

Fact Sheet

Military Semiconductor Products

TL16C552AM / 5962-9755001QXA

SGYV037 -July 1997

TL16C552A Dual Asynchronous Communications Element with FIFO

HIGHLIGHTS

The TL16C552A is an enhanced dual channel version of the popular TL16C550 asynchronous communications element (ACE). The device serves two serial input/output interfaces simultaneously in microcomputer or microprocessor-based systems. 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 dual ACE can be read at any time during functional operation by the CPU. The information obtained includes the type and condition of the transfer operations being performed and the error conditions.

In addition to its dual communications interface capabilities, the TL16C552A provides the user with a fully bi-directional parallel data port that fully supports the parallel Centronics-type printer. The parallel port and the two serial ports provide IBM PC/AT-compatible computers with a single device to serve the three system ports.

KEY FEATURES/BENEFITS

- IBM PC/AT Compatible
- Two TL16C550 ACEs
- Enhanced Bidirectional Printer Port
- 16-Byte FIFOs Reduce CPU Interrupts
- Independent Control of Transmit, Receive, Line Status, and Data Set Interrupts on Each Channel
- Individual Modem Control Signals for Each Channel
- Programmable Serial Interface Characteristics for Each Channel:
 - 5-, 6-, 7-, or 8-bit Characters
 - Even-, Odd-, or No-Parity Bit Generation and Detection
 - 1-, 1 1/2-, or 2-Stop Bit Generation
- 3-State TTL Drive for the Data and Control Bus on Each Channel

SUPPORT

For additional information on this and other Mixed Signal/Analog Products visit our Mixed Signal home page at:

http://www.ti.com/sc/docs/military/product/mix_sig/mixsig_1.htm

Additional information regarding this product is available by calling the Texas Instruments U.S. Product Information Center (PIC) at (972) 644-5580 during normal business hours (CST/CDT). For European PIC information visit <http://www.ti.com/sc/docs/pic/home.htm>

DIE SIZE

The current die has a size of: 198 mils x 196 mils.



TECHNOLOGY

- 1 μm LinEPIC™ Process
- ESD level: 2 kV

PACKAGING

Package Option: 68-pin Ceramic Quad FlatPack (HV)

POWER DISSIPATION

The table below shows modeled data. This data can be used for approximating system thermal characteristics:

Package Thermal Data

Package	R _{qJA}	R _{qJC}
68 Pin HV	74° C/W	3° C/W

Note: much better thermal impedances can be achieved by using air flow, or with increasing metal backplane thickness or trace area in the Printed Circuit Board (PCB) that is used.

PROCESS/PERFORMANCE OPTIONS

The TL16C552AM is processed to the military temperature range at the SN-level, or at the SNJ-level for programs requiring devices processed to MIL-PRF-38535. The DSCC Standard Microcircuit Drawing (SMD) for this device is given below.

DSCC SMD

TI Parent	DSCC SMD
TL16C552AMHVB	5962-9755001QXA

SUPPORT LITERATURE

You can access data sheets via TI's home page on the internet (<http://www.ti.com>) or reference the literature number SLLS189B when contacting the PIC.

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Mailing Address:

Texas Instruments
Post Office Box 655303
Dallas, Texas 75265