

## I2C/SMBus Interface 100kHz/400kHz 5.5V 24-Pin WQFN EP

T/R



Images are for reference only

[Inquiry](#)

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

**Package/Case:** WQFN24

**Product Type:** Drivers

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

The automotive-grade, 10-bit DAC53701-Q1 and 8-bit DAC43701-Q1 (DACx3701-Q1) are a pin-compatible family of buffered voltage-output smart digital-to-analog converters (DACs). These devices consume very low power, and are available in a tiny 8-pin WSON package. The feature set combined with the tiny package and low power make the DACx3701-Q1 an excellent choice for applications such as automotive tail plus brake light, license plate light fade-in fade-out, and PWM expansion for interior light.

These devices have nonvolatile memory (NVM), an internal reference, a PMBus-compatible I<sup>2</sup>C interface, and a general-purpose input. The DACx3701-Q1 operates with either an internal reference or with the power supply as a reference, and provides a full-scale output of 1.8 V to 5.5 V.

The DACx3701-Q1 are smart DAC devices because of their advanced integrated features. With force-sense output, GPI based function trigger, PWM output, and NVM capabilities, smart DACs enable system performance and control without the use of software.

## Key Features

AEC-Q100 qualified for automotive applications:  
Temperature grade 1:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ ,  $T_{\text{A}}$

1 LSB INL and DNL (10-bit and 8-bit)

Wide operating range  
Power supply: 1.8 V to 5.5 V

General-purpose Input (GPI) based function trigger

PMBus compatible I<sup>2</sup>C interface  
Standard, fast, and fast mode plus

Four slave address options configured using the broadcast address

1.62-V  $V_{\text{IH}}$  with  $V_{\text{DD}} = 5.5 \text{ V}$

User-programmable nonvolatile memory (NVM/EEPROM)  
Save and recall all register settings

Programmable waveform generation: Square, triangular, and sawtooth

Pulse-width modulation (PWM) output using triangular waveform and FB pin

Digital slew rate control

Internal reference

Very low power: 0.2 mA at 1.8 V

Flexible startup: High impedance or 10K-GND

Tiny package: 8-pin WSON (2 mm  $\times$  2 mm)



## Recommended For You

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**TCA9534PWR**

Texas Instruments, Inc

TSSOP16

**TCA9517DR**

Texas Instruments, Inc

SOP8

**TCA6416APWR**

Texas Instruments, Inc

TSSOP24

**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