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DLN-4ME MULTI PROTOCOL MASTER ADAPTER (WITH ENCLOSURE)



DLN-4M adapter is a powerful solution to connect and control various hardware devices using I2C, SPI or GPIO serial interfaces from your PC. The device features easy installation and plug-and-play support.

\$140.90

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ACCESSORIES



HOOD FOR DB26 CONNECTOR

\$5.60



USB A/B CABLE 6 FEET

\$4.90

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Features

Key Features

- **USB to SPI master interface** with configurable phase, polarity and frequency (up to 48MHz);
- **USB to SPI Flash interface**
- **USB to I2C master interface** with configurable frequency (up to 1MHz);
- **USB to UART interface;**
- **48 digital I/O pins** with debounce filter, open drain functionality and embedded pull-up resistors;
- **8 analog inputs** with event-driven interface;
- **4 PWM outputs** with configurable frequency and duty cycle;
- **3 Pulse and frequency counters** with event-driven interface;
- 1 status LED and 2 user-configurable LED's;
- **no hidden fees:** API, updates, software and technical support are free;
- **USB 2.0 high-speed (480 MHz)** interface with Plug-and-Play detection and notification;
- RoHS Compliant

Event-Driven Interface

There are two approaches to monitor user actions (e.g. key presses) or sensor measurements. Your application can either poll for changes or react on events.

Here is an example that will help us understand the difference.

Let us assume that our application must notify a user if a voltage level monitored by the DLN-4M adapter is out of the predefined range.

Our application can poll the DLN-4M adapter periodically to check the digital input value. You would have to decide how frequently you need to poll this input. If you poll it too frequently, you unreasonably waste computer resources and USB bandwidth. If you poll it rarely, you can't react on the changes in a timely manner.

Another approach is to configure the DLN-4M adapter to notify your application when the voltage level crosses the threshold. You application can perform other tasks instead of continuously polling the device. When the voltage level crosses the threshold, the DLN-4M adapter sends an event with current measurements to your application.

The polling approach wastes computer resources and USB bandwidth, while the event-driven interface facilitates more responsiveness.

Specifications



DB26 CONNECTOR

\$4.90

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DLN-1A PC-I2C/SPI/GPIO
INTERFACE ADAPTER (WITH
CONNECTORS)



DLN-1 PC-I2C/SPI/GPIO
INTERFACE ADAPTER

Absolute Maximum Ratings:

Parameter	Min	Max
Storage Temperature	-60°C	+150°C
Ambient Temperature Under Bias	-40°C	+85°C
DC Input Voltage to Any Pin	-0.3V	+4.0V

Operating Conditions:

Parameter	Min	Max
Ta (Ambient Temperature Under Bias)	0°C	+70°C
DC Current VCC and GND Pins		50mA

GPIO Characteristics:

Symbol	Parameter	Condition	Min	Max
VIH	Input High Voltage		2.31V	3.6V
VIL	Input Low Voltage		-0.3V	0.99V
VOH	Output High Voltage	IOUT= 2.0mA	2.9V	
VOL	Output Low Voltage	IOUT= -2.0mA		0.4V
IL	Input Leakage Current I/O Pin			0.001mA
IDC	DC Current per I/O Pin	3.0V<VDDIO<3.6V; VOH=2.2V		9mA

SPI Interface Characteristics:

Symbol	Parameter	Condition	Min	Max
VIH	Input High Voltage		2.31V	3.6V
VIL	Input Low Voltage		-0.3V	0.99V
VOH	Output High Voltage	IOUT= 2.0mA	2.9V	
VOL	Output Low Voltage	IOUT= -2.0mA		0.4V
Freq	SPI Bus Frequency	configurable	376 kHz	48 MHz

I2C Interface Charachteristics:

Symbol	Parameter	Condition	Min	Max
VIH	Input High Voltage		2.31V	3.6V
VIL	Input Low Voltage		-0.3V	0.99V
VOHi	Output High Voltage	Internal VCC	2.9V	
VOHe	Output High Voltage	External VCC	(VCC-0.4)V	
VOL	Output Low Voltage			0.4V
Freq	I2C Bus Frequency	configurable	1470 Hz	400 kHz *

* Frequencies of up to 1 Mhz are supported. However, due to GPIO DC current limitations, the necessary size of pull-up resistors cannot be ensured.

Documentation and Downloads

Documentation & Online Support

DEVELOPMENT

Title	Links	Description
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C/C++ API	Title		Description
.NET API			API description for .NET development.
LabView Instrument Driver			NI LabView instrument driver and LabView examples description.

GENERAL

	Title	Links	Description
	User Manual		Installation tutorial, system requirements, firmware update instructions.

ONLINE SUPPORT

	Title	Links	Description
	Community forum		Create forum thread to get answer or communicate other thread to help community members
	Email products support		Email us to ask product support questions.
	Email orders support		Email us to ask questions regarding purchasing and applied orders.
	Customer online form		Submit customer online form

Hardware Information

	Title	Links	Description
	Connectors and Jumpers		Port and pins assignment on available connectors and jumpers description.
	Schematics		Board schematics.
	Mechanical Drawing		Board mechanical drawing.

Software

Title	Links	Description
MS Windows Setup Package		Contains driver, API libraries, binaries and software examples source code to use DLN adapter in MS Windows OS.
Linux Setup Package		Contains all required files to start using DLN adapter in Linux.
Firmware Update		Latest firmware update for DLN adapter. Firmware can be downgraded with this application also.

Reviews

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