# Embedded Computer User Manual



### Safety defended:

Properly maintain your system to guarantee its service life and reduce the damage risk.

- It should avoid the humidity and extreme temperature when using.
- Avoid being revealed making equipment for a long time under shoot straight at sunlight or intense ultraviolet ray lamp light.
- Avoid heavy impact or drop onto the ground.
- The LCD screen is very easy to shave a wound, avoid crashing please. Be sure not to use other sharp article to bump against touch screen.
- The fuselage is external, close a power source, allocate away mains lead if should be clean, quality cloth cleans with tiny wet soft when clean screen, in order to not lose trifling soft of cotton please.
- Strictly forbid the machine presumptuously dismantling or keeping the machine, otherwise, possibility damage in repair.
- Do not place with your equipment or accessory and other inflammable liquid,

the gas or other explosive articles place together, to avoid happening

dangerous.

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### **PRODUCT DESCRIPTION**

#### Introduction

- ◆ 9.7" 4:3, 1024 ×768 high resolution, Touch screen control;
- ◆ Comply with IP 64 Waterproof Standard;
- Android 4.3/5.1 OS (Windows CE 7.0 or Linux 3.0.35 OS for optional);
- Micro SD card storage makes the data reliable, convenient and easy for expansion;

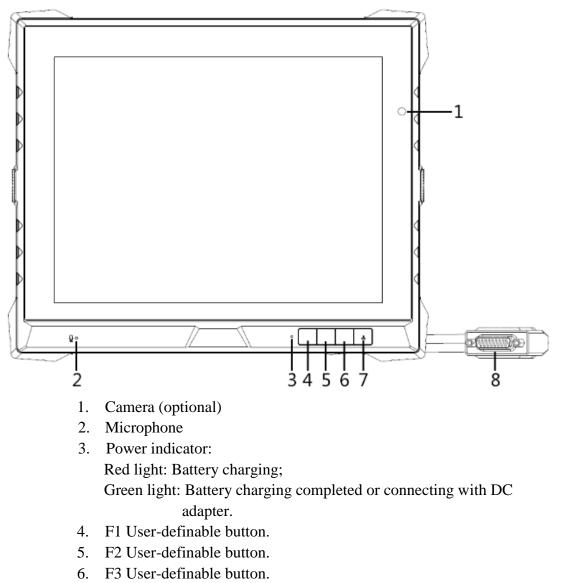
### **Optional Functions**

- ♦ GPS (external)
- ♦ 5.0M camera (built-in)
- ◆ Microphone
- ◆ Wi-Fi 802.11 b/g/n (built-in)
- ♦ 3G/4G (built-in)
- ♦ Bluetooth (built-in)
- ◆ 5400mAh Li-ion battery (built-in)

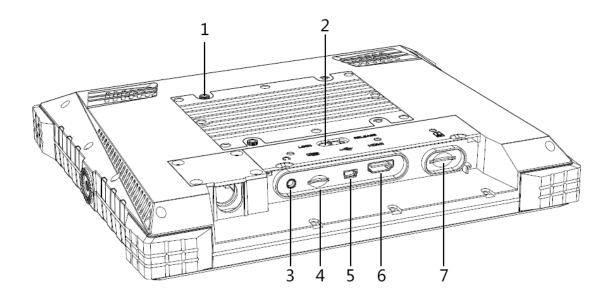
### Parameter

| Configuration                        |   | Parameter        |          |  |  |
|--------------------------------------|---|------------------|----------|--|--|
|                                      | <b>CPU</b> Freescale i  | MX6q Quad core 1 | .0GHz    |  |  |
| System configuration                 | Flash   | 8GB              |          |  |  |
|                                      | RAM   | 1GB (Optional: 2 | GB) DDR3 |  |  |
|                                      | Micro SD card, S  | SIM card         |          |  |  |
|                                      | USB Device 2.0  | , USB host 2.0   |          |  |  |
|                                      | Earphone output port<br>DC power input                                  |                  |          |  |  |
|                                      |   |                  |          |  |  |
| Interface                            | 4×RS232 interface   |                  |          |  |  |
|                                      | (optional RS485/RS422 interface)<br>4×Gpio input, 6×Gpio output<br>HDMI |                  |          |  |  |
|                                      |   |                  |          |  |  |
|                                      |   |                  |          |  |  |
|                                      | Ethernet and POE interface  |                  |          |  |  |
| Touch Panel                          | Capacitive  |                  |          |  |  |
| Display                              | 9.7" LVDS   |                  |          |  |  |
| Screen Resolution                    | 1024×768  |                  |          |  |  |
| Brightness                           | 350cd/m <sup>2</sup>  |                  |          |  |  |
| Contrast                             | 900:1   |                  |          |  |  |
| Viewing Angle                        | 178 % 178 °(H/V   | )                |          |  |  |
| Power supply                         | DC 9-36V  | With Battery     | DC11-36V |  |  |
| Power Consumption<br>(Normal mode)   | ≤9W   |                  |          |  |  |
| Power Consumption<br>(Charging mode) | ≤24W  |                  |          |  |  |
| Working                              | -   |                  |          |  |  |
| Temperature                          | -20℃-60℃  |                  |          |  |  |
| Storage Temperature                  | -30°C-70°C  |                  |          |  |  |
| Dimension (LWD)                      | 252 × 511 × 37 (  | (mm)             |          |  |  |
| Weight                               | 1340g   |                  |          |  |  |

## **Parts Description**

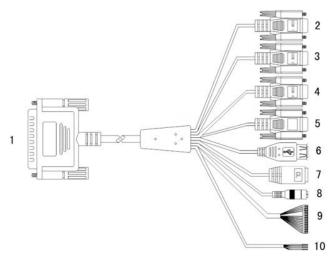


- 7. Power on/off: Long press to power off.
- 8. Extended cable.



- 1. 75MM VESA.
- 2. Cover switch.
- 3. Earphone jack: to connect with earphone.
- 4. Micro SD card slot: insert micro SD card to store pictures and other data.
- 5. Mini USB port: To connect with USB cable.
- 6. HDMI out.
- 7. 3G/4G card slot: insert 3G/4G SIM card to connect with wireless network.

## **Extended Cable Specification**



| No. | ltem              |                                   | S                     | peci  | fication | ۱     |     |         |  |
|-----|-------------------|-----------------------------------|-----------------------|-------|----------|-------|-----|---------|--|
| 1   | Convertor         | To connect with device cable      |                       |       |          |       |     |         |  |
| 2   | Com 1 serial port | RS232 serial port                 |                       |       |          |       |     |         |  |
| 3   | Com 2 serial port | RS232 serial port or GPS port     |                       |       |          |       |     |         |  |
| 4   | Com 4 serial port | RS232 or RS422 serial port switch |                       |       |          |       |     |         |  |
| 5   | Serial port       | RS232 or RS485 serial port switch |                       |       |          |       |     |         |  |
| 6   | USB host port     | For data trans                    | For data transmitting |       |          |       |     |         |  |
| 7   | LAN port          | For network of                    | connec                | tion  |          |       |     |         |  |
| 8   | Power             | To connect w                      | ith DC                | C ada | pter     |       |     |         |  |
| 9   | Gpio port         | ~                                 | 1                     |       | 2        | 3     |     | 4       |  |
|     |                   | Gpio input<br>(0~5V)              | Gpio_                 | 62    | Gpio_56  | Gpio_ | 166 | Gpio_84 |  |
|     |                   |                                   | Br&V                  | N     | B&W      | LG    | r   | Р       |  |
|     |                   |                                   | 5                     | 6     | 7        | 8     | 9   | 10      |  |
|     |                   | Gpio output                       | Gpio                  | Gpi   | o Gpio   | Gpio  | Gpi | o Gpio  |  |
|     |                   | (0V  or  5V)                      | _67                   | _17   | 2 _45    | _178  | _93 | 3 _66   |  |
|     |                   |                                   | W                     | Gr    | Pu       | Bl    | G   | Y       |  |
|     |                   | Cric CND                          | 11                    |       |          |       | I   |         |  |
|     |                   | Gpio GND                          |                       |       | ]        | В     |     |         |  |
|     |                   |                                   | 13                    |       | 14       | 15    |     | 16      |  |
|     |                   | CAN                               | CAN1                  | Н     | CAN1L    | CAN2  | H   | CAN2L   |  |
|     |                   |                                   | 0                     |       | R        | Br    |     | R&W     |  |
| 10  | Definition port   |                                   | 1                     |       | 2        | 3     |     | 4       |  |
|     |                   | RS422                             | G (A                  | .)    | Y (B)    | O (Z  | )   | R (Y)   |  |

Ps: O "orange", W "white", R "red", Br "brown", B "black", LG "light green", P "pink", Gr "gray", Pu "purple", Bl "blue", G "green", Y "yellow".

# **SIM Card & Memory Card Instructions**

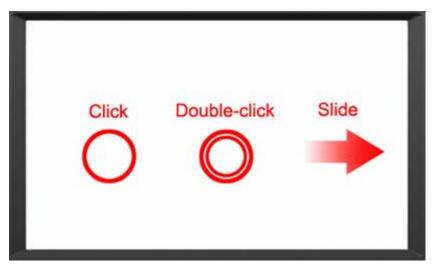
- In order to avoid damaging of the 3G/4G card & memory card, please insert the card smoothly and push slightly before you draw it out.
- The memory card will be heat after long time working.
- If you don't correctly use the memory card or cut the power when it being read, maybe some data will be damaged.
- If you don't correctly use 3G/4G card or cut the power when it being read, the network will be interrupted.
- If you do not use SD card for a long time, please put it into packing box. Insert the memory card as shown as

#### follows,

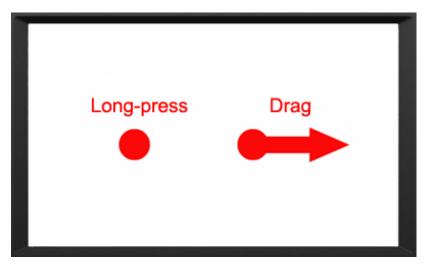
- Find the location of the 3G/4G card or memory card slot, part of the metal contacts facing down forward until it snaps into place.
- Insert the 3G/4G card or memory card smoothly to avoid of damaging.
- Please do NOT insert micro SD card into 3G/4G card slot, otherwise, micro SD will be hard to be taken out, and may be damaged.
- ◆ 32G micro SD supported.

# **Basic Operation**

#### **Click and Slide**



### Long-press and Drag



### Delete



Long-press the application icon, and drag to the Home screen, then drop to the recycle bin on the right to delete this app.



# MENU

### Icon Bar

Icon bar shows on the top of screen.

| lcon | Name           | Description  |
|------|----------------|--|
| ţ    | USB            | Status of USB device plugged-in.                                   |
| D    | micro SD       | Status of micro SD card plugged-out.                               |
|      | card           | Status of micro SD card plugged-in.                                |
|      | Wi-Fi          | Wi-Fi signal connection and status of signal weakness or strength. |
| Itti | Signal         | Signal disconnection or connection failure.                        |
| ull  | - Signal       | Signal connection and status of signal weakness or strength.       |
|      | Battery status | Battery and charging status  |
| 4:59 | Time           | Current time   |

### **MENU SETTING**



| inaner Sear | Wallpaper | Manage apps | Add |
|-------------|-----------|-------------|-----|
| aper Sear   | aper      | Wallp       |     |

### 1. Click **O** to add.

| Add to Home screen |
|--------------------|
| P Shortcuts        |
| Widgets            |
| Folders            |
| Wallpaper          |

1-1. Add application shortcut to Home screen according to user's need.

| 0   | <u>a</u>    |           | Q      | Q             | Ó       |
|-----|-------------|-----------|--------|---------------|---------|
| Add | Manage apps | Wallpaper | Search | Notifications | Setting |

- Image: Constraint of the start of
- Image: Constraint of the second se

- 2. Click is to manage applications.
- 2-1. Click download: To view and manage downloaded applications.

2-2. Click All Applications: To view and manage all applications.

| Downloaded                                | All                | On SD card   | Running                   | 2-3. Click SD Card: 10 view an         |
|---|--------------------|--------------|---------------------------|--|
| GPS Test<br>704KB                         |                    |              |                           | downloaded in SD card.                 |
| Touch Test<br>792KB                       |                    |              |                           |  |
| 2.14MB                                    |                    |              |                           |  |
|   |                    |              |                           |  |
|   |                    |              |                           |  |
|   | SD card            | storage      |                           |  |
| 36KB used                                 |                    |              | 1.6GB free<br>* 📶 📔 10:32 | 2-4. Click 🖾 Running: To               |
| Downloaded                                | All                | On SD card   | Running                   | applications which are running.        |
| Settings<br>1 process and 0 services      |                    |              | 12MB                      |  |
| wdj_install<br>1 process and 1 service    |                    |              | 8.2MB<br>09:14            |  |
| 360<br>2 processes and 2 services         |                    |              | 11MB<br>07:53             |  |
| 360MobileSafe<br>1 process and 2 services |                    |              | 16MB<br>01:35             |  |
| Music<br>1 process and 2 services         |                    |              | 2.5MB<br>09:20            |  |
| 96MB used                                 | RÆ                 | M            | 210MB free                |  |
| Some used                                 |                    |              | 2 tomb free               |  |
| • • R                                     |                    | Q, I         | <b>D</b> (Ö)              | 3. Click <b>I</b> to launch wallpaper. |
| Add Manage apps                           | Wallpaper<br>Touch | Search Notif | fications Settings        | 5. Chek <b>m</b> to launch wanpaper.   |
|   |                    |              |                           |  |
| Select wallpaper from                     |                    |              | والمحمر والت              | 3-1. Choose favorite wallpaper.        |
| Gallery                                   |                    |              |                           |  |
|   |                    |              |                           |  |

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Live wallpaper

Wallpaper

2-3. Click SD Card: To view and manage application

To view and manage nning.

12

| 0   | Q           |           | Q      | •             | Ö        |
|-----|-------------|-----------|--------|---------------|----------|
| Add | Manage apps | Wallpaper | Search | Notifications | Settings |

Touch

4. Click to search.

| 1 📀 🛜 😰          |                  |                  |     | 🕴 📊 🧯 10:33 |
|------------------|------------------|------------------|-----|-------------|
| Google           |                  |                  |     |             |
|                  |                  |                  |     |             |
|                  |                  |                  |     |             |
|                  |                  |                  |     |             |
|                  |                  |                  |     |             |
|                  |                  |                  |     |             |
|                  |                  |                  |     |             |
|                  |                  |                  |     |             |
| q w <sup>2</sup> | e <sup>3</sup> r | t <sup>s</sup> y | u i | ° ° p       |
|                  |                  |                  |     |             |
| a s              | d                | fg               | h j | k I         |
| 🚖 🕺 Z            | x                | c v              | b n | m 💌         |
| ?123 📀           |                  |                  |     | Go          |
| U.S.             | <b>1</b>         |                  | •   | 1 and an    |

4-1. Input the keywords, and click search automatically.

| Manage apps | Wallpaper   | <b>Q</b><br>Search    | Notifications                | <b>O</b><br>Settings                           |
|-------------|-------------|-----------------------|------------------------------|--|
|             | Manage apps | Manage apps Wallpaper | Manage apps Wallpaper Search | Wallpaper         Search         Notifications |

5. Click to launch Notice function.

| September 30, 2013   | * iii 🧕 10:33<br>Clear |
|--|------------------------|
| Ongoing  |                        |
| <ul> <li> <sup>↓</sup> Connected as a media device<br/>Touch for other USB options         </li> </ul> | 45%                    |
| USB debugging connected<br>Select to disable USB debugging   |                        |
| Notifications  |                        |
| My Uploads     Uploads finished  | 10:30 AM               |
|  |                        |
|  |                        |
|  |                        |
|  |                        |

5-1. The notice bar shows system, running and error notice. (Notice bar hides on the top of screen, drag and pull down from the screen top to show it.)

| Add                              | R<br>Manage apps                    | Wallpaper       | <b>Q</b><br>Search | Notifications | Settings       | 6. Click to launch setting.                          |
|----------------------------------|-------------------------------------|-----------------|--------------------|---------------|----------------|--|
|                                  |                                     |                 |                    |               | Touch          |  |
| 2 Settings                       |                                     |                 | _                  |               | * iill 🧧 10:36 | 6-1. Setting according to users' needs.              |
|                                  | s & networks                        |                 |                    |               |                |  |
| 🗲 Call sett                      | ings                                |                 |                    |               |                |  |
| <ul><li>◄) Sound</li></ul>       |                                     |                 |                    |               |                |  |
| 🖚 Display                        |                                     |                 |                    |               |                |  |
| 🖽 Locatior                       | n & security                        |                 |                    |               |                |  |
| 🖄 Applicat                       | ions                                |                 |                    |               |                |  |
| @ Account                        | s & svnc                            |                 |                    |               |                |  |
| 👩 🛜 📀 🖞<br>Wireless & netwo      | rk settings                         |                 |                    |               | * jil 🧧 10:36  | 6-1-1. Click "Wireless & network settings" to launch |
| Ethernet<br>Turn on ethernet     |                                     |                 |                    |               |                | setting of wireless and network.                     |
| Airplane m<br>Disable all wirele |                                     |                 |                    |               |                |  |
| WiFi                             |                                     |                 |                    |               | ~              |  |
| Wi-Fi settin<br>Set up & manage  | <b>gs</b><br>wireless access points |                 |                    |               |                |  |
| Bluetooth                        |                                     |                 |                    |               | ✓              |  |
| Bluetooth s                      | settings<br>ons, set device name &  | discoverability |                    |               |                |  |
| Tethering 8                      | portable hots                       | spot            |                    |               |                |  |

\* 👬 📋 10:37 6-1-2. Launch "Call settings" after 3G SIM card inserted.  $\overline{\bullet}$ 

Voicemail service Voicemail settings Settings for My operator Other call settings Call forwarding Additional settings Internet call settings

👩 🌍 🌚 🕴 Call settings

Voicemail

Fixed Dialling Numbers Manage Fixed Dialling Numbers

| 😰 🛜 🏵 Y   | * ill 🦲 10:39              |
|---|----------------------------|
| Sound settings                                  |                            |
| General   |                            |
| Silent mode<br>All sounds except media & alarms |                            |
| Vibrate<br>Only in Silent mode                  |                            |
| Volume  |                            |
| Incoming calls                                  |                            |
| Phone ringtone                                  |                            |
| Notifications                                   |                            |
| Notification ringtone                           |                            |
| Feedback  |                            |
|   |                            |
| 😰 👼 🖗 🔮 住<br>Display settings                   | * iii <mark>1</mark> 10:39 |
| Brightness                                      |                            |

Auto-rotate screen

Animation

Passwords

Visible passwords

6-1-3. Click "Sound settings" after 3G card connected, to set sound function.

6-1-4. Click "Display settings" to set Brightness, Auto rotate screen, Animation, XEC DLS Control and Screen timeout.

6-1-5. Click "Location & security settings" to set location and password management.

- 6-1-6. Click "Application settings" to launch background
  - and auto sync setting when network connected.

| All window animations are shown  |               |
|--|---------------|
| XEC DLS Control  |               |
| Screen timeout<br>Adjust the delay before the screen turns off automatically                 |               |
| 🙋 🎅 옷 📀 🖞<br>Location & security settings  | * iii 🧰 10:40 |
| My Location  |               |
| Use wireless networks<br>See location in applications (such as Maps) using wireless networks |               |
| Use GPS satellites<br>When locating, accurate to street level                                | ~             |
| Screen unlock  |               |
| Set up screen lock<br>Lock screen with a pattern, PIN or password                            |               |
|  |               |

| 🙋 🗟 🥸 भू<br>Application settings                                 | * iii 🧧 10:41 |
|--|---------------|
| Unknown sources<br>Allow Installation of non-Market applications |               |
| Manage applications<br>Manage and remove installed applications  |               |
| Running services View and control currently running services     |               |
| Storage use<br>View storage used by applications                 |               |
| Battery use<br>What has been using the battery                   |               |
| Development<br>Set options for application development           |               |

| 👩 🛜 📀 🖞   | * | ١١ | 10:42      |
|---|---|----|------------|
| Privacy settings<br>personal data                 |   |    |            |
| Factory data reset<br>Erases all data on phone    |   |    |            |
|   |   |    |            |
|   |   |    |            |
|   |   |    |            |
|   |   |    |            |
|   |   |    |            |
|   |   |    |            |
|   |   |    |            |
|   |   |    |            |
| 🙋 🚰 📀 갖<br>Language & keyboard settings           | * | îΠ | 10:45      |
| Language & Reyboard settings<br>Language settings |   |    |            |
| Select language<br>English (United Kingdom)       |   |    |            |
| User dictionary                                   |   |    |            |
| Keyboard settings                                 |   |    |            |
| Android keyboard<br>Android keyboard Settings     |   |    |            |
|   |   |    |            |
|   |   |    |            |
|   |   |    |            |
| ତ୍ତି 🗟 📀 ହ  | * | ŭđ | 10:47      |
| Date & time settings                              |   |    |            |
| Automatic<br>Use network-provided values          |   |    |            |
| Set date<br>30/09/2013                            |   |    |            |
| Select time zone                                  |   |    |            |
| Set time  |   |    |            |
| Use 24-hour format                                |   |    |            |
| 1:00 P.M.   |   |    |            |
| Select date format<br>31/12/2013                  |   |    | $\bigcirc$ |
|   |   |    |            |

6-1-7. Click "Privacy Settings" to restore factory settings when problem occurred.

Please DO backup all important files and data before restore factory settings. Otherwise, files and data will be deleted and restored to defaults.

6-1-8. Click "Language & keyboard Settings" to set language and keyboard functions.

6-1-9. Click "Date & time settings" to set date and time automatically and manually.

### Accessories

#### Standard:



### **Optional:**



| 1. GPS antenna           | 1piece (connect with COM2 port on the extended cable) |
|--------------------------|---|
| 2. VESA rail slot        | 1piece  |
| 3. VESA bracket          | 1piece  |
| 4. 5000mA Li-ion battery | 1piece (built-in)                                     |
| 5. Micro SD (TF) card    | 1piece  |

### **Trouble Shooting**

### **Power Problem**

#### Cannot boot up

- 1. Wrong cable connection
  - a) Connect Extended cable with device first, and connect the AC end of DC adapter with DC input port of Extended cable, then the other end of DC adapter connect with power plug socket.
- 2 Bad connection
  - a) Check every connection and socket of power source

### **Screen Problem**

- 1. No picture on screen.
- 2. The application reaction time is too long and cannot be activated when clicked.
- 3. The image appears delay or still when switching.

#### Please restart your system if the device has any problem as described above.

- 4. Display screen is misty
  - a) Please check whether the display screen surface has dust filth or not. Please simply wipe with clean and soft cloth.

### Note: due to constant effort to improve products and

#### product features, specifications may change

without notice.