

Irda Standard Protocol Stack Controller Supporting Dte Applications -40C to 85C 18-Pin SOIC W

Manufacturers	Microchip Technology, Inc
Package/Case	SOIC-18
Product Type	Interface ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for MCP2150-I/SO or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The MCP2150 is a cost effective, low pin count (18-pin), easy to use device for implementing IrDA standard wireless connectivity. The MCP2150 provides support for the IrDA standard protocol “stack” plus bit encoding/decoding.

The serial interface baud rates are user selectable to one of four IrDA standard baud rates between 9600 baud and 115.2 kbaud (9600, 19200, 57600, 115200). The IR baud rates are user selectable to one of five IrDA standard baud rates between 9600 baud and 115.2 kbaud (9600, 19200, 37400, 57600, 115200). The serial interface baud rate will be specified by the BAUD1: BAUD0 pins, while the IR baud rate is specified by the Primary Device (during Discover phase). This means that the baud rates do not need to be the same. The MCP2150 operates in Data Terminal Equipment (DTE) applications and sits between a UART and an infrared optical transceiver.

The MCP2150 encodes an asynchronous serial data stream, converting each data bit to the corresponding infrared (IR) formatted pulse. IR pulses received are decoded and then handled by the protocol handler state machine. The protocol handler sends the appropriate data bytes to the Host Controller in UART formatted serial data.

The MCP2150 supports “point-to-point” applications. That is, one Primary device and one Secondary device. The MCP2150 operates as a Secondary device. It does not support “multi-point” applications.

Sending data using IR light requires some hardware and the use of specialized communication protocols. These protocol and hardware requirements are described, in detail, by the IrDA standard specifications. The encoding/decoding functionality of the MCP2150 is designed to be compatible with the physical layer component of the IrDA standard. This part of the standard is often referred to as “IrPHY”.

The complete IrDA standard specifications are available for download from the IrDA website (www.IrDA.org).

Features

Implements the IrDA® standard including:

IrLAP

IrLMP

IAS

TinyTP

IrCOMM (9-wire "cooked" service class)

Provides IrDA standard physical signal layer support including:

Bidirectional communication

CRC implementation

Data communication rates up to 115.2 kbaud

Includes UART to IrDA standard encoder/decoder functionality:

Easily interfaces with Industry standard UARTs and infrared transceivers

UART interface for connecting to Data Terminal Equipment (DTE) systems

Transmit/Receive formats (bit width) supported: 1.63 μ s

Hardware baud rate selection for UART:

9.6 kbaud

19.2 kbaud

57.6 kbaud

115.2 kbaud

Infrared baud rates supported:

9.6 kbaud

19.2 kbaud

38.4 kbaud

57.6 kbaud

115.2 kbaud

64 Byte Data Packet Size

Programmable Device ID String

Operates as Secondary Device

Related Products



[MCP23008T-E/SO](#)

Microchip Technology, Inc
SOIC-18



[MCP2551-I/P](#)

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PDIP-8



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SOIC-8