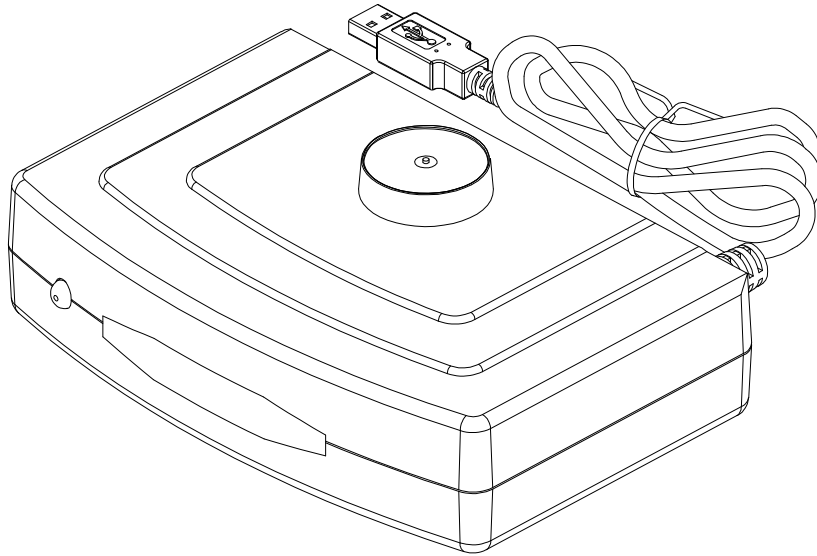


TMR900U Series



Touch Memory Reader With USB HID Keyboard Interface User's Manual

Manual Part Number: TM970113 REV: A

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GIGA-TMS

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Content

Information	3
Introduction	4
Specification	5
Accessory	6
Technical & Operational Description	7
Pin Assignment & Connection	8
Software Operation	9
Default Settings & Data Format	12
Installation	13

Information

1. TMR900U series models:

- TMR900U Touch Memory Button With USB HID Keyboard Interface Reader
- TMR900UD Touch Memory Button With USB HID Keyboard Interface Reader

2. Standard package includes:

- One TMR900U Touch Memory Button With USB HID Keyboard Interface Reader
- One demo software & user manual disk.
- One accessories package.

3. Optional accessories (ordered separately)

- iButton tag

4. FCC Compliance:

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

5. Trademarks:

The following are the trademarks of Dallas Semiconductor Corporation:

Dallas

Dallas Semiconductor

Touch Memory Button

Touch Memory

Introduction

TMR900U is a device, that lets you read the Identification Code (sometimes referred to as an ID-code or Registration number) of Dallas Semiconductor's Touch Memory Buttons. The device is extremely simple to use: all you need to do is press the Touch Memory Button against the touch probe, located on top of the TMR900U's housing. ID-code will then be read out, verified against possible read errors and output into your PC via USB interface.

TMR900U reads out and outputs touch-button's ID-code. After the read, you can compare the data send to your PC with the data engraved on the touch button's housing. Fig.1 shows the Touch Memory Button with the ID-code engraved on it. After the read, computer will receive a full 16-digit string, shown below the button.

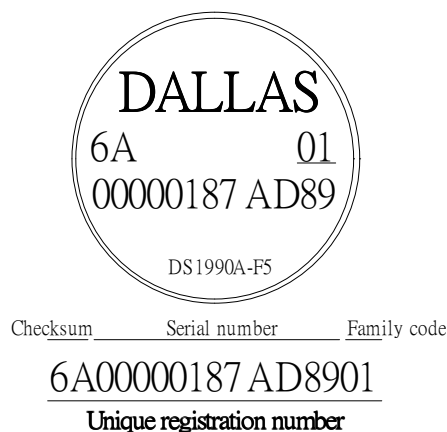


Fig1. Touch Memory Button from Dallas Semiconductor and it'sunique 16-character registration number.

Each of the 16 characters can be a digit from 0 to 9 or a capital letter from A to F. The ID-code of any Touch Memory Buttons is absolutely unique. Dallas Semiconductor guarantees that no two Touch Memory Buttons will ever be manufactured with the same ID-code. Thus, the Buttons can be used for various automated password entry and in other areas requiring a unique code.

In fact, the 16-character ID-code consists of 3 fields:

Family code	Dallas Semiconductor manufactures more than dozen different Touch Memory models. Each model has a unique family code.
Serial number	This serial number is unique for each and any member of the device family.
CRC	2 control characters, used to verify the correctness of the data.
<hr/>	
All together	Unique 16-characters serial number

All Dallas Semiconductor's Touch Memories, regardless of their type and function have this unique registration number and utilize one single standard protocol for registration number readout. Therefore, you can use the TMR900U to read the registration number of any existing Touch Button.

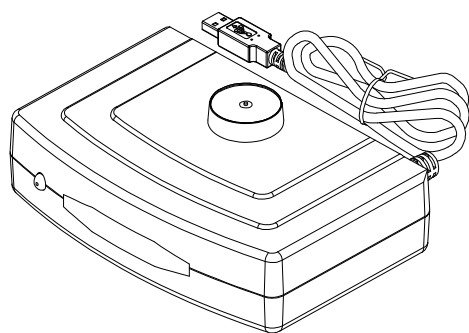
The TMR900U also allows the user to customize the ID-code output format by programming a Prefix and Postfix strings as well as several other options. For more details refer to the "Programming" section of this Manual.

Specification

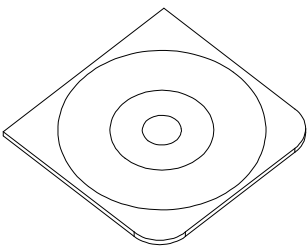
Reading capabilities	Read the ID code of all Touch Buttons conforming to Dallas Semiconductor 1-wire protocol. (*)
PC interface	USB HID Keyboard interface
Power supply	5V through USB port
Power consumption	50mA max
Certificate	CE、FCC
Dimension	120(L) x 80(W) x 37.5(H) mm
Weight	160g
Operating Temp	-0 to 50 Deg C
Storage Temp	-10 to 60 Deg C
Humidity	10 ~ 90%

* as described in Dallas semiconductor's "Book of Touch Memory Standards".

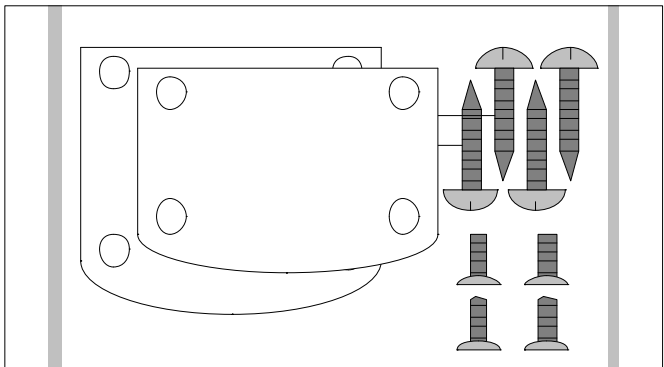
Accessory



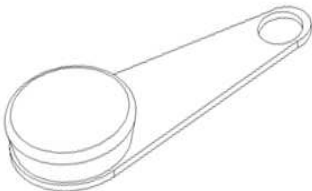
**Main Unit
(TMR900U)**



**Software and manual
(DISK5413)**

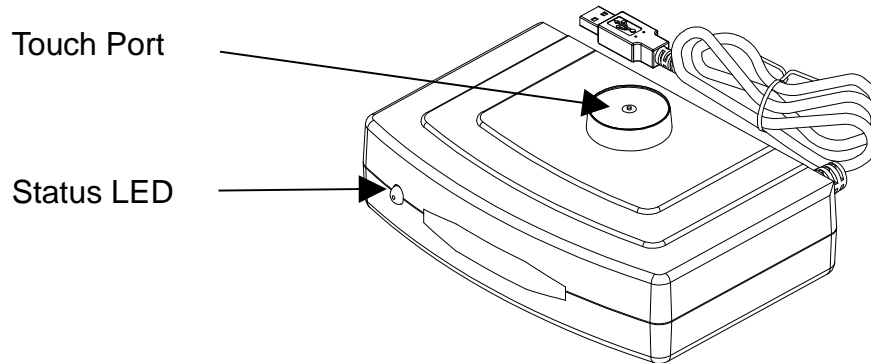


Accessories package



**iButton Tag
(Option)**

Technical & Operational Description



TMR900U Touch Memory Reader

Located on the upper cover is the touch port. To read the Touch Memory Button, just press it firmly against the touch port.

There is also a 3-color (red, green and orange) status LED. When TMR900U is powered up but no Touch Memory Button is being read, the green light is on. When normal Touch Memory Button read is in progress, the orange light is on.

Status

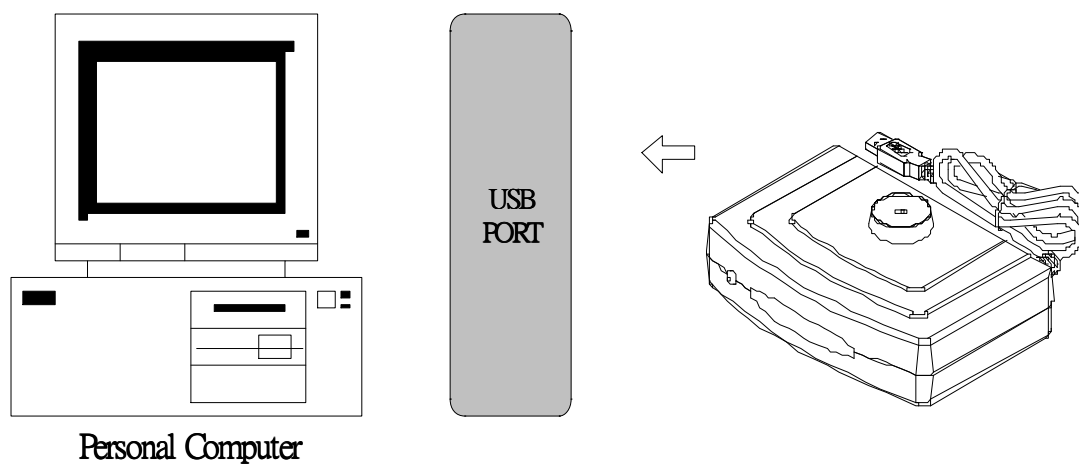
Status	Green LED	Red LED	Orange LED	Buzzer	Read iButton Tag
Power ON	OFF	OFF	ON	ON*	X
Ready	ON	OFF	OFF	OFF	O
Touch the Tag to the touch port	OFF	OFF	ON	ON*	O*
Remove the Tag from the touch port	ON	OFF	OFF	OFF*	X*
Firmware Management Mode	OFF	ON	OFF	OFF	X

*** means this function can control for iButton configure software.**

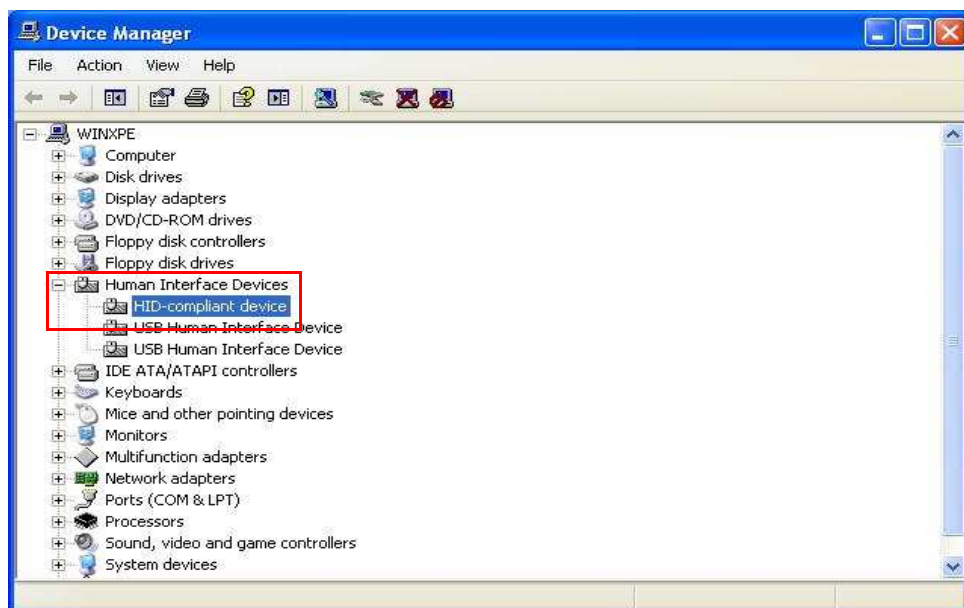
USB Cable Pin Assignment & Connection

USB PIN Assignment	Discription
PIN1	VDD
PIN2	D -
PIN3	D+
PIN4	GND

Connect to PC



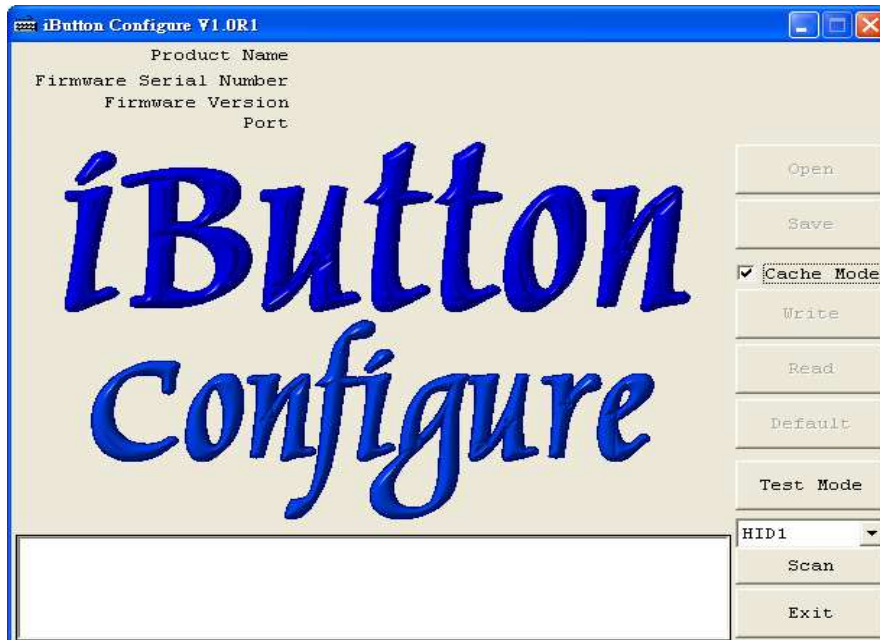
Plug the USB cable of TMR900 to any USB port of your PC. Then go to [Control Panel]\ [System]\ [Hardware]\ [Device Manager]\ [Human Interface Devices], and see if “HID-compliant device” appears. If “HID-compliant device” appears, it indicates TMR900U has been detected by your computer.



Software Operation

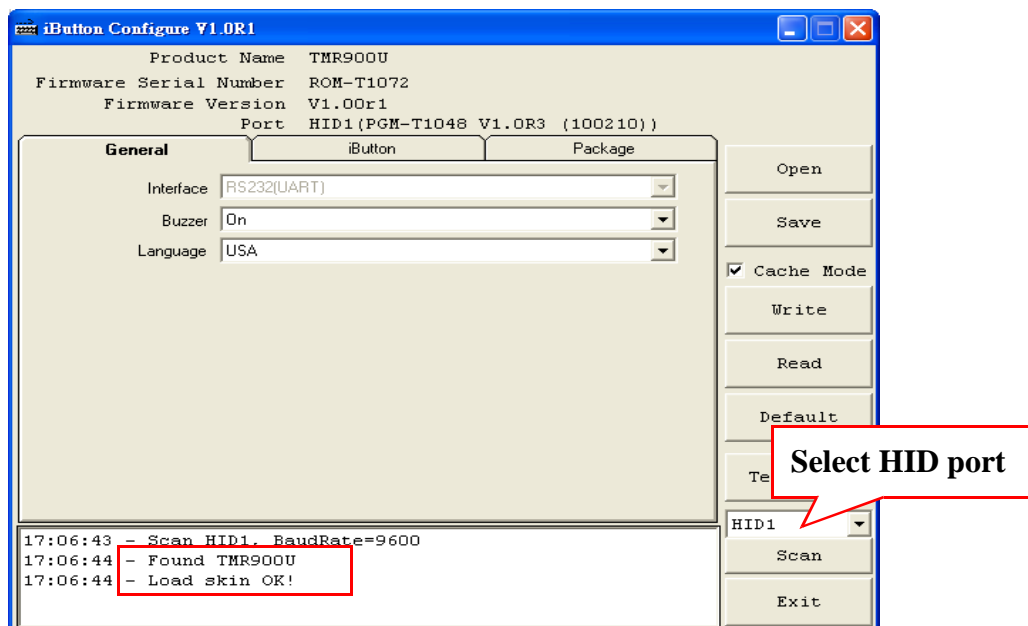
Connect TMR900U with PC through USB port , then run the demo software “iButton configure”.(You can find the software in Disk5413)

Step 1: Main page



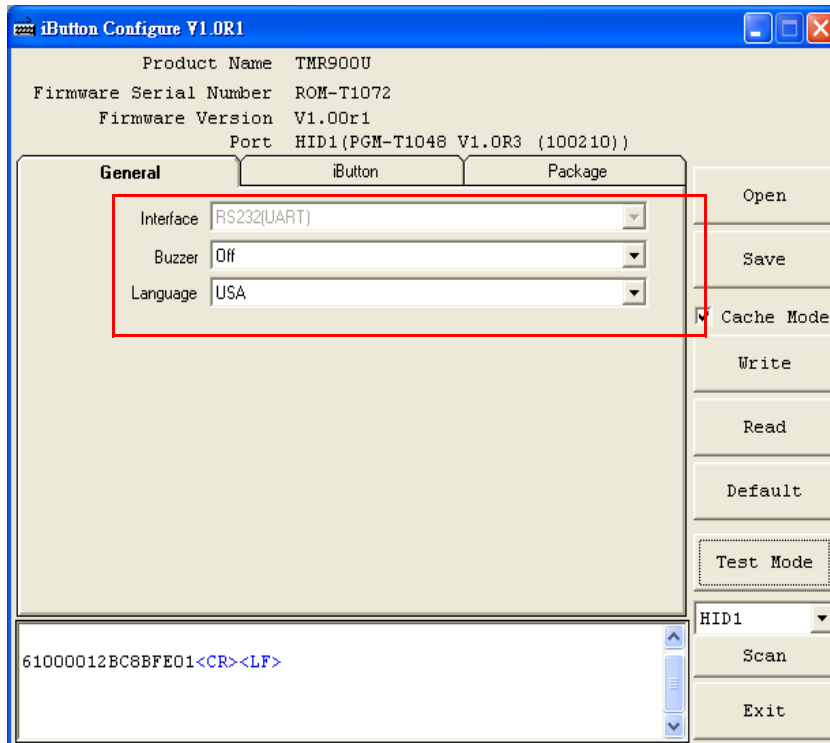
Step 2: HID Scan

Select “ HID Port “ and click ”SCAN” to communicate TMR900U with PC. The software will detect TMR900U and related setting. If the communication is successful, it will show”Found TMR900U” and product information as below :



Step 3: General Settings

Click 'General' to set “Buzzer (On or Off)”, “Language (Keyboard type)” .
If necessary. Then click “Write” to save the settings to TMR900U.

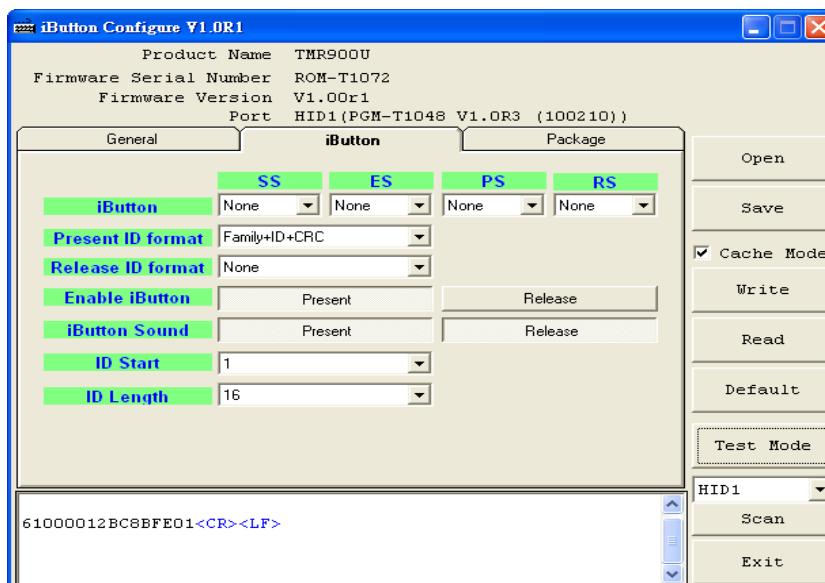


Step 4: iButton Settings

Select “iButton” to set different iButton formats for data output after reading.

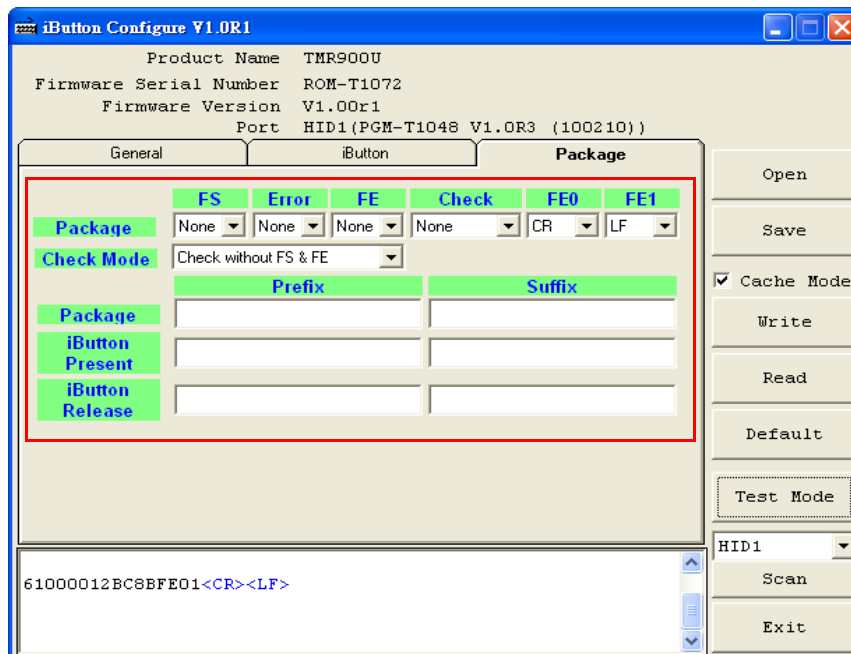
- Choose the iButton data output format.
- Choose the Present / Release ID format for output data.
- Enable / Disable iButton data output of Present / Release .
- Enable / Disable iButton sound of Present / Release.
- Set the ID start / length of data information.

The click “Write” to save the settings to TMR900U.



Step 5: Package

Click “Package” to set Package, check mode, Prefix code, Postfix code, iButton present/release message Delimiter if necessary. Then click “Write” to save the settings to TMR900U.



Save : Click “Save” to save all settings as *.cfg file.

Open : If you want to download the settings form the file, click “Open” to open the file and click “Write” to download the settings.

Read : If you want to know the setting of TMR900U, click ”Read” and download the file to show it on display area.

Default : Click “Default” to reset TMR900U and get default setting if necessary. Default values are as below (red –lined area).

Test Mode : Click “Test Mode” to into the test function window.

Cache Mode : Cache TMR900U settings for iButton configure software.

Exit : Click “Exit” to close iButton configure software.

Default Settings

Buzzer	On
Language	USA
Present ID format	Family + ID + CRC
Release ID format	None
Present iButton	Enable
Release iButton	Disable
Present iButton Sound	Enable
Release iButton Sound	Disable
ID Start	1
ID Length	16
Prefix	Empty
Postfix	Empty
OnRemove	Empty
Package Delimiter	Data+CR+LF
Check Mode	Check without FS&FE
Package prefix	Empty
Package Suffix	Empty
iButton Present Prefix	Empty
iButton Present Suffix	Empty
iButton Release Prefix	Empty
iButton Release Suffix	Empty

Data Format

Package Prefix
Pack FS
iButton Present/ Release Sentinel
iButton Prefix
iButton SS
iButton Data
iButton ES
iButton Suffix
Pack FE
Pack Check
Pack FE0
Pack FE 1
Package Suffix

Installation

