UART 1-CH 16byte FIFO 2.5V/3.3V/5V 48-Pin LQFP Tray

Manufacturer:	Texas Instruments, Inc
Package/Case:	LQFP48
Product Type:	Drivers
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

The TL16C550D and the TL16C550DI are speed and operating voltage upgrades (but functional equivalents) of the TL16C550C asynchronous communications element (ACE), which in turn is a functional upgrade of the TL16C450. Functionally equivalent to the TL16C450 on power up (character or TL16C450 mode), the TL16C550D and the TL16C550DI, like the TL16C550C, can be placed in an alternate FIFO mode. This relieves the CPU of excessive software overhead by buffering received and transmitted characters. The receiver and transmitter FIFOs store up to 16 bytes including three additional bits of error status per byte for the receiver FIFO. In the FIFO mode, there is a selectable autoflow control feature that can significantly reduce software overload and increase system efficiency by automatically controlling serial data flow using RTS output and CTS input signals.

The TL16C550D and TL16C550DI perform serial-to-parallel conversions on data received from a peripheral device or modem and parallel-to-serial conversion on data received from its CPU. The CPU can read the ACE status at any time. The ACE includes complete modem control capability and a processor interrupt system that can be tailored to minimize software management of the communications link.

Both the TL16C550D and the TL16C550DI ACE include a programmable baud rate generator capable of dividing a reference clock by divisors from 1 to 65535 and producing a 16× reference clock for the internal transmitter logic. Provisions are included to use this 16× clock for the receiver logic. The ACE accommodates up to a 1.5-Mbaud serial rate (24-MHz input clock) so that a bit time is 667 ns and a typical character time is 6.7 ms (start bit, 8 data bits, stop bit).

Two of the TL16C450 terminal functions on the TL16C550D and the TL16C550DI have been changed to TXRDY and RXRDY, which provide signaling to a DMA controller.

The TL16C550D is being made available in a reduced pin count package, the 32-pin RHB package. This is accomplished by eliminating some signals that are not required for some applications. These include the CS0, CS1, ADS, RD2, WR2, and RCLK input signals and the DDIS, TXRDY, RXRDY, OUT1, OUT2, and BAUDOUT output signals. There is an internal connection between BAUDOUT and RCLK.

All of the functionality of the TL16C550D is maintained in the RHB package.

The TL16C550D is being made available in a reduced pin count package, the 24-pin ZQS package. This is accomplished by eliminating some signals that are not required for some applications. These include the CS0, CS1, ADS, RD2, WR2, DSR, RI, DCD, and RCLK input signals and the DDIS, TXRDY, RXRDY, OUT1, OUT2, DTR, and BAUDOUT output signals. There is an internal connection between BAUDOUT and RCLK.

Most of the functionality of the TL16C550D is maintained in the ZQS package, except that which involves the eliminated signals.

Key Features

Programmable Auto-BAUDOUT and RCLK.

Most of the functionality of the TL16C550D is maintained in the ZQS package, except that which involves the eliminated signals.
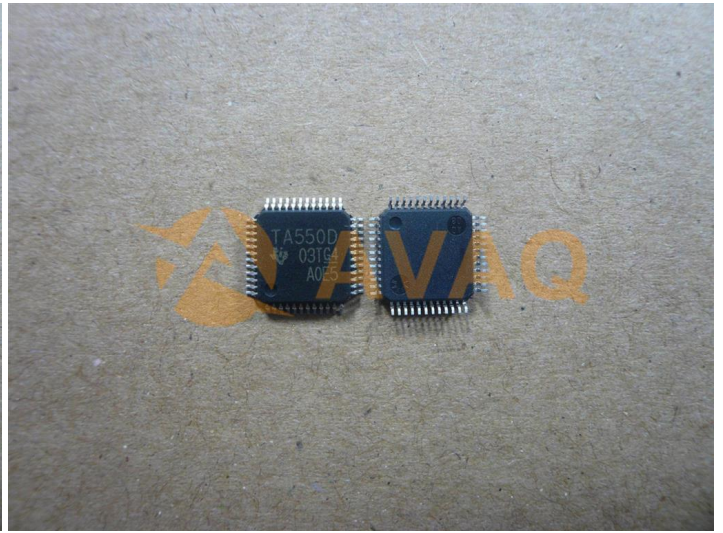
Recommended For You

TLV320AIC23BIPWR

Texas Instruments, Inc

TSSOP28

TLV320AIC3104IRHBR

Texas Instruments, Inc

QFN32

TL16C554AIPN

Texas Instruments, Inc

LQFP80

TLV320AIC3101IRHBR

Texas Instruments, Inc

QFN32

TL16C554APN

Texas Instruments, Inc

LQFP80

TLV320AIC24KIPFBR

Texas Instruments, Inc

TQFP-48

TL16C554PN

Texas Instruments, Inc

QFP

TLV320AIC24KIPFB

Texas Instruments, Inc

TQFP-48

TL16C752BLPTREP

Texas Instruments, Inc

LQFP-48

TL16C550DIPFBR

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48-TQFP

TLC320AC01CFN

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PLCC28

TL16C552AFN

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PLCC

TL16C450FN

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PLCC44

TL16C554FN

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PLCC

TLV320AIC31IRHBR

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VQFN32

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