

## FEATURES

- Palm Universal Connector
- Front probe
- RJ-11 connector
- Unique 1-Wire address
- Embedded iButton holder
- Software-compatible with the DS9097U
- Compatible with the Garmin iQue 3600, Palm m125, m130, m5xx, i705, Tungsten (T, W and C) and Zire 71
- 27 kV ESD protection (IEC 801-2) on the 1-Wire bus



## DESCRIPTION

The TT2301 "iReader" is an iButton/1-Wire interface for the Universal Connector utilized on the majority of currently shipping Palm handhelds. With its clever design, the ABS enclosure and the 27 kV ESD (IEC801-2) protection, the TT2301 can be used in almost any environment.

Special features, like the embedded iButton holder, its globally unique 1-Wire address, the front probe and the RJ-11 connector guarantees the maximum usage flexibility while the compatibility with the Dallas/Maxim DS9097U allows the programmer to focus on the application rather than on the interfacing details.

## SPECIAL FEATURES

The TT2301 features a globally unique, DS2401 based, 1-Wire address that allows a unique identification of the product and can be used for tracking purposes or to enforce a software protection scheme.

With the embedded DS9094F holder, any iButton can be internally attached to the TT2301 to provide companion services such as non volatile memory, temperature measurement or SHA-1 encryption engine.

The RJ-11 connector allows the TT2301 to be connected to any existing 1-Wire network or to the Dallas/Maxim supplied iButton probes for an easier use on the field.

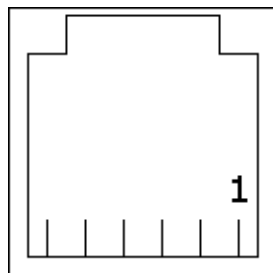
## APPLICATIONS

- Time and attendance
- Automatic part information & warranty tracking
- Temperature monitoring (HACCP)
- Mobile access control
- Route tracking
- Electronic signature
- eCash
- Electronic fleet management
- Quality control
- Asset tracking

## RJ-11 CONNECTOR

The RJ-11 connector, located on the front of the unit, can be used to attach the TT2301 to an external probe or to connect it to any 1-Wire network. To improve the reliability of the unit, you should keep your network as short as possible.

The pinout of the RJ-11 connector is shown in figure. As an option, the 5V output and GND signals can be routed to pin 1 and 2 of the connector. See ORDERING INFORMATION for details.



Pin	Description	Pin	Description
1	Not connected	4	1-wire ground
2	Not connected	5	Not connected
3	1-wire data	6	Not connected

## EMBEDDED HOLDER

The embedded holder, located behind a plastic cover on the back of the unit, can be used to firmly attach any iButton to the TT2301. Take care to disconnect the Palm from the TT2301 before attaching or detaching an iButton.



## ACCESSORIES

The following accessories have been tested for compatibility with the TT2301:

DS9092GT	iButton probe
DS1402D-DR8	Blue Dot Receptor
DS1402-RP8	iButton Probe Cable
DS1402-BR8	iButton Holder Cable

## SOFTWARE DEVELOPMENT KIT

The Dallas/Maxim 1-Wire Public Domain Kit is the best choice to develop applications for the TT2301 and allows for code reusing across many different platforms. Code debugging can be performed with a DS9097U connected to a PC running the POSE emulator. We have positively tested the 1-Wire Public Domain Kit with Palm OS<sup>®</sup> 4.0 and 4.1, while PalmOS 5.0 requires a switch from the Old Serial Manager to the newer Serial Manager used in that OS version.

## REFERENCES

- Dallas/Maxim [DS9097U](#) datasheet
- Dallas/Maxim [DS2480B](#) datasheet
- Dallas/Maxim [DS2401](#) datasheet
- Dallas/Maxim [DS9092](#) datasheet
- Dallas/Maxim [Book of iButton Standards](#)

## ORDERING INFORMATION

# TT2301-xyzjk

Option code	Description
X	H = Embedded DS9094F iButton holder 0 = No holder
y	I = Unique 1-wire address (DS2401) 0 = No address
Z	R = Front RJ-11 connector 0 = No RJ-11 connector
j	5 = 5V output on the RJ-11 connector 0 = No 5V output
k	F = Front iButton probe (DS9092) 0 = No probe

The standard, full-featured, version of the TT2301 can be ordered with the code TT2301-HIR0F. Please contact the factory to inquire about customizations, lead-times and availability.

---

**DATASHEET REVISION HISTORY**

<b>Rev.</b>	<b>Date</b>	<b>Description</b>
01	2003-01-31	First draft
02	2003-02-17	Updated sections: pinout, applications and ordering.
03	2003-06-18	Updated order code description and compatibility list.
04	2003-11-16	Minor corrections.
05	2004-06-16	Updated compatibility list.

## TRADEMARKS

iReader is a trademark of Tower Technologies.

TowerTech is a registered trademark of Tower Technologies.

1-Wire and iButton are registered trademarks of Dallas Semiconductor.

Palm OS is a registered trademark of Palm, Inc.

Palm is a trademark of Palm, Inc.

## GENERAL DISCLAIMER

Specifications contained in this datasheet are in effect as of the publication date shown. Tower Technologies reserves the right to make changes to its products or specifications at any time, without notice, in order to improve design or performance and to supply the best possible product.

Tower Technologies assumes no responsibility for use of any products described herein and makes no representations that they are free from patent infringement or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent, patent rights or other rights, of Tower Technologies.



*"The leading way for your wireless business."*

**Tower Technologies s.r.l.**  
Via San Francesco d'Assisi, 27  
10121 – Torino  
ITALY

Telephone: +39 011 5630820

Fax: +39 011 5630821

## LIFE SUPPORT POLICY

TowerTech products are not authorized for use as critical components in life support devices or systems without the express written approval of Tower Technologies.

1. Life support devices or systems are devices or systems which support or sustain life and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.