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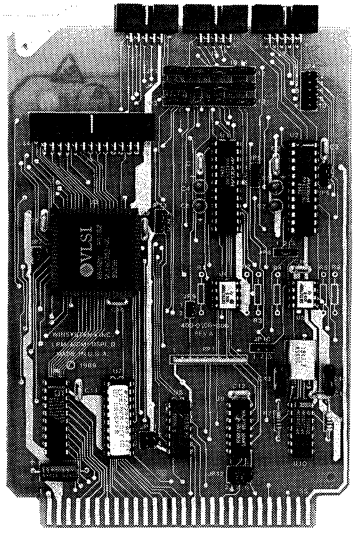
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Find the *WinSystems LPM-DSPIO* at our website: ***Click HERE***

FEATURES

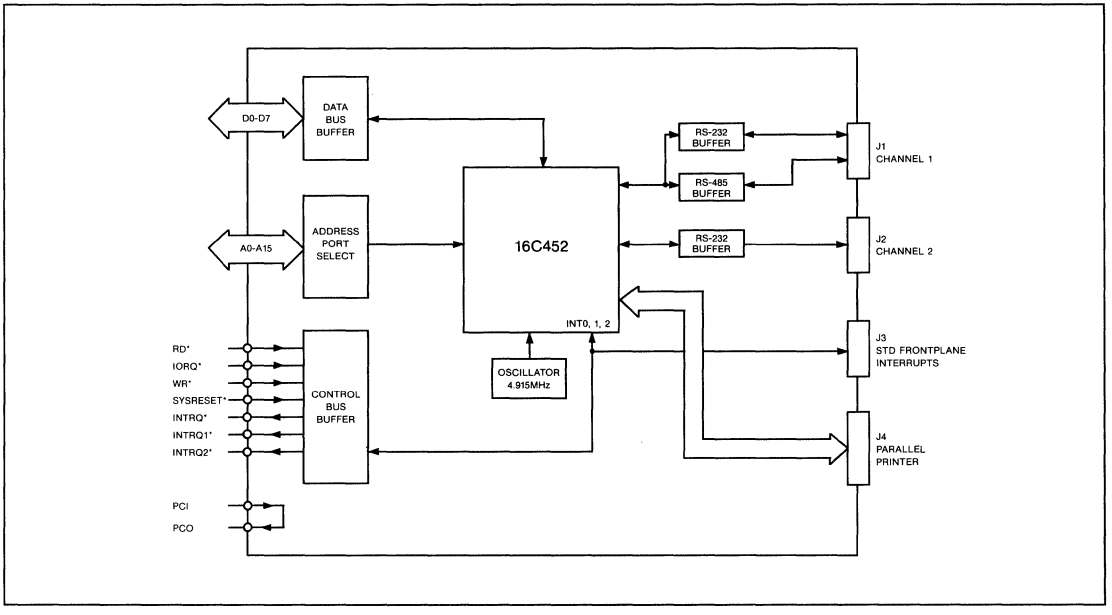
- Two independent 82C50A serial channels
- Programmable serial interface characteristics for each channel
  - 5-, 6-, 7-, or 8-bit characters
  - Even, odd, or no parity
  - 1, 1½ or 2 stop bits
  - Local loopback for diagnostics
- Independent control of transmit, receive, line status, and data set interrupts on each channel
- RS-232 and RS-485 on both channels with RS-422 levels on channel 1 only
- Asynchronous data rates to 38.4 Kbps
- Software programmable baud rate generator
- Programmable board I/O address selectable for PC-XT/AT hardware/software compatibility
- Frontplane or backplane interrupts supported
- Centronics parallel printer interface onboard mapped as LPT1 or LPT2
- +5 volt only operation
- Available for CMOS STD Bus: LPM-DSPIO



The LPM/MCM-DSPIO is a STD Bus and CMOS STD Bus dual serial 82C50A UART and Centronics parallel I/O card for the STD Bus and CMOS STD Bus based on the VL16C452. It is ideally suited for applications running DOS programs or languages that require exact register compatible hardware for program execution.

FUNCTIONAL CAPABILITY

STD Bus Interface - The LPM-DSPIO is the CMOS STD Bus version and the MCM-DSPIO is the STD Bus version of this card. The LPM/MCM prefix indicates the card has the same features and functionality. The



differences between the two products are the various power requirements, bus interface levels, and operation temperature ranges.

Serial I/O - A VLSI technology VL16C452 serves as the serial communication controller. It has two independent, double buffered, serial asynchronous channels that are 82C50A hardware compatible. The unit contains on-chip software programmable baud rate generators selectable through 38.4K 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, 1½ or 2 stop bits. Each channel is setup to provide internal diagnostics such as loopback and echo mode on the data stream.

The standard serial I/O map is COM1 and COM2 (3F8-3FF hex and 2F8-2FF hex respectively) for PC compatibility. Alternative maps are jumper selectable.

Both channels support RS-232 and RS-485 electrical interface levels. Channel 1 will also support RS-422 if Channel 2 is jumpered for RS-232. Only +5 volts is required for the system since a Maxim MAX239 chip is used which generates the plus and minus voltages required for RS-232. Higher RS-232 (+10 volt) levels can be obtained by optionally jumpering +12V to the MAX239. This is occasionally required for long cable runs or for certain mouse interfaces.

The RS-422 configuration provides separate balanced transmit and receive signal pairs. For RS-485 multi-drop lines, only one signal pair is used for "party line" network structures. The LPM/MCM-DSPIO 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 have 100 ohm termination resistors installed onboard for impedance matching.

Certain PC-compatible BIOS' and communications applications software (i.e. Greenleaf, etc.) will not permit data transmission until the modem input status lines are set to the correct logic levels. The LPM/MCM-DSPIO has an onboard jumper header to permit the user to force the correct binary state for the control interchange circuits.

Both serial channels are configured as a DTE and each wired to an individual 10-pin right angle connector like the PC-AT. This permits easy connections to a standard 9-pin male D-sub connector with the WinSystems' CBL-123-1.

Parallel I/O - The VL16C452 also provides a direct 26-pin Centronics parallel I/O interface from the LPM/MCM-DSPIO. The standard default I/O Map is LPT1 (378-37F hex) with a jumper selectable option or LPT2 (278-27F hex).

The parallel port is wired as a printer port but can be used for other devices. The first 8-bits are available as input or output only. The additional handshake lines are dedicated 5-bits as input only and 4-bits as output only.

Interrupts - Interrupts are generated on error conditions or receive/transmit buffer status for the serial I/O and from the parallel I/O. They can be wired via the INTRQ*, INTRQ1*, and INTRQ2* on the STD Bus and CMOS STD Bus backplane or via the frontplane convention.

SPECIFICATIONS

Electrical

Vcc = +5V ±10% at 170mA typ.,
+12V ±10% at 20mA (optional): LPM-DSPIO
Vcc = +5V ±5% at 270mA typ.,
+12V ±5% at 20mA (optional): MCM-DSPIO

Mechanical

Meets STD Bus mechanical specifications

Connectors

Interrupts: 10-pin 0.100" grid
Parallel: 26-pin 0.100" grid
Serial: Two 10-pin 0.100" grid

Environmental

Operating Temperature: 0° to +65°C
Non-condensing relative humidity: 5% to 95%

ORDERING INFORMATION

LPM-DSPIO	Dual Serial/Parallel I/O card
MCM-DSPIO	Dual Serial/Parallel I/O card
CBL-101-3	26-pin ribbon to 25-pin "D" adapter
CBL-123-1	10-pin ribbon to 9-pin "D" adapter

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