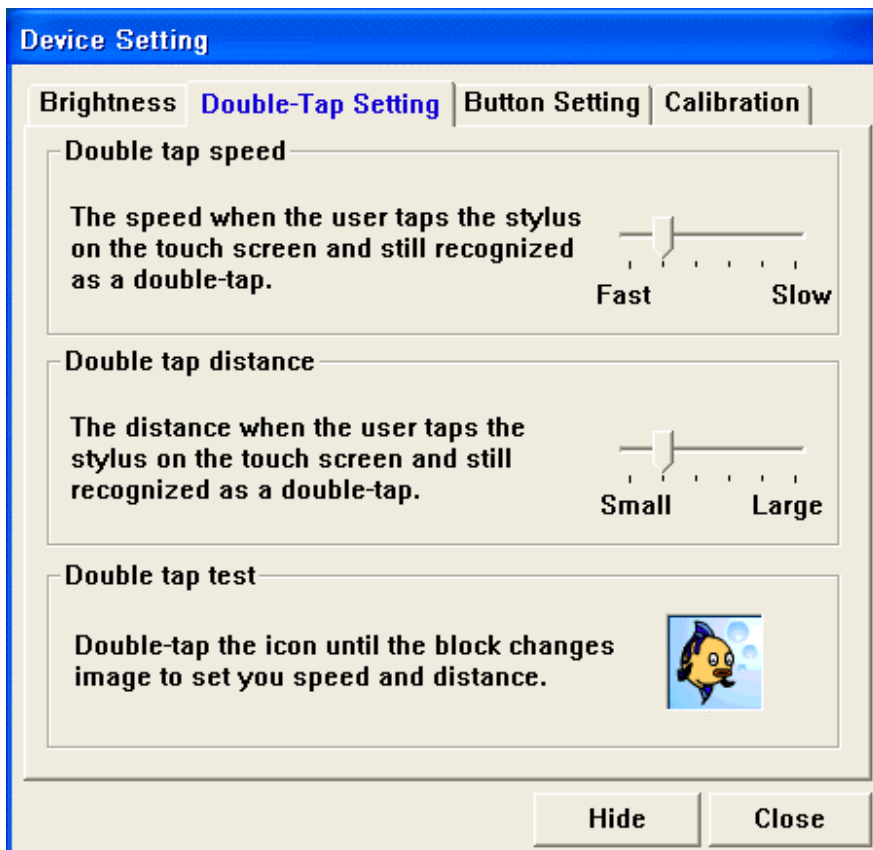
- (1) Press the function key 4, and you will see the “Device Setting” window (As in the figure).
- (2) Please click the “Brightness” button.
- (3) You can adjust the brightness level according to your personal preference.



## 5.5 Double-Tap Setting

You can also change the double-tap speed in Device Setting utility program.


- (1) Press the function key 1, and you will see the "Device Setting" window (As in the figure).
- (2) Please click the "Double-Tap Setting" tab.
- (3) You can adjust the speed and the distance of the double tap according to your personal preference.



## 5.6 Button Setting

We provided four function keys. They can help you to quickly launch programs. You can change the setting to suit your requirements.

- (1) Press the function key 1, and you will see the "Device Setting" window.
- (2) Please click the "Button Setting" button. (As in the figure)
- (3) You can change the button setting for your own needs.

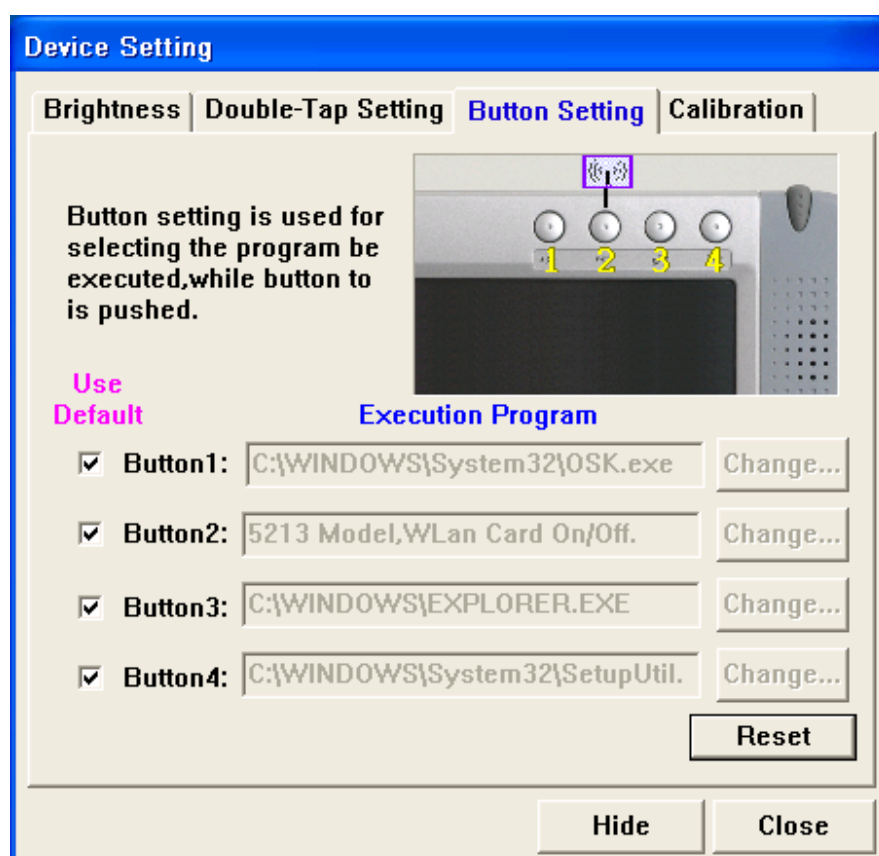
 **NOTE!** The default settings of these four function keys were shown as follows:

Button 1: On Screen Keyboard

Button 2: Internet Explorer

Button 3: Windows Explorer

Button 4: Device Setting

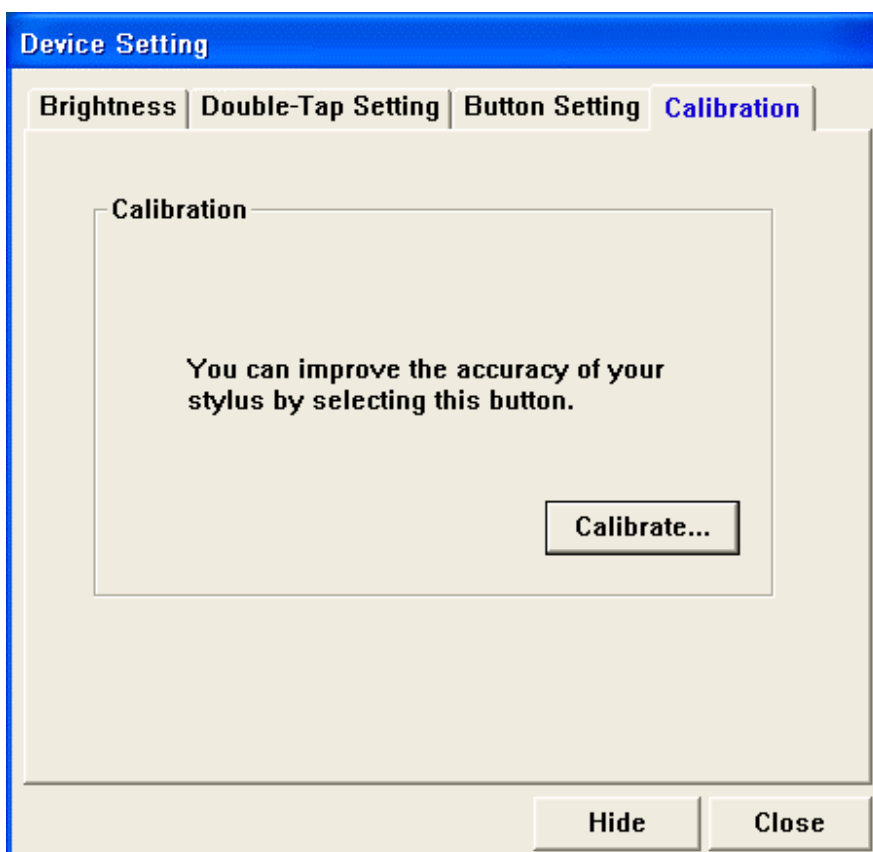


## 5.7 Recalibrating the Touch-Screen

If the user finds that TWN-5213 CU is responding bluntly to stylus taps, the user will need to recalibrate his screen.

Follow the instructions below.

- (1) Launch the Device Setting Utility program.
- (2) Please click the "Calibration" button.







(3) Screens 1 through 7 of device calibration.



Screen 1



Screen 2



Screen 3



Screen 4



Screen 5



Screen 6



Screen 7

## 5.8 Using the Input Method

TWN-5213 CU provides an integrated Soft Keyboard to ease the data input. You can bring up the Soft Keyboard by pressing the function key 1.



## 5.9 Resetting TWN-5213 CU

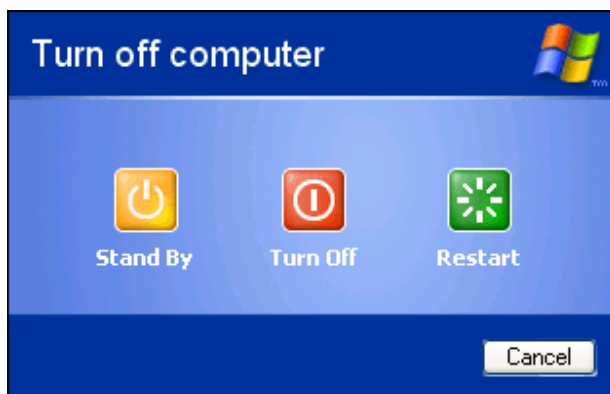
There are two ways of resetting TWN-5213 CU: Hardware Reset and Software Reset

### Hardware Reset



The reset button is located on the top left of TWN-5213 CU.

### Software Reset




You can choose to perform a system cold reset by:  
Start -> Turn off Computer -> Restart.

## 6. Software Applications .....

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Software applications that support Windows® XP operating systems are available to be executed on TWN-5213 CU. You can download some programs by your needs. For details on commercially-available software applications, contact your local retailer or visit the Microsoft's Web site at <http://www.microsoft.com>

 **NOTE!** TWN-5213 CU might not support applications written for MS-DOS or 16-bits application programs. You should check for compatibility before using the applications.

## 7. Restrictions .....

This section describes the current status of firmware and OS image on this platform by the time when this user manual was published. Please contact an authorized TATUNG representative to obtain the most recent updates.

1. The system was built with Windows XP Embedded SP1 execution environment.
2. Direct boot is supported and the image is loaded only from an IDE Compact Flash Card. This allows easy upgrade of the OS image from the host PC or external storage card.
3. A fully-charged battery can last for more than two hours under full operation.
4. OS upgrade function is not supported. We will provide the OS image upgrade function for the next OS image.
5. When you use the ad hoc mode to connect to the Internet, make sure that the name of the NIC does not contain more than 10 characters.
6. When you plug and remove the PCMCIA card, please press the "Safely Remove Hardware" icon.
7. Suspending the system while your PCMCIA card or hard drive is in operation may cause system crash and your device may not be bootable again. If your device is no longer bootable, you need to send back your CF card for repair. Please contact your nearest Tatung service representative for service.
8. When the system is in RDP mode, you may experience degrading performance in audio and video playback.
9. The browser does not currently support XML, Flash or special JavaScript authored Web pages and therefore Web contents containing such objects may not be displayed correctly.
10. When the system is accessing the PCMCIA storage card, sudden removal of the card may damage it. Please ensure that all data transactions are fully completed or stopped before removing the card.

## 8. Troubleshooting .....

When you experience operational problems, check the following guide for system troubleshooting. If problems persist, please contact your service provider for technical support.

Battery Operation Problems	Action
Main battery is low.	<ul style="list-style-type: none"><li>▪ Replace or recharge the battery as soon as possible.</li><li>▪ Plug in the AC-DC adapter in and continue using TWN-5213 CU</li><li>▪ When the main battery is discharging, the RAM data will be kept since the memory is powered by the backup battery. If the backup battery power is low, the data may be totally lost, so please save your data regularly.</li></ul>
The battery appears to be damaged or has reached the end of its service life.	<ul style="list-style-type: none"><li>▪ Purchase a new battery.</li></ul>
TWN-5213 CU powers off automatically.	<ul style="list-style-type: none"><li>▪ Use the stylus to tap on the screen to check whether the display activates by your awakening.</li><li>▪ Check to see if the system is in suspend mode.</li><li>▪ Check to see if the battery power is too low or completely drained.</li><li>▪ Replace a charged battery or plug in the AC-DC adapter to charge the battery.</li></ul>
TWN-5213 CU cannot be turned on when not connected to AC power.	<ul style="list-style-type: none"><li>▪ Make sure the battery switch is in the lock position.</li><li>▪ The battery power may be too low to run TWN-5213 CU. Try connect to AC power again.</li></ul>
Display Related Problems	Action
Screen appears dark	<ul style="list-style-type: none"><li>▪ Excessive exposure to direct sunlight may cause TWN-5213 CU screen to temporarily darken. This is a natural phenomenon for LCD screens. It will not be permanent.</li></ul>
Screen appears blank	<ul style="list-style-type: none"><li>▪ Adjust the LCD display brightness by using the brightness control or restart TWN-5213 CU.</li></ul>

System Operation Problems	Action
The touch screen is out of calibration.	<ul style="list-style-type: none"> <li>Run recalibration from Control Panel/Stylus.</li> </ul>
TWN-5213 CU locks up or runs slowly.	<ul style="list-style-type: none"> <li>Close applications that are not in use.</li> <li>Try to reset the system by pressing reset button.</li> </ul>
The touch screen is damaged.	<ul style="list-style-type: none"> <li>Contact an authorized TATUNG representative.</li> </ul>
TWN-5213 CU runs out of storage space	<ul style="list-style-type: none"> <li>Reallocate TWN-5213 CU storage and program memory management by doing a cold boot (memory initialization).</li> </ul>
To turn off the sound in TWN-5213 CU	<ul style="list-style-type: none"> <li>Disable the volume and notifications functions.</li> </ul>
Network Connection Problem	Action
Network connection problems	<ul style="list-style-type: none"> <li>Make sure that the access point is firmly seated and connected to the proper network jack while it is functioning in the network infrastructure mode.</li> <li>Make sure that you have provided the required server information.</li> <li>Ensure that WEP is enabled and the keys are accepted for both the client and host devices while exercising the ad hoc mode (peer-to-peer connection).</li> <li>You can view the system's wireless status by checking the Wireless Signal LED</li> </ul>



## 9. Support and Service .....

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### Web site

You may obtain the Tatung Wireless Thin Clients' product information from <http://www.tatungWebPad.com>. This online service is provided free of charge.



## 10. Warranty.....

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### Warranty

**Important:** Warranty terms may be different with the country of purchase; contact Authorized TATUNG Sales and Service office for detailed product warranty information.

#### One-Year Limited Hardware Warranty

Tatung warrants its Wireless Thin Client products to be free from defects in material and workmanship during the warranty period. If the Wireless Thin Client product proves to be defective in material or workmanship during the warranty period, Tatung will, at its sole option, repair or replace the product with a like product.

Should Tatung be unable to repair or replace the product within a reasonable amount of time, the customer's alternate exclusive remedy shall be a refund of the purchase price upon return of the product.

#### How long the warranty is effective:

Tatung Wireless Thin Clients are warranted for one (1) year from the date of the first consumer purchase.

#### What the warranty does not cover:

- Misuses; unauthorized modification; opening for any reason except to perform an official upgrade using an proper tools/kit
- Operation or storage outside the environmental specifications for the product
- The battery, or damage caused by this battery
- In-transit damage and improper maintenance
- Physical damage to the unit, such as a cracked or broken screen or defect resulting from use of improper software, accessories, media, supplies, consumables, or such items not designed for use with the product.

Tatung makes no other express warranty, whether written or oral, with respect to this product. Any implied warranty of merchantability or fitness for a particular purpose is limited to the one-year duration of this written warranty.

Some customers do not have limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This warranty gives your specific legal rights, and you may also have other rights that vary from customer to customer.



## **Tatung Software Product License Agreement and Tatung Software Product Limited Warranty**

Tatung Wireless Thin Client products contain preinstalled software programs. Please read the following Tatung Software Product License Agreement before proceeding.

**Important:** Carefully read this License Agreement and the Limited Warranty statement before operating the equipment. The rights to the software are licensed, not sold. Tatung or its licensors continue to own all intellectual property rights to the software, and you will be granted certain rights to use the software upon your acceptance of this license. Rights in the software are offered only on the condition that you agree to all terms and conditions of the License Agreement. Operating the equipment indicates your acceptance of these terms and conditions. If you do not agree to the terms and conditions of the License Agreement, return the complete package for a full refund now.

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### **The Following License Terms Govern the Use of the Software:**

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### **Transfer of Right in Software**

You may transfer rights to the software to a third party only as part of the transfer of all your rights and only if you obtain the prior agreement of the third party to be bound by the terms of this License Agreement. Upon such a transfer, you agree that your rights to the software are terminated and that you will either destroy all your copies and adaptations or deliver them to the third party. Transfer to a U.S. government department or agency or to a prime or lower tier contractor in connection with a U.S. government contract shall be made only upon prior written agreement to terms required by Tatung.

### **Sublicensing and Distribution**

You may not lease, sublicense the software or distribute copies or adaptations of the software to the public in physical media, by telecommunication or at all without the prior written consent of Tatung.

### **Termination**

Tatung may terminate this software license for failure to comply with any of these terms, provided Tatung has requested you to cure the failure and you have failed to do so within thirty (30) days of such notice.

### **Updates and Upgrades**

You agree that the software does not include updates and upgrades that may be available from Tatung under a separate support agreement.



### **Export Clause**

You agree not to export or re-export the software or any copy or adaptation in violation of the U.S. Export Administration regulations or other applicable regulations.

### **U.S. Government Restricted Rights**

The Software and Documentation have been developed entirely at private expense. They are delivered and licensed as "commercial computer software" as defined in DFARS 252.227-7013 (Oct 1988), DFARS 252.211-7015 (May) or DFARS 252.227-19 (Jun 1987) (or any equivalent agency regulation or contract clause), whichever is applicable. You have only those rights provided for such Software and Documentation by the applicable FAR or DFARS clause or the Tatung standard software agreement for the product involved.

### **Tatung Software Product Limited Warranty**

**Important:** This Tatung Software Limited Warranty shall cover all software that is provided to you, the customer, as part of the Tatung product, including any operation system software. Any third party software supplier's warranty terms that may be found online or in any documentation or other materials contained in the product packaging shall supersede the Tatung Software Product Limited Warranty with regard to that third party software.

### **Ninety-Day Limited Software Warranty**

Tatung warrants for a period of 90 days from the date of purchase that the software product will execute its programming instructions when all files are properly installed. Tatung does not warrant that the software will be uninterrupted or error free. In the event that this software product fails to execute its programming instructions during the warranty period, your remedy shall be replacement or refund only. Return the media to Tatung for replacement. Should Tatung be unable to replace the media within a reasonable amount of time, Tatung shall refund the purchase price upon return of the product and all copies.

### **Removable Media (If Supplied)**

Tatung warrants the removable media, if supplied, upon which this product is recorded to be free from defects in material and workmanship under normal use for a period of 90 days from the date of purchase. In the event the media proves to be defective during the warranty period, your remedy shall be replacement or refund only. Return the media to Tatung for replacement. Should Tatung be unable to replace the media within a reasonable amount



of time, Tatung shall refund the purchase price upon return of the product and destruction of all other non-removable media copies of the software product.

#### **Notice of Warranty Claims**

You must notify Tatung in writing of any warranty claim not later than 30 days after the expiration of the warranty period.

#### **Limitation of Warranty**

Tatung makes no other express warranty, whether written or oral, with respect to this product.

Any implied warranty of merchantability of fitness for a particular purpose is limited to the 90-day duration of this written warranty.

#### **Limitation of Liability and Remedies**

The Remedies provided above are your sole and exclusive remedies. In no event shall Tatung be liable for any direct, indirect, special, incidental, or consequential damages (including lost profit), whether based on warranty, contract, tort, or any other legal theory.

In no case shall Tatung's liability exceed the purchase price for the software and/or product. The limitations set forth above will apply regardless of whether you accept the software.



## 11. Regulatory and Safety Notices .....

### Declaration of Conformity

Model Number: TATUNG Wireless Thin Client

Trade Name: TATUNG CO.

Responsible Party: TATUNG CO.

Address: 22 Chung-Shan N. Rd. Sec. 3, Taipei, Taiwan 104, R.O.C.

Telephone number: + 886-2-2586-7714

This device complies with the following Certifications,

UL 60950

FCC Part 15

TUV-GSCE



**Wireless Thin Client**

**Model : TWN-5213 CU**

**Input : DC16V --- 2.5A**



FCC ID: BJM-TWN5213BZN



**CE0560①**

**Caution:** 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.

**MADE IN TAIWAN**



## 11.1 Federal Communication Commission Interference Statement

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 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.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

### IMPORTANT NOTE:

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device complies with FCC RF Exposure limits set forth for an uncontrolled environment, under 47 CFR 2.1093 paragraph (d)(2). This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

TATUNG CO. declares that TWN-5213 ( FCC ID: BJMTWN5213-BZN ) is limited in CH1~CH11 for ☐ 2.4GHz by specified firmware controlled in U.S.A.

The Maximum average SAR (1g) for 802.11b is 1.040W/kg.