

## I2C/SMBus Interface 100kHz/400kHz 5.5V 24-Pin TSSOP T/R

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** TSSOP24

**Product Type:** Drivers

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active



Images are for reference only

[Inquiry](#)

### General Description

The TCA6416A is a 24-pin device that provides 16-bits of general purpose parallel input/output (I/O) expansion for the two-line bidirectional I2C bus (or SMBus) protocol. The device can operate with a power supply voltage ranging from 1.65 V to 5.5 V on the I2C bus side (VCCI) and a power supply voltage ranging from 1.65 V to 5.5 V on the P-port side (VCCP).

The device supports both 100-kHz (Standard-mode) and 400-kHz (Fast-mode) clock frequencies. I/O expanders such as the TCA6416A provide a simple solution when additional I/Os are needed for switches, sensors, push-buttons, LEDs, fans, etc.

## Key Features

I2C to Parallel Port Expander

Operating Power-Supply Voltage Range of 1.65V to 5.5V

Allows Bidirectional Voltage-Level Translation and GPIO Expansion Between 1.8-V, 2.5-V, 3.3-V, and 5-V I2C Bus and P-Ports

Low Standby Current Consumption of 3 $\mu$ A

5-V Tolerant I/O Ports

400-kHz Fast I2C Bus

Hardware Address Pin Allows Two TCA6416A Devices on the Same I2C/SMBus Bus

Active-Low Reset Input (INT)

Input/Output Configuration Register

Polarity Inversion Register

Internal Power-On Reset

Power-Up With All Channels Configured as Inputs

No Glitch On Power Up

Noise Filter on SCL/SDA Inputs

Latched Outputs With High-Current Drive Maximum Capability for Directly Driving LEDs

Latch-Up Performance Exceeds 100 mA Per JESD 78, Class II

ESD Protection Exceeds JESD 22  
2000-V Human-Body Model (A114-A)

200-V Machine Model (A115-A)

1000-V Charged-Device Model (C101)

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## Recommended For You

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### **TCA9534PWR**

Texas Instruments, Inc  
TSSOP16

### **TCA9517DR**

Texas Instruments, Inc  
SOP8

### **TCA6416ARTWR**

Texas Instruments, Inc  
WQFN24

### **TCA4311ADGKR**

Texas Instruments, Inc  
MSOP-8

### **TCA9554APWR**

Texas Instruments, Inc  
TSSOP16

### **TCA9539QPWRQ1**

Texas Instruments, Inc  
TSSOP24

### **TCA6408APWR**

Texas Instruments, Inc  
TSSOP16

### **TCA9535DBR**

Texas Instruments, Inc  
SSOP24

### **TCA9517DGKRQ1**

Texas Instruments, Inc  
VSSOP8

### **TCA6408AQPWRQ1**

Texas Instruments, Inc  
TSSOP16

### **TCA9535DBT**

Texas Instruments, Inc  
SSOP24

### **TCA9803DGKR**

Texas Instruments, Inc  
MSOP8

### **TCA9554ADBQR**

Texas Instruments, Inc  
SSOP16

### **TCA9534APWR**

Texas Instruments, Inc  
TSSOP16

### **TCA9536DGKR**

Texas Instruments, Inc  
VSSOP-8