TL16C554APN

UART 4-CH 16byte FIFO 3.3V/5V 80-Pin LQFP Tray

Manufacturer:	Texas Instruments, Inc
Package/Case:	LQFP80
Product Type:	Drivers
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

The TL16C554 and the TL16C554I are enhanced quadruple versions of the TL16C550B asynchronous communications element (ACE). Each channel performs serial-to-parallel conversion on data characters received from peripheral devices or modems and parallel-to-serial conversion on data characters transmitted by the CPU. The complete status of each channel of the quadruple ACE can be read at any time during functional operation by the CPU. The information obtained includes the type and condition of the operation performed and any error conditions encountered.

The TL16C554 and the TL16C554I quadruple ACE can be placed in an alternate FIFO mode, which activates the internal FIFOs to allow 16 bytes (plus three bits of error data per byte in the receiver FIFO) to be stored in both receive and transmit modes. To minimize system overhead and maximize system efficiency, all logic is on the chip. Two terminal functions allow signaling of direct memory access (DMA) transfers. Each ACE includes a programmable baud rate generator that can divide the timing reference clock input by a divisor between 1 and (216-1).

The TL16C554 and the TL16C554I are available in a 68-pin plastic-leaded chip-carrier (PLCC) FN package and in an 80-pin (TQFP) PN package.

Key Features

Integrated Asynchronous-Communications Element

Consists of Four Improved TL16C550C ACEs Plus Steering Logic

In FIFO Mode, Each ACE Transmitter and Receiver Is Buffered With 16-Byte FIFO to Reduce the Number of Interrupts to CPU

In TL16C450 Mode, Hold and Shift Registers Eliminate Need for Precise Synchronization Between the CPU and Serial Data

Up to 16-MHz Clock Rate for up to 1-Mbaud Operation with VCC = 3.3 V and 5 V

Programmable Baud-Rate Generators Which Allow Division of Any Input Reference Clock by 1 to (216 – 1) and Generate an Internal 16 × Clock

Adds or Deletes Standard Asynchronous Communication Bits (Start, Stop, and Parity) to or From the Serial-Data Stream

Independently Controlled Transmit, Receive, Line Status, and Data Set Interrupts

5-V and 3.3-V Operation

Fully Programmable Serial Interface Characteristics:
5-, 6-, 7-, or 8-Bit Characters

Even-, Odd-, or No-Parity Bit

1-, 1 1/2-, or 2-Stop Bit Generation

Baud Generation (DC to 1-Mbit Per Second)

False Start Bit Detection

Complete Status Reporting Capabilities

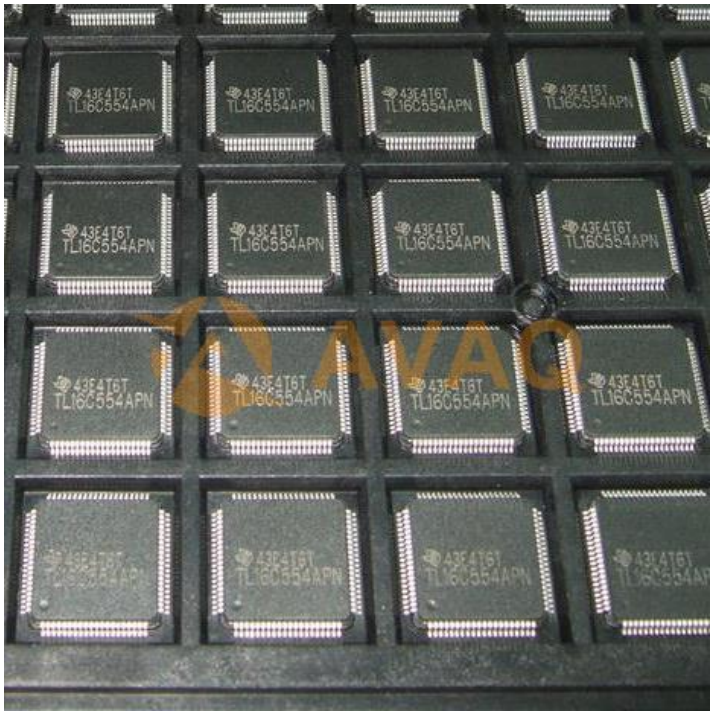
Line Break Generation and Detection

Internal Diagnostic Capabilities:
Loopback Controls for Communications Link Fault Isolation

Break, Parity, Overrun, Framing Error Simulation

Fully Prioritized Interrupt System Controls

Modem Control Functions (RTS Mode,



Recommended For You

TLV320AIC23BIPWR

Texas Instruments, Inc

TSSOP28

TLV320AIC3104IRHBR

Texas Instruments, Inc

QFN32

TL16C554AIPN

Texas Instruments, Inc

LQFP80

TLV320AIC3101IRHBR

Texas Instruments, Inc

QFN32

TLV320AIC24KIPFBR

Texas Instruments, Inc

TQFP-48

TL16C554PN

Texas Instruments, Inc

QFP

TLV320AIC24KIPFB

Texas Instruments, Inc

TQFP-48

TL16C752BLPTREP

Texas Instruments, Inc

LQFP-48

TL16C550DIPFBR

Texas Instruments, Inc

48-TQFP

TLC320AC01CFN

Texas Instruments, Inc

PLCC28

TL16C552AFN

Texas Instruments, Inc

PLCC

TL16C450FN

Texas Instruments, Inc

PLCC44

TL16C554FN

Texas Instruments, Inc

PLCC

TLV320AIC31IRHBR

Texas Instruments, Inc

VQFN32

TLV320AIC3100IRHBR

Texas Instruments, Inc

QFN32