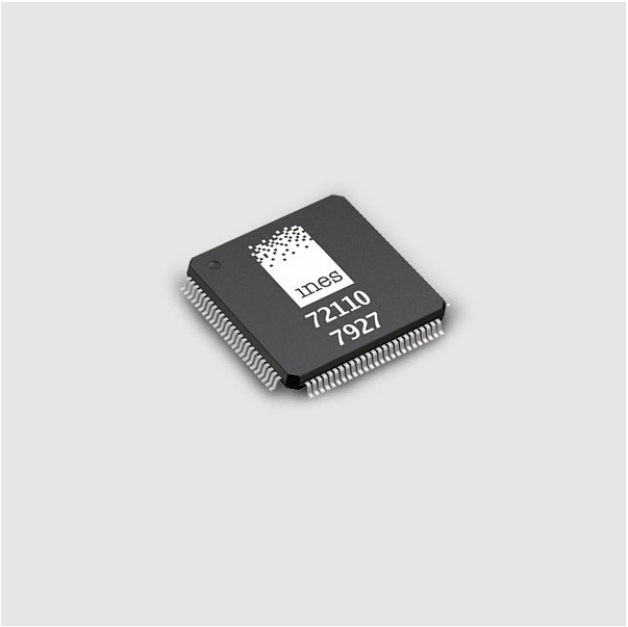
i72110

µP to GPIB interface ASIC



Features

- **Talker/Listener interface for instrumentation devices**
- **Microprocessor Bus Interface with 5.0 VIO**
- **NEC µPD7210 compatible register layout**
- **100 pin TQFP package**
- **RoHS conformant (Pb-free)**

Description

The i72110 GPIB-Chip is the ideal solution to implement a IEEE488.2 GPIB interface for instruments controlled by a microprocessor. The GPIB-ASIC is designed to meet all of the functional requirements for talker and listener (TL) devices as specified by the IEEE Standards 488.1-1987 and 488.2-1987. Connected between the microprocessor bus and the GPIB, the GPIB-IC provides high-level management of the GPIB to unburden the processor and to simplify both hardware and software design. The i72110 requires only the addition a few external components to implement a talker/listener GPIB interface.

History

The IEEE Standard 488 describes a "Standard Digital Interface for Programmable Instrumentation" which, since its introduction in 1975 has become the most popular means of interconnecting instruments and controllers in laboratory, automatic test, and even industrial applications. Refined over several years, the 488-1978 Standard, also known as The General Purpose Interface Bus (GPIB), is a highly sophisticated standard providing a high degree of of flexibility to meet virtually all instrumentation requirements. The i72110 implements all of the functions that are required to interface to the GPIB as a talker or listener device. While it is beyond of the scope of this document to provide a complete explanation of the IEEE 488 Standard, a basic descriprion follows:

The GPIB interconnects up to 15 devices over a commom set of data control liners. Three types of devices are defined by the standard: talker, listener, and controller, atthough some devices may combine functions such as talker/listener or talker/controller.

Data on the GPIB is transferred in a bit-parallel, byte-serial fashion over eight data I/O lines (/DIO[1]-/DIO[8]). A three-wire handshake is used to ensure synchronisation of transmission and reception. In order to permit more than one device to receive data at the same time, these control lines are "open collector" so that the slowest device controls the data rate. A number of other control lines perform a variety of functions such as device addressing, interrupt generation and so forth.

The i72110 implements all functional aspects of talker and listener as defined by the 488.1-1987 Standard on a single chip.

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Specifications

GPIB Capabilities

IEEE 488.1 Capabilities: AH1, SH1, T/TE5, L/LE3, SR1, RL1, PP1/PP2, DC1, DT1, C0
GPIB Handshake Rate: > 1Mbytes/sec

Environmental and Physical

Package: 100 TQFP, 16.0 mm x 16.0 mm x 1.6 mm
Storage Temperature: -20…80°C
Ambient Temperature: -0…70°C

Ordering Information

i72110-33 - Tray of TBA units

On the Web

Click www.inesinc.com for more information and resources.

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