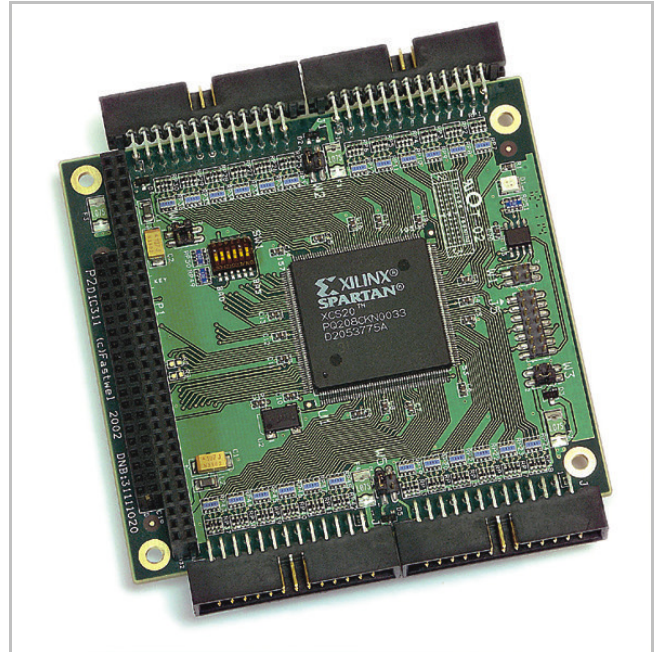


UNIO96-1 Multipurpose I/O Card

PC/104 format

FEATURES

- 96-channel digital I/O card
- Compatibility with digital and analog opto-isolated modules Opto-22, Grayhill (including series 73G, 73L)
- Frequency measurement at any channel
 - From 9.2 to 73.0 kHz (accuracy 0.025%)
 - From 9.2 to 1900 kHz (accuracy 0.5%)
- Serial signal can be transmitted or received through any line (115200, 8, 1, N)
- Programmable debounce logic time on the lines: 40 ns, 320 ns, 4 ms, 60 ms
- Programmable configuration of channels as inputs or outputs in groups:
 - 8 groups of 8 channels and 8 groups of 4 channels;
 - 48 groups of 2 channels
- 5 interrupt lines and a DMA channel
- Extended operating temperature range from -40°C to +85°C



Connections

Digital I/O lines of the UNIO96-1 are terminated with 4 26-pin IDC-type connectors. The TB-26 series terminal boards, MPB-xx series opto-racks, and TBI-xx/xx series isolated terminal boards can be used to connect the external lines to the module. The I/O channels can be pulled to +5 V or GND through 10 kΩ pull-up/pull-down resistors by groups of 24.

DESCRIPTION

The module is a 96-channel digital I/O card in PC/104 format. UNIO96-1 accepts TTL-logic level signals.

The main application area of the module – to serve as an interface with opto-module racks MPB-24/TBI-24/TBI-16L (Opto-22, Grayhill) or with isolated I/O terminal boards TBI-xx/xx. Besides, the module can be used to control displays, LED-devices, for frequency measurements, for timing diagrams generation, for code conversion, etc.

Opto-module Rack Interface

The main purpose of the UNIO96-1 is to provide an interface with opto-module racks (Opto-22, Grayhill) and with isolated I/O terminal boards TBI-xx/xx series (see connection diagram). The card allows to serve 96 modules of any type (analog, digital, input, output).

The serial data transceivers and frequency gage of the UNIO96-1 allow to control 1 input and 1 output Grayhill opto-isolated modules (73G/73L series) simultaneously using no processor resource (interrupt generation is possible).

TECHNICAL SPECIFICATIONS

Input voltage: CMOS and TTL levels compatible

Output voltage: CMOS level compatible

Output current:

0...12 mA (logic 0 level is 0.4 V or less)

0...4 mA (logic 1 level is 2.4 V or more)

Output current for opto-modules:

0...20 mA (not more than 1.0 V)

Analog conversion time:

900 μs max (series 73G-Ixx),

800 μs max (series 73G-Oxx),

600 μs max (series 73L-I/Oxx)

Power requirements

Voltage: +5 V ±10%,
consumption current 250 mA (without channels current)

Environmental

Operating temperature range: -40 to +85°C

Relative humidity: 5% to 95% at +25°C

Modules Comparison Chart

	UNIO96-1	UNIO96-5
I/O channels	96	96
Programmable I/O channels	8 groups of 8 lines + 8 groups of 4 lines or 48 groups of 2 lines	Each line is individually programmable
Output capability, logical low/high (TTL levels), mA	12.0 / 4.0	8.0 / 8.0
Output capability for opto-modules, mA	20	30
Interface with analog Grayhill modules: conversion time for I/O channel, μ s:		
Grayhill 73G series73L	900/800	125/200
Grayhill 73L series	300/300	33/75
Programmable debounce time	+	+
In-System Programming (ISP)	+ (with additional means)	+
Operating temperature range -40 to +85°C	+	+

ORDERING INFORMATION

DIC31101 UNIO96-1, PC/104 multipurpose digital I/O module, 96 lines

Accessories

ACS00002 FC26-60, ribbon cable, 26 threads, IDC connectors, 0.6 m (2 ft)

DIB9120x TBI-24/0C-x, digital input terminal boards, 24 channels

DIB91301 TBI-0/24C, isolated digital output terminal board, 24 channels

DIB91101 TBR8, relay switching module, 8 channels

TIB96101 TBI-24LC, terminal board for Grayhill 70L & 73L modules, 24 contacts

TIB96201 TBI-16L, terminal board for Grayhill 70L & 73L modules, 16 contacts

TIB96501 TB-26, terminal board, 26 contacts