TOWERTECH

TT2301 "iReader"
iButton®/1−Wire® interface
for the Palm Universal Connector

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 embdedded 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.
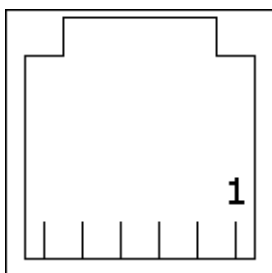
Pin	Description	Pin	Description
1	Not connected	4	1−wire ground
2	Not connected	5	Not connected
3	1−wire data	6	Not connected

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®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

Rev.	Date	Description
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.

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