Asynchronous Communications Element with Plug-and-Play (PnP) and Auto-Flow Control

Description

The TL16PNP550A is a functional upgrade of the TL16C550C asynchronous communications element (ACE). Functionally equivalent to the TL16C450 on power up, the TL16PNP550A can be placed in an alternate mode (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 3 additional bits of error status per byte for the receiver FIFO. In the FIFO mode, there is a selectable auto-flow control feature that can significantly reduce software overload and increase system efficiency by automatically controlling serial data flow via RTS output and CTS input signals. The 'PNP550A also responds to the plug-and-play auto-configuration process on power-up.

Key Features

- PnP card auto-configuration sequence compliant
- External pin-to-bypass PnP auto-configuration sequence
- Provides 10-interrupts IRQ3–IRQ7, IRQ9–IRQ12, IRQ15
- Simple 3-pin interface to SGS-Thomson's EEPROM 2K/4K ST93C56/66 or equivalent
- High output current drive. No external buffer needed for data and interrupt signals.
- On-chip I/O port-address decoding
- Modem-control functions (CTS, RTS, DSR, DTR, RI, and DCD)
- Programmable autoflow control
- UART and plug-and-play bypass modes
- Up to 16-MHz clock for up to 1-Mbaud operation

Applications/End Equipment

- Fax
- Modem
- Mouse
- Serial port

Package Types

TL16PNP550AFN   68-pin plastic J-leaded chip carrier