Multi function Display

With Opto Isolated Inputs, Relay Outputs, Serial I/O, LCD and Keypad Interfaces

Features

- 16 Opto Isolated Inputs
- 2 Relay Outputs
- Powered from 7 to 35 Volts dc, 5 to 24 Volts ac
- One RS232 / 485 Serial Port
- Two RS232 Serial Ports
- High performance 68000 based CPU
- Up to 1 M-byte of EPROM
- Up to 512 k-byte of Flash Memory
- Up to 512 k-byte of Static RAM
- Program in Assembler, C or Modula-2
- Micro-Module / Midget Compatible
- 8 x 8 matrix keypad port
- Graphics LCD panel interface
- Alphanumeric LCD interface
- Vacuum Fluorescent Display option
- Piezo buzzer
- Additional Expansion Boards available
- Minos Operating System compatible

Description

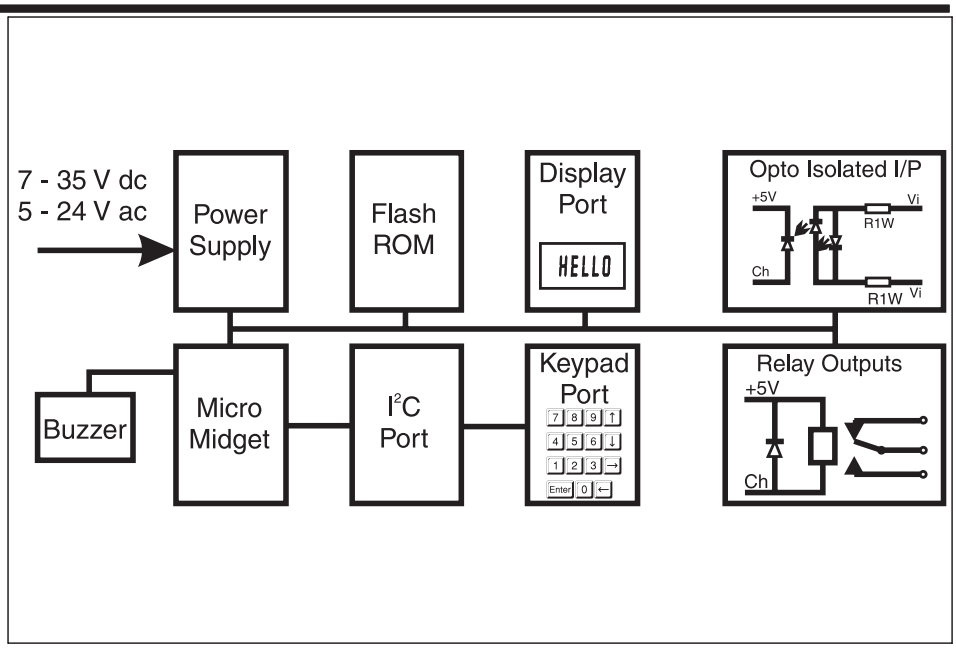
The multi function display board is ideal for use as a man-machine interface, data logger or for use as a terminal.

68000 Compatible Controller

This product uses a Micro-Midget controller. Please refer to Micro-Midget leaflet for full details

Flash Memory

Up to 512 k-byte Flash EPROM memory is provided to allow for long term parameter storage and user program strorage. By keeping the application program in the Flash memory it can easily be updated by down loading the program via a serial port. The EPROM will not need to be replaced enabling unskilled personnel to upgrade an application.



Power Supply

This unit is powered by its own on board switch mode power supply. The input voltage range is wide to allow for most industrial conditions. The power supply is capable of supplying up to 1 Watt for use on board from a single supply between 7 and 35 volts d.c or 5 and 24 volts a.c.

Opto Isolated Inputs

The 16 opto isolated inputs use a.c. opto isolators allowing both d.c and a.c input signals to be used. The input voltage is optimised for 28 Volts, with a 'user configured' version available that allows the user to determine the input voltage range. The switch over voltage is approximately half the input range. A small amount of hysteresis is built in to the input stage to reduce bounce on gentle rise time signals and switches. Isolation is provided for up to 1000 Volts r.m.s.

Relay Outputs

The two relay outputs use subminiture single pole change over relays. These can be used to switch larger relays if required. The contact rating of each relay channel is 28 Volts d.c at 1 Amp or 120 Volts a.c at 0.5A.

Serial Ports

There are up to three serial ports available on this board. Two of the serial ports are for use with RS232 type devices, the other can be switched between RS232 and RS485. One of the RS232 ports can be used for direct connection to a host PC either for programming or data logging. When connected using the half duplex RS485 port up to 250 units can be networked together, each with a unique station number. The RS485 network is differential making it ideal for communications over long distances and in noisy environments. The serial ports can operate over a wide range of baud rates from 500 up to 38400 with data sizes between 5 and 8. Odd or even parity checking can be enabled.

Matrix Keypad

An interface is provided which will allow matrix keypads to be connected to the board. The largest matrix that can be accommodated is a 64 key keypad on an 8 x 8 matrix, but any size and matrix below this can easily be accommodated.

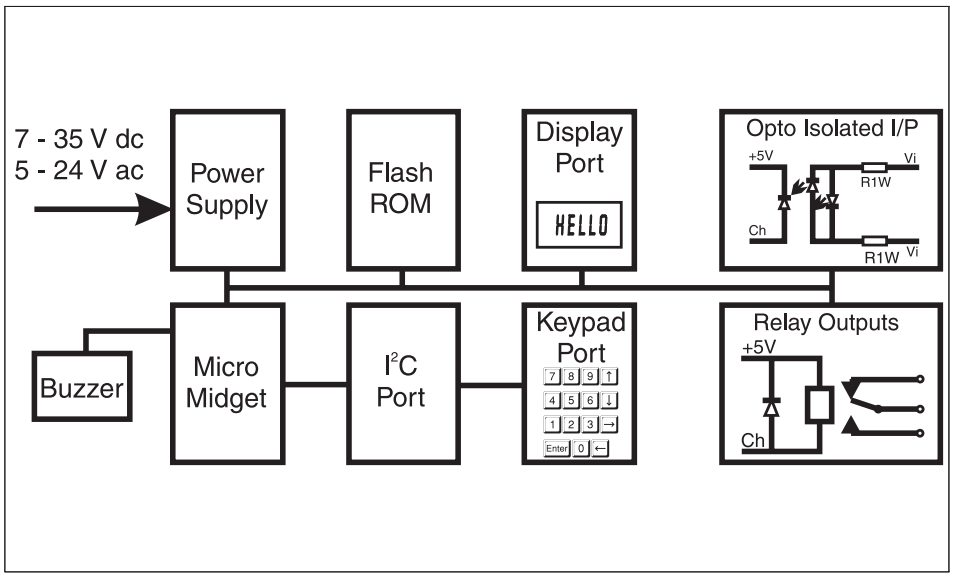
Display Interface

Depending on the model ordered, a number of different display modes are available. Supported devices include alphanumeric LCDs up to 4 lines by 40 characters using a HD44780 compatible controller device, monochrome graphics panels up to 240 x 128 dots with a HD61830 compatible controller and a range of vacuum fluorescent displays. A device to generate the a.c voltage to drive the backlight is also available with some of the display options.

Programming

Development packs are available for this product. They include everything that is required to develop an application, in-

cluding a board, a power supply, full documentation, demonstration programs and a royalty free Minos real time multi tasking operating system. Also included is support for the chosen programming language. If 'C' is your chosen language then a 68K 'C' Cross compiler, 68K Assembler, Linker, Library Manager and text editor are provided. For Modula-2 an interpreter is provided in the EPROMs fitted to the controller board. Your code can be written in any text editor and down loaded to the controller where it will be interpreted and run. The operating system has full support for all devices fitted to this product allowing easy access between the I/O device and the application program.



Specification

Power

7 to 35 Volts d.c
5 to 24 Volts a.c 50/60 Hz

Program Memory

Up to 1 M-byte EPROM
Up to 512 k-byte Static RAM
Up to 512 k-byte Flash EPROM

Inputs

16 Opto Isolated Inputs
Isolation 1000 Volts r.m.s.
28 Volts d.c./a.c. or user configured

Outputs

2 Single, pole change over relays
28 V d.c @ 1 A
120 V a.c. @ 0.5 A
Insulation 100 MOhms
Power 0.45 Watt

Serial

2 RS232, 1 RS232/RS485
500 to 38400 baud
5 - 8 data bits
1 - 2 stop bits
Odd, Even or No parity

LCD Interface

Up to 4 x 40 Alphanumeric with HD44780 controller
Up to 240 x 128 Graphics panel with HD61830 controller
Vacuum Fluorescent Display

Back light Controller (option)

Display Size - 30 - 100 cm^2
Output Voltage 7 - 170 Volts @ 330 - 890 Hz

Key pad Interface

Up to 8 x 8 matrix (64 keys)
User configurable matrices

Environmental

0 - 70 deg C
0 to 90% RH (non condensing)

Order Codes

K-070	Alphanumeric Display Board (8 I/P, 4 x4 Key Matrix)
K-071	Graphics Display Board (8 I/P, 4 x 4 Key Matrix)
K-072	Vacuum Fluorescent Display Board (8 I/P, 4 x 4 Key Matrix)
OPTION-B	Back Light Controller - Graphics Only
OPTION-K	8 x 8 Matrix Keypad Port (64 keys maximum)
OPTION-I	16 Channel Input
K-244	4 x 40 Alphanumeric LCD
K-240	2 x 40 Alphanumeric LCD
K-246	240 x 128 Mono Graphics LCD Panel
K-247	256 x 64 Mono Graphics LCD Panel
K-248	4 x 4 IP67 Matrix Keypad
K-249	4 x4 Membrane Keypad

announce970627

Cambridge Microprocessor Systems Limited,
Unit 17 - 18 Zone 'D',
Chelmsford Road Ind. Est.,
Great Dunmow,
Essex, U.K. CM6 1XG.
Telephone 01 371 875644
FAX 01 371 876077
E-mail sales@cms.uk.com
Website http://www.cms.uk.com