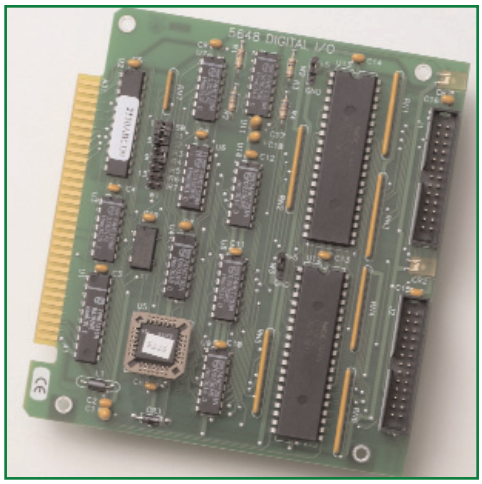
Analog/digital I/O for Micro PC expansion

The 5648 provides 48 channels of analog or digital I/O. All 48 channels can be used for TTL digital I/O. Twenty–four of the channels can be used for analog I/O instead of digital I/O. The digital I/O lines are TTL compatible, and are implemented with an Intel 82C55 chip. These lines will interface with logic devices, switch inputs, LEDs, and industry–standard opto module racks. The 48 lines are grouped into six ports of eight lines each. Four of those ports can be programmed as inputs or outputs on a port–wide basis. Two of the ports can be programmed as four lines of inputs and four lines of outputs. Octagon has a variety of opto modules and termination boards for easy access for field wiring.

The 24 analog lines are compatible with Grayhill G5 modules. The G5 input modules produce a frequency output that is directly proportional to the input. A custom ASIC on the 5648 converts the frequency to a 0–4095 count. The commands from the CPU card select the channel and start the conversion. The ASIC generates an interrupt on the completion of the conversion. The maximum conversion time is 625 µS.

The analog modules accept thermocouples, current loop, RTD and voltage inputs. Output modules include voltage and current outputs. The ASIC measures the frequency, eliminating processor overhead. The system will detect incorrect polarity, out–of–range signal, and missing or defective module conditions.



Octagon products are designed and manufactured under the supervision of an ISO 9001–2000 certified quality management system.

Micro PC cards plug into any ISA expansion slot or Micro PC card cage. The Octagon family of Micro PC controllers, expansion cards, and card cages provide a complete solution for applications in transportation, security, military, communications, distributed control, point–of–sale, ticketing machines, weighing equipment, and other similar applications.

The 5648 will withstand high shock and vibration, and operates in temperature ranges from –40° to +70° C. This rugged expansion card will provide years of reliable service in the most challenging environments. Octagon offers a wide range of terminal blocks and opto racks to assist you in configuring a system that best suits your application.

Features

I/O:

- 48 lines of TTL digital I/O
- Input low: –0.3V to +0.8V
- Input high: 2V to Vcc
- Output low: 0.45V maximum
- Output high: 2.4V minimum
- In output mode, can sink 2.5 mA at 0.4V and can source over 2.5 mA at 2.4V
- Jumper block pulls all lines per connector (24 lines) high or low with a 22 KΩ resistor

Analog I/O:

- When driving opto modules, the output can sink 15 mA at 1.0V

Connectors:

- Two male 26–position, straight I/O connectors
- Mates with Octagon CMA–26 cable, for direct connection to opto modules or termination blocks
- One LED for each connector, to show when that connector is accessed

Addressing & Interrupts:

- Jumper–selectable base addresses of 100h, 110h, 120h, 130h, 140h, 150h, 160h, or 170h.
- Interrupts 3 through 7 can be selected via jumpers to indicate end of analog conversion

Environmental & power:

- –40° to 70° C operating
- –50° to 85° C nonoperating
- 5% to 95%, RH, noncondensing)
- Size 4.5" x 4.9", Micro PC form factor
- Power: 5V ± 5% at 270 mA typical, 300 mA maximum

Ordering information

#3716 5648 analog/digital I/O card

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