DT351

16-Channel Isolated Digital I/O Board for the PCI Bus

Key Features:

- Isolated for use in noisy industrial environments
- Interrupt on digital input lines
- High current drive output capability
- Channel to channel isolation
- Over-current protection
- Supported by Measure Foundry®, test and measurement application builder software that lets you easily create complex measurement applications.

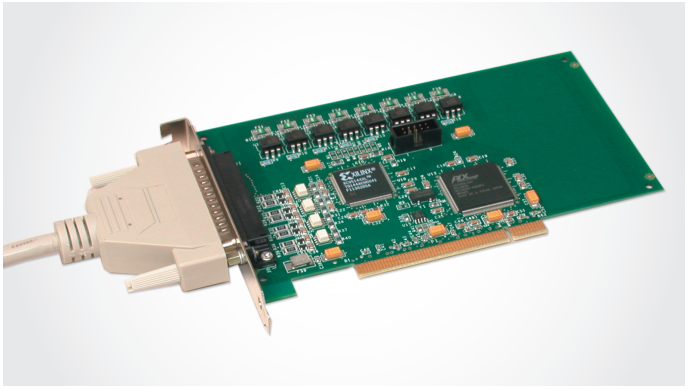


Figure 1. The DT351 Isolated Digital I/O board provides protection in noisy industrial environments.

Overview

Ideal for industrial applications, the DT351 is a 16-channel isolated digital I/O board for the PCI bus. All inputs and outputs feature channel to channel isolation of at least 250VDC.

16 Digital I/O Channels

Each DT351 provides 8 isolated inputs and 8 isolated outputs. Channel-to-channel isolation is implemented with isolators on each channel. The digital inputs have a voltage range up to 32VDC. The ability to interrupt on bit changes on the inputs eases programming and enhances functionality. The outputs can support a maximum load voltage of 60V, and can drive current to 100 mA.

Replaces Solid State Relays

The DT351 can replace traditional digital I/O boards and external solid state relays and panels. Channel-to-channel isolation of at least 250VDC and high current output drive of 100 mA per channel make the DT351 ideal for industrial applications. Your computer is protected from damage caused by accidental contact with external high voltages since each channel is galvanically isolated from the computer and from other channels.

Over-Current Protection

The inputs are protected from transients and reversed connections. Fuses on the output channels and short circuit protection guard against damage from incorrect wiring of the connections and gross current excesses. The output line protection is provided by solid state fuses. The fuses will open when the load exceeds 140 mA. The fuses return to normal operation when current is returned to normal operating range. There is also an over voltage clamp protection device which is set at 60 V and provides transient voltage protection.

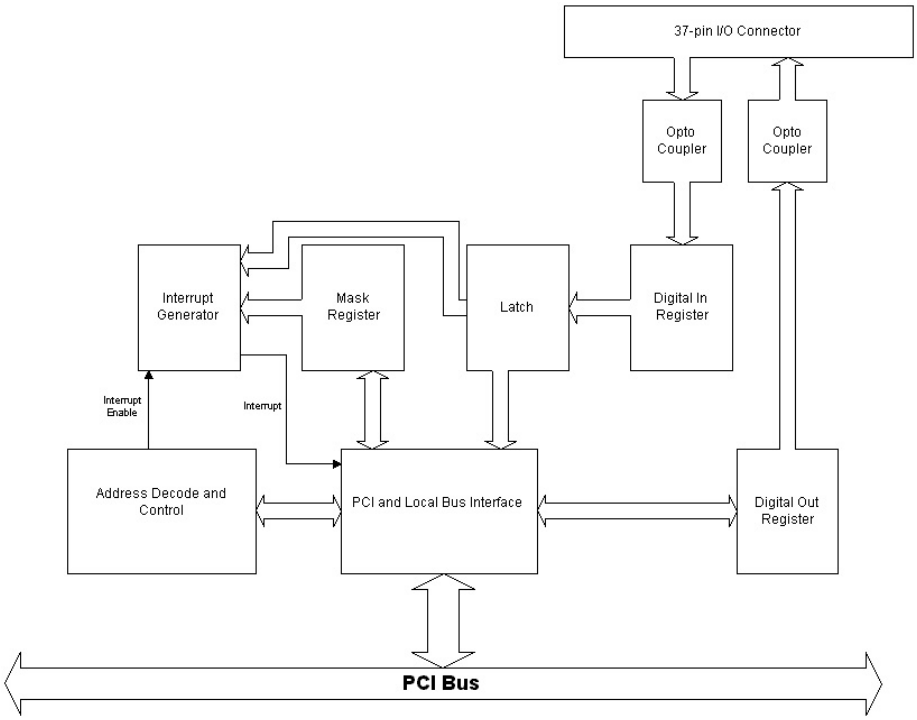


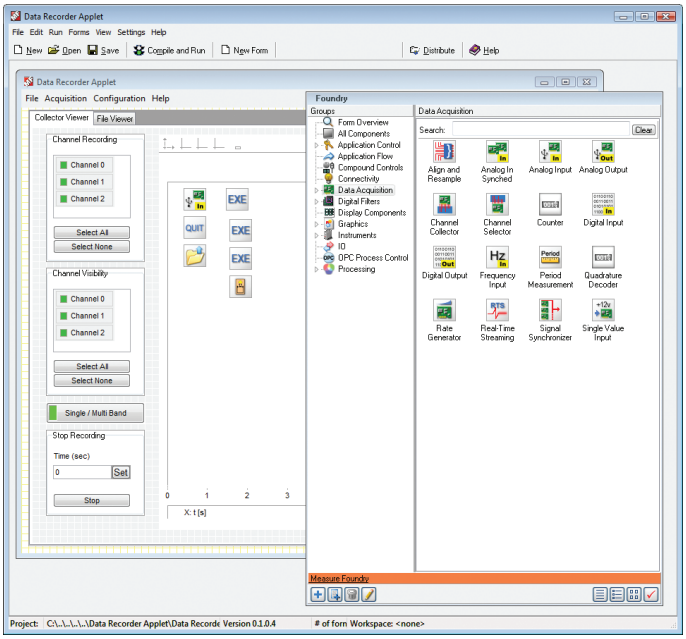
Figure 2. DT351 Block Diagram

Software Options

Many software choices are available for application development, from ready-to-measure applications to programming environments, and run under Microsoft Windows XP/Vista/7.

The following software is available for use with this module or board and is provided on the Data Acquisition Omni CD:

- **Device Driver** – The device driver allows the use of this DAQ module or board with any of the supported software packages or utilities.
- **Measure Foundry®** – An evaluation version of this software is included on the Data Acquisition Omni CD. Measure Foundry® is a drag-and-drop test and measurement application builder designed to give top performance with ease-of-use development.
- **Measurement Applets** – Included in the Measure Foundry evaluation version. These small applications, developed with Measure Foundry, can be modified or combined to provide a specific solution. Order the full development version of Measure Foundry to develop applications using real hardware.
- **Quick DataAcq application** – The Quick DataAcq application provides a quick way to get up and running using your PCI board. Using this application, verify key features of the module, display data on the screen, and save data to disk.
- **DT-Open Layers® for .NET Class Library** – Use this class library if you want to use Visual C#® or Visual Basic® for .NET to develop application software for your PCI board using Visual Studio® 2003/2005/2008; the class library complies with the DT-Open Layers standard.
- **DataAcq SDK** – Use the Data Acq SDK to use Visual Studio 6.0 and Microsoft® C or C++ to develop application software for your PCI board using Windows®; the DataAcq SDK complies with the DT-Open Layers standard.
- **DTx-EZ** – DTx-EZ provides ActiveX® controls, which allows access to the capabilities of your PCI board using Microsoft Visual Basic or Visual C++®; DTx-EZ complies with the DT-Open Layers standard.
- **DAQ Adaptor for MATLAB** – Data Translation's DAQ Adaptor provides an interface between the MATLAB® Data Acquisition (DAQ) toolbox from The MathWorks™ and Data Translation's DT-Open Layers architecture.
- **LV-Link** – An evaluation version of this software is included on the Data Acquisition Omni CD. Use LV-Link to use the LabVIEW™ graphical programming language to access the capabilities of your PCI board.



The data recorder applet is developed with Measure Foundry and allows you to acquire data, plot it, and save it to disk.

Accessories

STP37 Screw Terminal Panel and EP333 Cable

The STP37 screw terminal panel simplifies the connection of input and output devices to the DT351. All user connections are made on convenient screw clamp connectors. The STP37 is designed for tabletop or panel mounting, and includes nylon standoffs. The STP37 features LCD indicators to monitor output lines. The panels measure approximately 4 in. wide by 8 in. (10.2 x 20.3 cm). The EP333 is a two meter shielded cable used to connect the DT351 to the STP37.

Cross-Series Compatibility

Virtually all Data Translation data acquisition boards are compatible with the DT-Open Layers Class Library. This means that if your application was developed with one of Data Translation's software products, you can easily upgrade to a new Data Translation board. Little or no reprogramming is needed.

User Manual

Each DT351 board includes a user's manual that provides getting started and reference information about using the DT351. The manual is provided in electronic (PDF) format on the Data Acquisition Omni CD provided with the module.

Technical Support

Application engineers are available by phone and email during normal business hours to discuss your application requirements. Extensive product information, including drivers, example code, pinouts, a searchable Knowledge Base, and much more, is available 24 hours a day on our web site at www.datatranslation.com.

Ordering Summary

All Data Translation hardware products are covered by a 1-year warranty. For pricing information, please visit our website or contact your local reseller.

DT351

Each DT351 board is shipped with the Data Acquisition Omni CD, which includes DT-Open Layers-compliant drivers for Microsoft Windows XP/Vista/7, ready-to-run software, and comprehensive user's manuals in PDF format. (Manuals are available in hard-copy form for an additional charge).

- **DT351** — 16-Channel Digital I/O Board

ACCESSORIES

- **STP37** — Scew Terminal Panel.
- **EP333** — 2m shielded cable with two 37-pin connectors that mate to the STP37 and DT351 board.

SOFTWARE

The following software is available for purchase separately:

- **Measure Foundry** (SP1300-CD)– Visual, drag-and-drop software development environment for Windows® XP, Vista, and Windows 7.
- **LV-Link** – Access the power of Data Translation boards through LabVIEW™.

FREE SOFTWARE

The following software is available for free download from our website:

- **DAQ Adaptor for MATLAB** – Access the analyzation and visualization tools of MATLAB®.