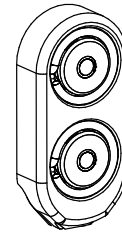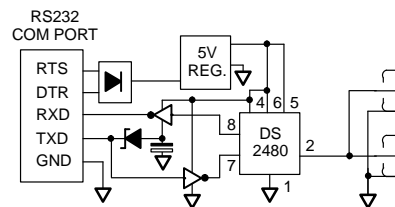# DALLAS
SEMICONDUCTOR

DS1416D
Laptop/Palmtop Blue Dot Adapter

FEATURES

- Blue Dot Dual Receptor for momentary (F3/F5 Micro-Can) or dwelled contact (F5 MicroCan only) with velcro/adhesive backing to mount on objects

- True–ground interface to an RS232 COM Port for reading and writing iButton™ devices

- Works with bipolar logic signals of $\pm$ 5V to $\pm$ 12V (RS232C) as well as unipolar signals of 5V to 12V

- Supports reading and writing at regular and Overdrive speeds

- Provides strong pull–up to 5V for Temperature iButton, Crypto iButton and EEPROM iButton

- Communicates at data rates of 9.6k (default), 19.2k, 57.6k and 115.2k bits/s

- Adapter is powered entirely from an RS232 interface

SCHEMATIC

ORDERING INFORMATION

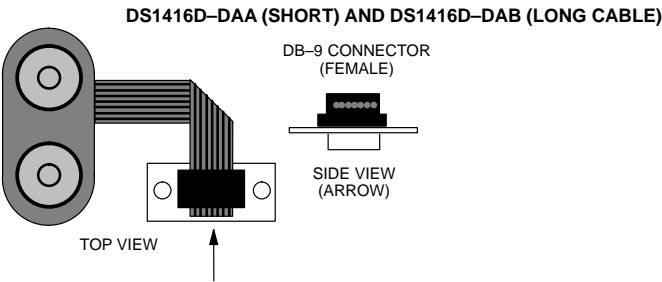|	
DS1416D–DAA	Dual Dot with DB–9 Connector
DS1416D–DAB	as DS1416D–DAA but longer cable
DS1416D–DBA	Dual Dot with single inline connector
DS1416D–DCA	Dual Dot with dual inline connector

DESCRIPTION

The DS1416D is a sophisticated RS232 to 1–Wire™ Adapter which performs RS232 level conversion and actively generates the 1–Wire communication signals. Together with an adequate TMEX software driver it enables an IBM–compatible laptop or Windows CE computer to directly read all and write any non–EPROM iButton devices connected to the adapter. 1–Wire communication is supported by the adapter for regular as well as Overdrive speed. The serial port must support a data transmission rate of 9600 bits/s. Under software control, the adapter can be set up for RS232 data rates of 19200, 57600 and 115200 bits per second. The two higher rates are recommended for communication at Overdrive speed with Overdrive capable devices connected to the 1–Wire bus. Since the DS1416D operates

in a byte mode, every data byte received from the RS232 port generates eight time slots on the 1–Wire bus.
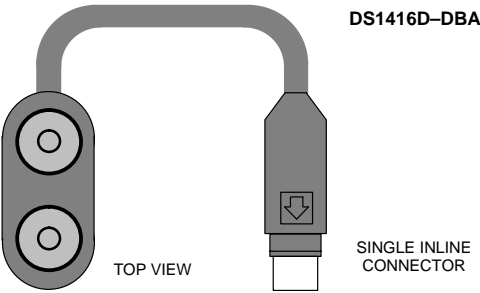
The DS1416D is based on the DS2480 Serial 1–Wire Line Driver chip and therefore is **not a plug–in replacement for the DS9097 or DS9097E**. The RXD/TXD Polarity Select input of the DS2480 is tied to Vdd (non–inverting).

The DS1416D is available in a variety of signal paths and connector types to the serial port of the computer supporting several models and brands. See figure 1 for the geometries, connector types and computer type the version of the DS1416D is custom–fitted to.

DS1416D VERSIONS FOR TOSHIBA LAPTOPS Figure 1a

DS1416D–DAA (SHORT) AND DS1416D–DAB (LONG CABLE)

DB–9 CONNECTOR
(FEMALE)

SIDE VIEW
(ARROW)

TOP VIEW

DS1416D VERSION FOR HP320LX PALMTOP Figure 1b

DS1416D–DBA

TOP VIEW

SINGLE INLINE
CONNECTOR

DS1416D VERSION FOR HP200 PALMTOP Figure 1c

DS1416D–DCA

TOP VIEW

DUAL INLINE
CONNECTOR
2 X 5 (FEMALE)

SIDE VIEW
(ARROW)