Physical Dimensions

Below are the dimensions for the Digi One Embedded device server and a graphic of the board layout.

Millimeter	61 x 29 x 13
Inches	2.4 x 1.14 x 0.5

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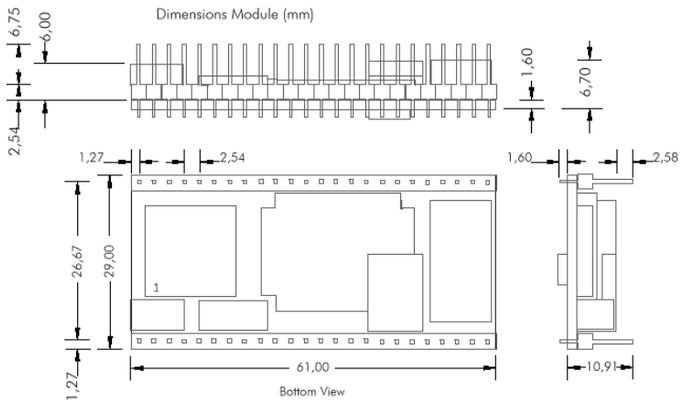

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Digi One Embedded Hardware Card

Connectware™

Introduction

This document provides specific technical information about the Digi One Embedded device server including pinout information and physical dimensions. For further information on sample code and a configuration application, see the Digi One Embedded product profile page at http://www.digi.com. A search on the keywords *Digi One Embedded* lists the product profile page.

The Digi One Embedded is a highly specialized single component solution: it offers a fast, easy, cost-effective way to network-enable a wide variety of products, such as commercial devices and consumer appliances. Transparent operation is achieved with an IEEE 802.3 compliant Ethernet controller and a robust onboard TCP/IP stack. The ultra compact DIL48 based design is able to withstand the harsh conditions of commercial and industrial environments.

Product Features

The Digi One Embedded device server provides significant product features in a compact form factor. Below is a brief listing of the main product features.

Embedded TCP/IP stack

Single Component Solution
- DIL48 Module
- Compact Form Factor (61 x 29 x 13 mm)
- Power Requirements +5V DC

TTL serial interface
- Full signal support for TX, RX, RTS, CTS, DTR, DSR, and DCD
- Supports throughput from 300 to 115,200 bits/s

IEEE 802.3 Compliant Ethernet Controller
- Integrated 10BaseT transceiver w/polarity correction
- Attachment Unit Interface (AUI) support
- Auto-detect for AUI/10BaseT interfaces

Product Specifications

Network Interfaces

RJ45 (10Base T) or AUI Ethernet

Network Protocols

IP, ARP, RARP, ICMP, TCP, UDP, *Telnet, and *Extended Telnet

Note: Telnet and Extended Telnet use the RFC 2217 standard only.

Data Rates

300, 600, 120,0 2400, 4800, 9600, 19200, 38400, 57600, 115200

Flow Control

RTS/CTS, DTR/DSR, XON/XOFF, None

Modem Control

DTR, DSR, DCD

Environmental

Operating tempeature	+0^{o} to +70^{o} C	+32^{o} to +158^{o}F
Storage temperature	-55^{o} to 125^{o} C	-67^{o} to +257^{o} F
Humidity	20 to 80%	

DC Characteristics

The table below lists the ViL and ViH requirements for the Digi One Embedded device server.

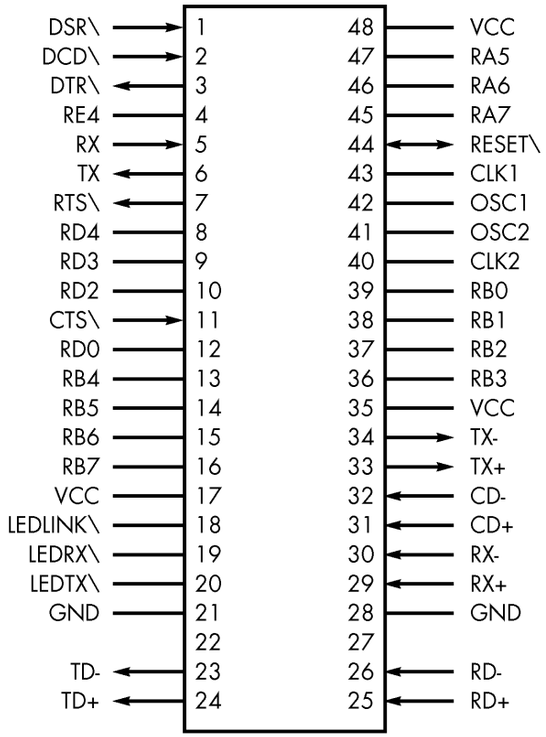
	Input Level	Minimum	Maximum	Units
Reset	Logic High	0.8Vdd	Vdd	V
	Logic Low	Vss	0.2Vdd	V
CMOS	Logic High	0.7Vdd	Vdd	V
	Logic Low	Vss	0.3Vdd	V
TTL	Logic High	2	Vdd	V
	Logic Low	Vss	0.8	V

Power Requirements

Volt	5V+/-10%
Ampere	250mA typical

Pinout Information

Below is the pinout diagram for the Digi One Embedded device server. The four pins 1, 24, 25, and 48 are found both on the topside and underside corners of the Digi One Embedded. Use the number locations as reference points.



The table below describes the features of the pins on the Digi One Embedded device server. The table contains four sections of pinouts:

- General Pinouts
- Serial TTL Pinouts
- Ethernet Pinouts
- Clock Pinouts

Pin	Signal	I/O	Description	Comments
General Pinouts				
21	GND	P	Ground	
28	GND	P	Ground	
17	VCC	P	Power	
35	VCC	P	Power	
48	VCC	P	Power	
44	Reset\	B	Reset	Low when active. The Digi device has its own RESET\ generator so this bidirectional pin may be left open.
Serial TTL Pinouts[1]				
6	TX	O	Transmit Data	
5	RX	I	Receive Data	
7	RTS\	O	Request To Send	Low when active.
11	CTS\	I	Clear to send	Low when active. When CTS is high, transmission stops if hardware flow control is enabled.
3	DTR\	O	Data Terminal Ready	Low when active.
2	DCD\	I	Data Carrier Detect	Low when active.
1	DSR\	I	Data Set Ready	Low when active.
Ethernet Pinouts				
18	LEDLINK\	O	Led link status	Low when 10BaseT link status is OK.
20	LEDTX\	O	LED TX	Low when receiving data.
19	LEDRX\	O	LED RX	Low when transmitting data.
29	RX+	I	AUI Receive	Receive data pins of the differential AUI pair [2].
3	RX-	I	AUI Receive	Receive data pins of the differential AUI pair [2].
31	CD+	I	AUI Collision	Collision pins of the differential AUI pair [2].
32	CD-	I	AUI Collision	Collision pins of the differential AUI pair [2].
33	TX+	O	AUI Transmit	Transmit data pins of the differential AUI pair [2].
34	TX-	O	AUI Transmit	Transmit data pins of the differential AUI pair [2].
25	RD+	I	10BaseT Receive	
26	RD-	I	10BaseT Receive	
24	TD+	O	10BaseT Transmit	
23	TD-	O	10BaseT Transmit	
Clock Pinouts				
43	CLK1			Not used [3]
42	OSC1			Not used [3]
41	OSC2			Not used [3]
40	CLK2			Not used [3]

[1] Default serial line settings are 9600 bps, 8 bits, no parity, 1 stop bit, and no flow control.
[2] 10BaseT interface connection always has priority over the AUI interface connection.
[3] CLK1 will be connected to OSC1 and CLK2 will be connected to OSC2.

RJ-45 Pinout Information

Following is the pinout information for an Ethernet RJ-45 connector plug. See the accompanying table displaying pins and the signals associated with them.

RJ-45 Pins	Digi One Embedded Pins	Signal
1	24	TD+
2	23	TD-
3	25	RD+
6	26	RD-