DALLAS
SEMICONDUCTOR

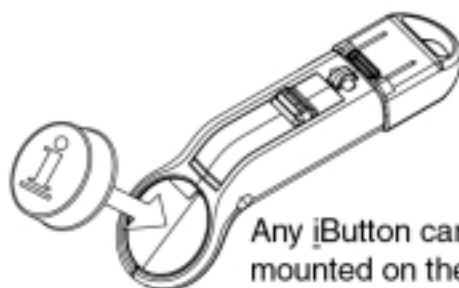# DS1490F
2-in-1 Fob*

www.dalsemi.com

FEATURES

- 1-Wire$^®$ to USB port adapter for direct connection to notebook and desktop computers
- Any iButton$^{™}$ mounts in the ergonomically angled handle for touch-and-go applications such as door entry
- Fast, convenient computer log on with data rates up to142k bits/second from the 1-Wire signal
- USB guard protects the USB A connector during everyday use conditions.
- 1.5M byte speed, low power, USB 1.2 compliant for plug and play operation
- LED shines through translucent case to indicate status
- Both the 2-in-1 Fob and its resident iButton are powered entirely from an USB interface
- Fob sources up to 10 ma for powering 1-Wire chips that require strong pull up such as the Java$^{™}$-powered or Thermochron iButton
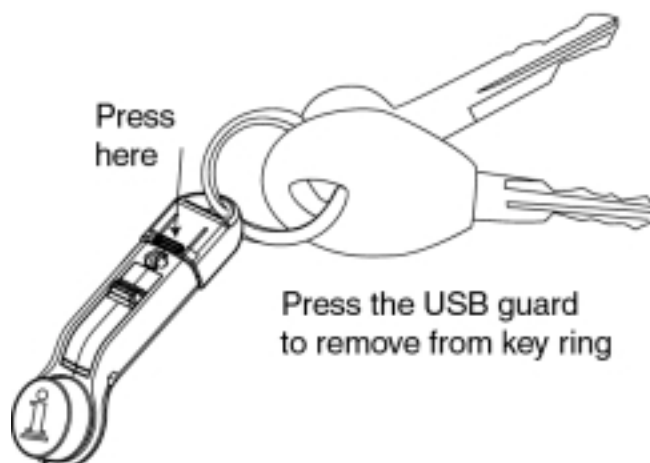- Low Profile Blue Dot extends 1-Wire signaling to other 1-Wire devices

*NOTE:

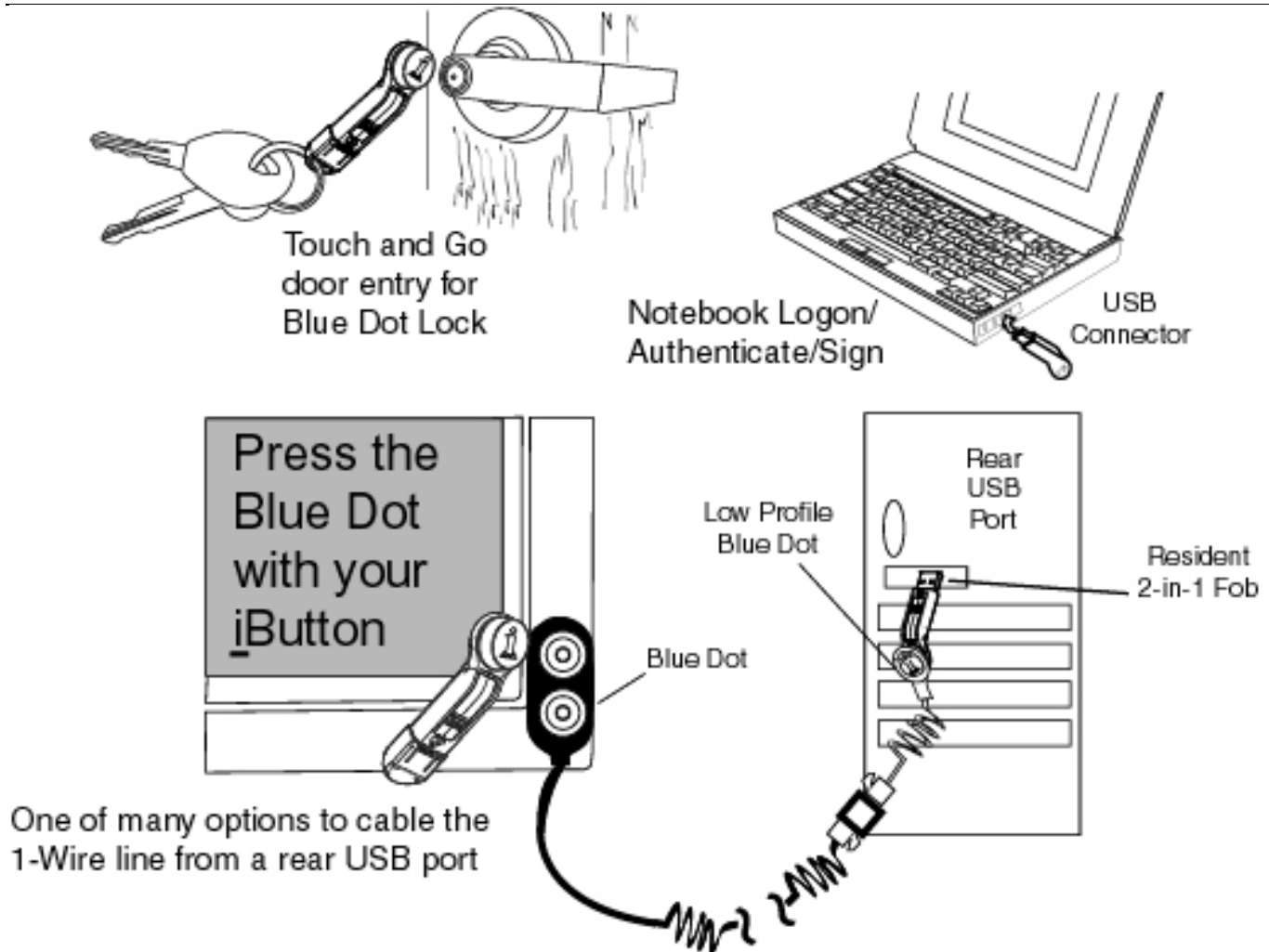The DS1490F 2-in-1 Fob is sold without the iButton to give choice of the desired iButton.

DS1490F 2-in-1 Fob with detachable USB guard

Any iButton can be mounted on the fob

Press here

Press the USB guard to remove from key ring

101000

Touch and Go
door entry for
Blue Dot Lock

Notebook Logon/
Authenticate/Sign

USB
Connector

Press the
Blue Dot
with your
iButton

Low Profile
Blue Dot

Rear
USB
Port

Resident
2-in-1 Fob

Blue Dot

One of many options to cable the
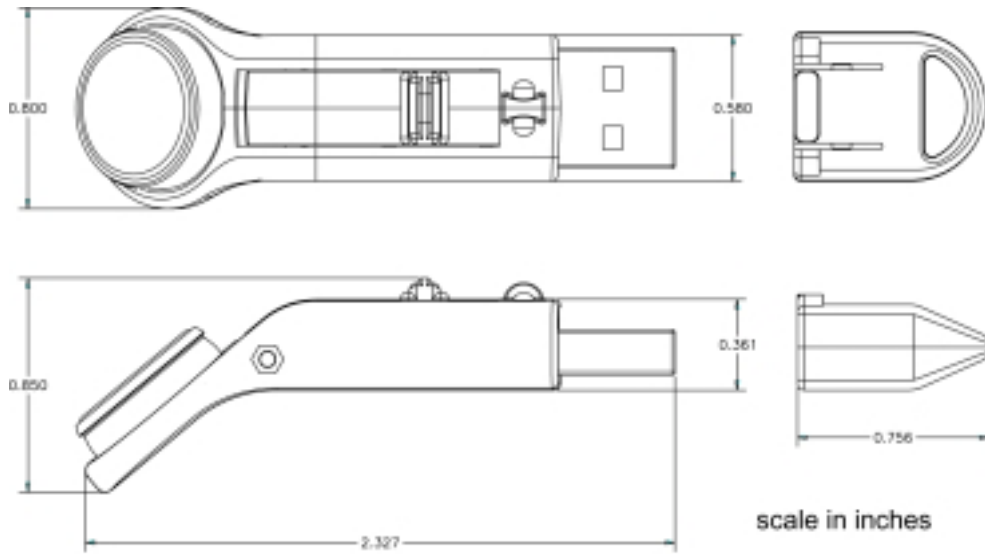1-Wire line from a rear USB port

DESCRIPTION

The 2-in-1 Fob has a DS2490 chip in its handle to convert 1-Wire signaling to USB communication. In this way an iButton, 1-Wire chip, or 1-Wire instrument can have a 2-way communication link with its USB host. Any iButton from the lowest cost to the most sophisticated can be mounted in the angled end of the fob. A Java-powered iButton in combination with the 2-in-1 Fob provides the equivalent of a Java smart card with a built in reader. Everything fits in the handle, so there is no cable for the notebook connectivity. The USB guard protects the connector from debris and mechanical stresses while attached to a key ring. Pressing the eject latch releases the guard of the 2-in-1 Fob for USB connection.

Together with the appropriate USB device driver, a notebook or desktop computer can read/write the attached iButton with no cables or other power connections. You can press the Blue Dot with your iButton for touch-and-go door entry.

By snapping on the Low Profile Blue Dot (DS1402L) to the iButton on the 2-in-1 Fob, the range of the 1-Wire signal can be extended to another Blue Dot receptor or other 1-Wire devices.

Dimensions

scale in inches

Schematic