

FelTouch 100

User's Manual

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Introduction

About the product

FelTouch is a wireless remote control device for TV connected media center devices including Windows based HTPC, Mac MINI, or SurBox.

It is one hand operational, to be an alternative choice against regular mouse and keyboard. And more -

- To receive user commands from user's finger touch actions, and
- To use standard USB interface and USB HID class operations to control host devices like PC or SurBox – Hanson's other media center product.
- To use touch gestures as a useful tool for man-machine interface. Touch gestures are already widely being used in Smartphone and modern computers.
- FelTouch model 100 comes with QWERTY keypad and PC mouse functionalities, fully compatible with PC (Windows and Macintosh) work environment.
- FelTouch model 110 is the other new model with different keyboard mapping for horizontal usage for key inputs.



The typical usage area of this device is for home infotainment, to control home media centers and HTPC (Home Theater PC) that are connected to TV in living room, OR other places where mouse/keyboard operation is not convenient (for example, no desk and standing surface for mouse/keyboard operation).

Product overview

A summary of this product features is

- One hand operation
- Companion to SurBox for TV internet browsing and media streaming
- Also Work with HTPC, MAC MINI for Connected TV
- Suit for office presenter
- 2.4GHz RF wireless connectivity
- Capacitive touch with high sensitivity
- Mouse alternative use
- Full QWERTY keyboard
- Stylish touch, button zero design
- Touch gestures for navigation - zoom in/out, scroll up/down
- 90 degree rotation for landscape operation
- Operated by normal AA batteries

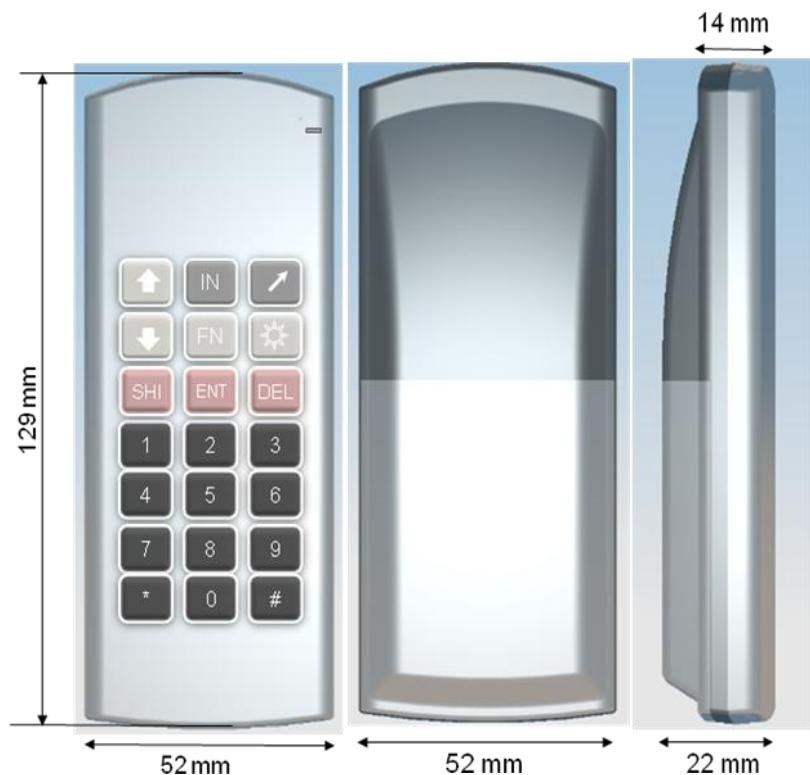
Getting Started

Product package

The product package includes

- FelTouch remote control
- FelTouch USB dongle
- AA Battery X 3

Remote Control: Front, Back and Side panels

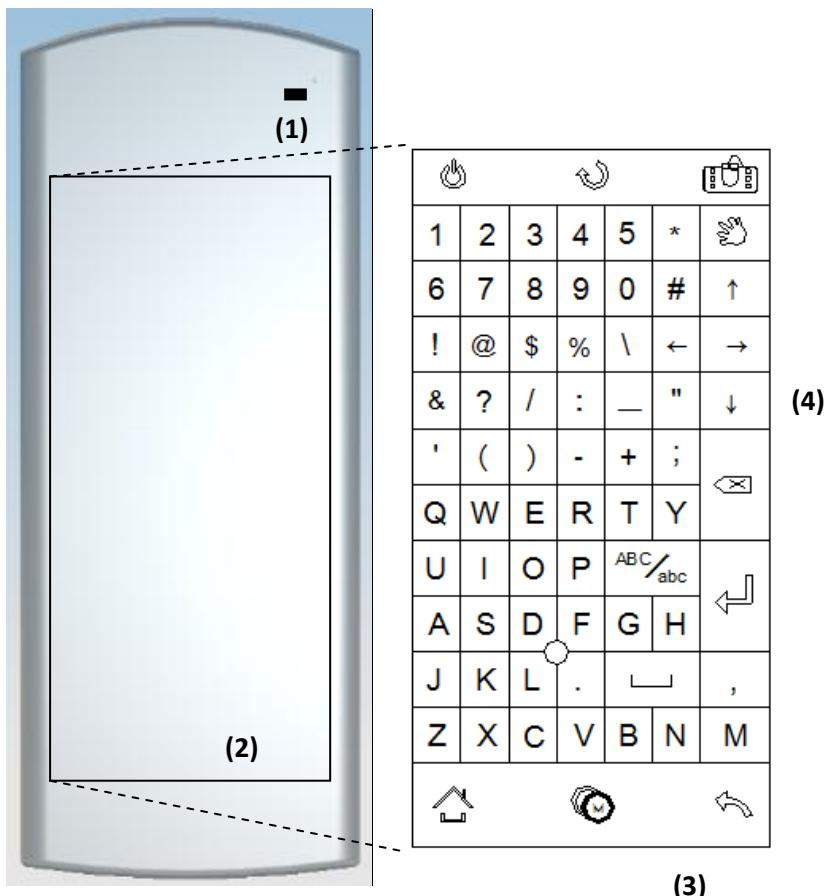


◆ Actual top cover pattern is showed in next page.

FeITouch 100



Function items



1. Notification LED, see description below

2. Touch active area
3. Function buttons
4. Keyboard input area

Notification LED

The Notification LED shows:

- Green light when power is on and the device is waiting for touch actions, keyboard input is disabled.
- Red light when power is on and the device is waiting for keyboard input. In this mode, users cannot change window cursor position.
- Short flashing of Red light to show the device has recognized a keyboard character input.
- Longer flashing of red light to show the device has detected a function key press.
- When finger touches the surface of touch active area, initially the LED will turn off until recognition of specific touch actions.

Touch active area

Touch active area is an area for user to have touch input actions.

This area is built by a high sensitive capacitive touch sensor, to detect movement of user fingers.

This device support one finger operations - such as change position, press, release, long press, and some two finger gestures.

The design uses two layers of operation scheme, to allow function buttons exist together with touch pad. If user presses a button longer than a designed time, the device will detect it as a long press, and will activate the button function; otherwise, the device will recognize it as a normal touch event, to change cursor position, or to join as part of a touch gesture activity.

This design maximizes the use of active area for touch operations, and at the same time, allow as many as possible soft buttons for software control purpose.

Function buttons

Function buttons are for

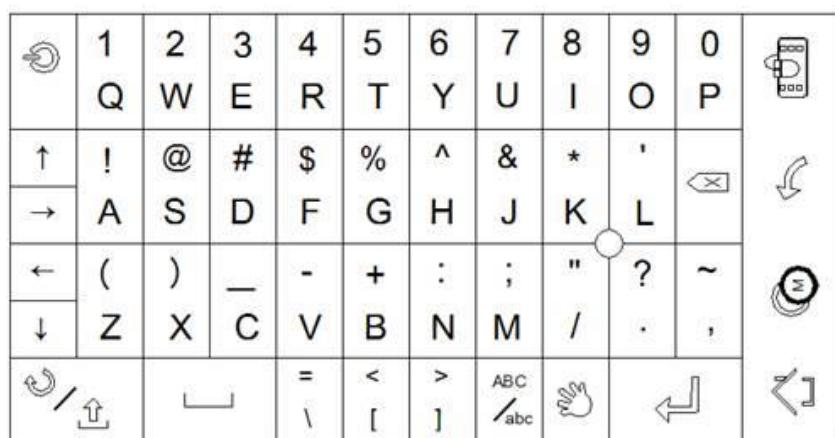
- Mode changes of the device. They include power on/off, switch between cursor mode and keyboard mode, rotate the device 90 degree to more fit into modern TV/ display landscape view.

- Operating system shortcut functions. Currently this device is customized to support [Surbox] – Hanson’s other product built by Android OS and Microsoft Windows some operations.

Keyboard input area

Keyboard input area is for user to input text during edit functions. It emulates QWERTY keyboard with alphanumeric characters and some special symbols together.

Alternative model option of **FelTouch 110** has different keyboard mappings as below for horizontal usage of keyboard as well as mouse pointer.



USB dongle



FelTouch USB dongle is to companion with FelTouch remote device, to receive data from remote side in wireless, and later forward the received commands to host devices – PC or Surbox. This device works as a standard USB HID mouse and keyboard, means users can choose FelTouch mainly as cursor operation and key inputs (with short messages), and at the same time, still able to use full function keyboard for text input intensive applications.

Installation

To remove the back cover

1. Firmly hold the device with both hands and the front panel is facing down.
2. Pull pack the back cover down with thumb until it disengages from the device.

To install batteries

1. This product is operated by three normal AA size batteries.
2. Install batteries and note the directions of each battery unit.

To hook USB dongle to host PC or Surbox media box

- This device operates to support up to 10 meter distance between USB dongle and FelTouch remote device.

This device can work for 2 months, or last longer, from one time battery change. However, the actual work time may be different based on various usage patterns and different battery models.

Touch actions

Touch action		Action's description	Meaning of the action
Finger move		Finger touches the surface of touch active area, and move. When action is recognized, the LED will turn off from green.	To move cursor position
Finger touch and hold		1. Finger touches the surface of touch active area, and 2. Holds the position for about 0.1 seconds. When action is recognized, the LED will change from dark to RED color.	To activate the item where the cursor is. For PC mouse, it means the left button is pressed. This action may be disabled from a default cursor mode. In this case, it will be enabled from Cursor Gesture Mode setting to Browsing mode. (Please see Cursor mode chapter)
Finger release		Release from finger touch. LED color will recover to GREEN.	Normally means end of a sequence of touch action
Touch scroll		1. Finger touch and hold. 2. Finger drag and move. 3. Control the move speed. 4. Finger release.	For Android OS, the move speed can be measured by software, to generate an effect of content scrolling with accelerated speed.
Button press		1. Finger touch and hold the function buttons. 2. LED will flash RED one time after the action is detected.	To activate the function buttons – such as [Home], [Back], [Tool],... Power button is an exception to others, has a longer time (1-2 sec.) until activation.
Parallel line		1. Two fingers touch in parallel, vertically or horizontally. 2. LED color will change between GREEN and RED.	To scroll up and down when cursor is on browsing mode.

			
Zoom in	   	<ol style="list-style-type: none"> 1. Two fingers touch the touch active area at the same time. 2. Start with two fingers keep > 2 cm apart. 3. Move and close two fingers to each other. 4. Release fingers when two fingers touch each other. 	<p>Zoom in function mainly is for web browser environment.</p> <p>OS mode (Windows or Android) should match to the actual host device, in order to have correct effects.</p>
Zoom out	  	<ol style="list-style-type: none"> 1. Two fingers touch the touch active area at the same time. 2. Start with two fingers keep close with each other. 3. Move and separate two fingers from one another. 4. Release fingers when two fingers leave each other more than 2 cm. 	<p>Zoom out function is mainly for web browser environment.</p> <p>OS mode (Windows or Android) should match to the actual host device, in order to have correct effects.</p>
Right circle		<ol style="list-style-type: none"> 1. Finger touches the touch active area. 2. Clock-wise to draw a circle. 3. And release. 	<p>In Browsing mode:</p> <p>It works as content scrolling down.</p> <p>For Windows Mouse, it works same as wheel down operation.</p> <p>In Media Control mode:</p> <p>It is to adjust media volume up.</p>
Left Circle		<ol style="list-style-type: none"> 1. Finger touches the touch active area. 2. Counter-Clock-wise to draw a circle. 3. And release. 	<p>In Browsing mode:</p> <p>It works as content scrolling up.</p> <p>For Windows Mouse, it works as wheel up operation.</p> <p>In Media Control mode:</p> <p>Adjust media volume down.</p>
Slide Right		One finger touches the active area and move from left to right, horizontally.	<p>Only work in Media Control mode.</p> <p>Move right to browse content index.</p>
Slide Left		One finger touches the active area and move from right to left, horizontally.	<p>Only work in Media Control mode.</p> <p>Move left to browse content index.</p>

		left, horizontally.	
Slide Up		One finger touches the active area and move from bottom to top, vertically.	Only work in Media Control mode. Move up to browse content index.
Slide Down		One finger touches the active area and move from top to bottom, vertically.	Only work in Media Control mode. Move down to browse content index.

Operating Modes

Change Input mode	Input modes
Press Keyboard button (Long press) and Mouse button to switch to/from Cursor and Keyboard input modes.	Cursor (Mouse) mode*
Touch gestures (parallel line) are also available to switch between these two modes.	Keyboard input mode

Change OS mode	Operating Systems
Press Keyboard button (Long press) three times in keyboard input mode, until LED flashes three times within 1 second.	Google Android setting for SurBox – Android TV
	Microsoft Windows or Apple Mac* Default OS mode.

This OS mode information is stored, depends on the model's hardware configuration, in remote control and USB dongle sides in both, and keeps it stored until a physical power off which usually caused by a new battery change.

Change Gesture mode	Gesture modes
Press Mouse (Cursor) button in Cursor mode.	Disabled* : Disable all touch gestures
The mode changes sequentially for each long press of the Mouse button. And LED flashes 1-3 times in short period to reflect current gesture mode.	Browsing : - Enable all gestures - Cursor works too - Media control actions does not work
	Media control : - Enable all touch gestures - And media control actions - But cursor is not work

Function Buttons

Function buttons are activated when user have long press action to the specific button area.

Button		Meaning of the button
Power		To power off this device actively, need to press this button and keep as long as 2 seconds until a flash of RED LED. The device is set to power off automatically after 5 minutes, if the device maintains idle without any touch actions.
Rotate		To rotate the touch active area coordinates 90 degree, to fit more to modern display size proportion.
Keyboard/ Cursor		To switch between cursor pointer and keyboard input.
Gesture sub-modes		If the device is in cursor mode, then Press to switch the sub modes among [1] Enable cursor move, but disable all other gestures. [2] Enable touch gestures for browsing. [3] Enable gestures for media, but disable cursor move. The touch gestures impacted by this action are zoom-in/out and touch scrolling. LED will flash RED 1, 2, or 3 times depends on the current sub mode, after setting. [Long press] – Longer than 5 seconds This device will be configured to change OS settings (between Android and Windows / Mac). To response to this mode change, LED will turn on color to RED and last around 1 second, and change back to GREEN.
Home		At Android OS mode, it goes back to HOME screen. At Windows OS mode, it opens up the [Start] menu.
Menu		At Android OS mode, it slides up the MENU tool bar. At Windows OS mode, it opens up the tool window – same as the function by pressing mouse Right button.

Back		Go back to last screen. At Android OS mode, it is the [BACK] key defined by this OS, to quit current activity, and move back to previous window. At Windows OS mode, it is [ESC] key of the keyboard.
Enter		In text edit, it sends [ENTER] command to confirm an input. In Media Control mode, it is used to select an item, while other touch operations are limited to gestures only.
Delete		In text edit, it sends [DELETE] command to device.

Function buttons are always active, not related to which mode the device is set to.

Software compatibility

FeiTouch has been tested and qualified working with various operating systems and popular HTPC and media center application software, include:

Windows XP / Windows 7
Ubundu Linux
Apple Macintosh OS X / Mac Mini
BOXEE
XBMC
SurBox – Android OS based media center device

New touch gestures dedicated to specific software items are being added continuously, based on customer feedback and demand.

FeiTouch also works together with other HID devices seamlessly, as it complies to the same USB HID class standard and 2.4GHz RF regulations.

Other Technical Specifications

Item	Descriptions
Dimensions	129mm X 52mm X 22mm
Battery in use	AA size battery X 3
Work time	Two months operation (@ 2 hours daily)
Touch sensor type	Capacitive touch sensor
Touch sensitivity	400x240 matrix in touch active area
Touch sensor capability	One finger and pseudo two finger operation
Wireless communication	10 meter @ 2.4GHz frequency band
Host interface	USB device with HID keyboard/mouse class
Software support	Android OS, Windows, Mac OS, and Linux
USB class support	HID classes – Keyboard, Mouse, Consumer Audio

FCC Interference Statement

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

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operations.

This device 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 device 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 device does cause harmful interference to radio/television reception, which can be determined by turning the device 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 the 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.

Warning:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.