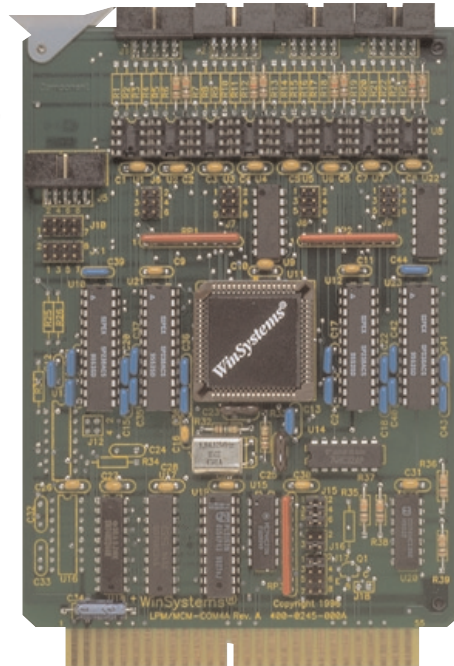


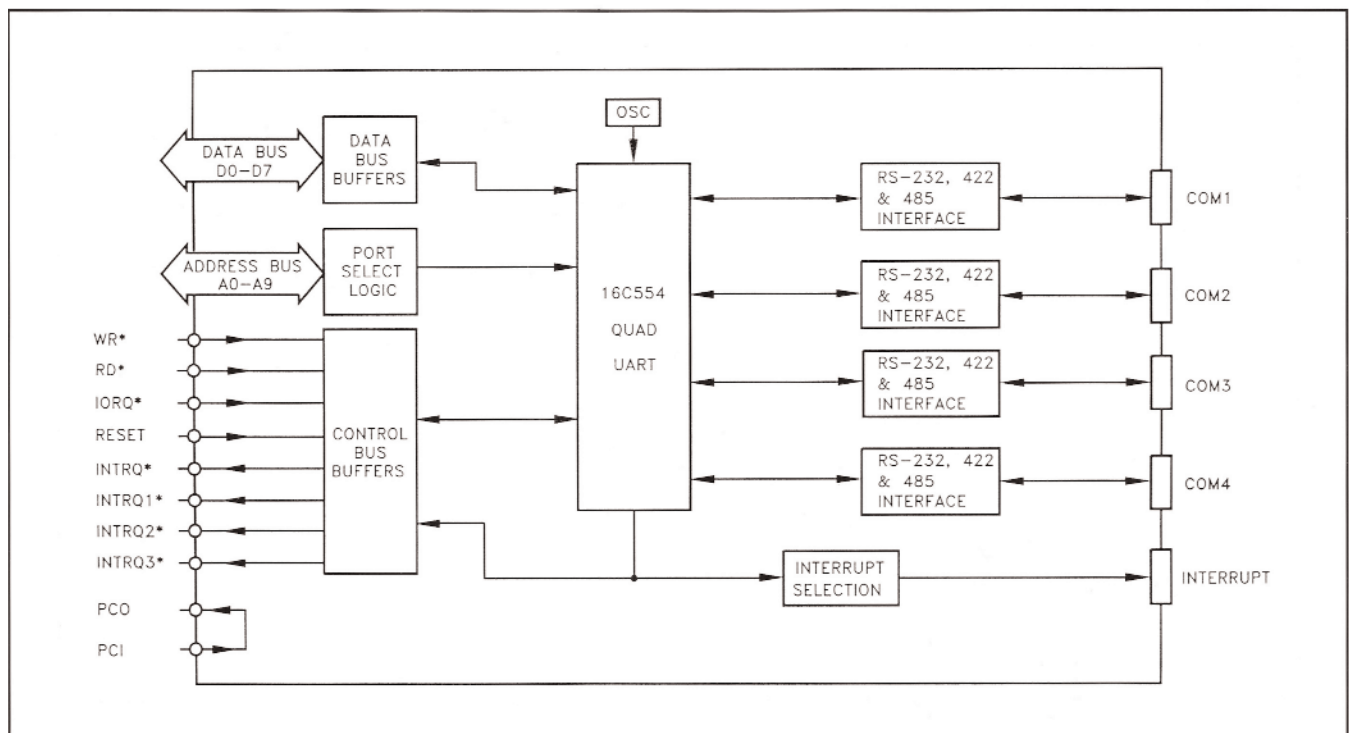
## FEATURES

- Four independent 8250 compatible serial channels
- Programmable serial interface characteristics for each channel
  - 5-, 6-, 7-, or 8-bit characters
  - Even, odd, or no parity
  - 1, 1.5, or 2 stop bits
  - Local loopback for diagnostics
- Independent control of transmit, receive, line status, and data set interrupts on each channel
- RS-232, RS485 and RS-422 electrical levels on all channels
- Asynchronous data rates to 115Kbps
- Software programmable baud rate generator
- Programmable board I/O address selectable for PC-XT/AT hardware/software compatibility
- Frontplane or backplane interrupts supported
- +5 volt only operation
- STD Bus compatible
- Available in CMOS as the LPM-COM4A
- Onboard watchdog timer



The LPM/MCM-COM4A is 4 channel serial 8250 compatible STD Bus board based on the 16C554. It is ideally suited for applications running DOS programs or languages that require exact register compatible hardware for program execution on software such as Greenleaf Comm Library, CROSSTALK, etc.

Each channel supports RS-232, 4-wire RS-485 and RS-422 electrical levels to interface to a wide variety of serial communications devices such as modems, mouse, and distributed I/O terminals. The CMOS STD Bus board is available that will operate from -40° to +85° Centigrade.



---

## FUNCTIONAL CAPABILITY

---

**Serial Controller** - A 16C554 serves as the serial communication controller. It is an improved version of the 16C450 UART with higher operating speed and lower access time. It has four independent, double buffered, serial asynchronous channels that are 82C50A hardware compatible. The unit contains on-chip software programmable baud rate generators selectable through 115K bits per second. Each has independent control of transmit, receive, line status and data set interrupts. Individual modem handshake control signals are available for each line.

Each channel will support 5, 6, 7 or 8 bit characters with even, odd or no parity generation/checking. It will handle 1, 1.5, or 2 stop bits. Each channel is setup to provide internal diagnostics such as loopback and echo mode on the data stream.

All serial channels are configured as a Data Terminal Equipment (DTE) and wired to an individual 10-pin right angle connector just like the PC-AT. This permits easy connections to a standard 9-pin male D-sub connector by using the WinSystems' CBL-123-1.

**Electrical Interface Levels** - The board can be ordered to support RS-232, RS-485 and RS-422 levels. Only +5 volts is required for the board since the transceiver chip which is used generates the plus and minus voltages required for the RS-232.

The RS-422/485 configuration provides separate balanced transmit and receive signal pairs. For RS-485 multidrop lines, one signal pair can be used for "party line" network structures. The LPM/MCM-COM4A is designed to properly disable the transmitter upon reset to prevent potential lock-up problems caused by a transmitter stuck in the ON mode. Both the RS-422/485 transmitter and receiver lines permit user installable termination resistors for impedance matching and biasing.

**Interrupts** - Interrupts are generated on error conditions or receive/transmit buffer status for the serial I/O. They can be either ORed together or individually wired via the INTRQ\*, INTRQ1\*, INTRQ2\*, and NMI lines on the STD Bus backplane or via a frontplane connector.

An onboard status register permits easy interrupt source identification when multiple channels share the same interrupt line.

**Addressing** - The MCM/LPM-COM4A is processor independent with 8- or 10-bit I/O decoding. Each channel requires 8 port addresses and each is independently decoded within the I/O map.

**Bus Interface** - The MCM-COM4A is the STD Bus and the LPM-COM4A is the CMOS STD Bus version of the board. Programming, cable pin-outs, bus pin assignments, and jumper configurations are identical for both cards. The LPM/MCM prefix indicates the card has the same features and functionality but a different bus interface logic, power requirements and operational temperature range.

## SPECIFICATIONS

---

### Electrical

Bus Interface: STD Bus compatible  
MCM-COM4A-2: Vcc = +5V +5% @ 425 mA typ.  
LPM-COM4A-2: Vcc = +5V +10% @ 125 mA typ.

### Mechanical

Dimensions: 4.5" x 6.5"

### Connectors

Interrupt: 10-pin 0.100" grid  
Jumpers: 0.025" square posts  
Serial: Four 10-pin 0.100" grid

### Environmental

Operating Temperature:  
MCM-COM4A: 0°C to +65°C  
LPM-COM4A: -40°C to +85°C  
Non-condensing relative humidity: 5% to 95%

## ORDERING INFORMATION

---

LPM-COM4A-2	RS-232 only on all 4 channels
LPM-COM4A-4	RS-422/485 only on all 4 channels
MCM-COM4A-2	RS-232 only on all 4 channels
MCM-COM4A-4	RS-422/485 only on all 4 channels
CBL-123-1	10-pin ribbon to 9-pin "D" cable

