

A product Line of Diodes Incorporated

PRODUCT BRIEF

PI7C1401

SPI/I²C Quad Port Expander

Features

- ➔ Support Low-speed signals management and I²C aggregation across four ports
- ➔ Support multiple PI7C1401s to control high-port-count through a single host interface
- ➔ Selectable I²C (up to 1Mhz) or SPI (up to 33Mhz) host control interface
- ➔ Automatic pre-fetching of critical, user-specified data from the modules
- ➔ Advanced LED features for port status indication, including programmable blinking and dimming
- → Support standard SFF-8431, SFF-8472, SFF-8436, SFF-8679, INF-8074 and other such low-speed electrical interfaces, including a dedicated 100/400Khz I²C interface to each port
- ➔ Customizable events which trigger an interrupt to the host
- → Broadcast Mode allows writes to all ports simultaneously
- → Separate host-side I/O voltage: 1.8V to 3.3V
- ➔ Industrial Temperature Range: -40°C to 85°C
- → ESD: (HBM) 4KV, (CDM) 2KV
- ➔ Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- → Halogen and Antimony Free. "Green" Device (Note 3)
- → Packaging (Pb-free & Green):
 - □ 56ZF (TQFN) 5x11mm, 0.5mm pin pitch

Applications

- → Telecom, 5G LTE Base-Station
- → Networking, Optic Switch/ Router
- ➔ Embedded, Industrial Controller
- → Storage, Datacenter

Application Example



Block Diagram



Software Support

- → PI7C1401 Programming Guide
- → PI7C1401 Sample Code
- → PI7C1401 Implementation Guide

Ordering Information

Part Number	Package	Description
PI7C1401AZFEX	ZF	56-contact, Thin Fine Pitch Quad Flat No-lead (TQFN)

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/ EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.

2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.

3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

4. E = Pb-free and Green

5. X suffix = Tape/Reel