

# VME-ASIO16

## 16 Serial Interfaces

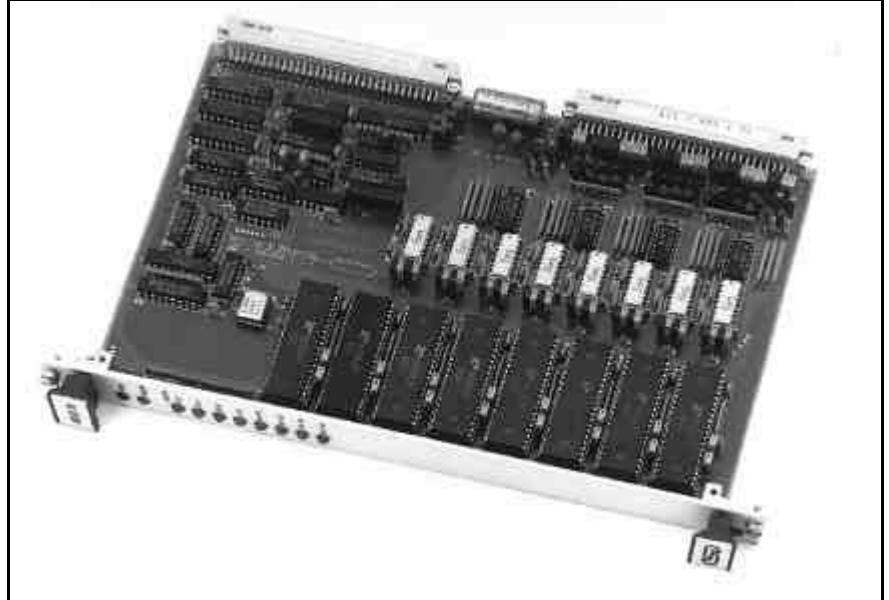


### **RS-232, RS-422 or TTY**

- 16 serial channels RS-232C or TTY
- Easily configured by jumpers
- Optionally 12 channels RS-422

### **Industrial Standard**

- Safety of operation by optoisolation between VMEbus and process environment
- Proper wiring to the backplane via P2



### **16 Asynchronous Serial Interfaces**

VME-ASIO16 is an I/O board designed for asynchronous serial data transfer via up to 16 channels. Each channel is suitable as RS-232 interface or as 20 mA current loop. The operation mode is selectable for each channel separately by jumpers. All signal and supply lines are led via P2.

Alternatively (add-on board) the VME-ASIO16 can also be equipped with up to 12 channels RS-422 (optocoupled) and 4 channels RS-232.

### **Current Loop**

The current loop interfaces are opto-isolated. When operating as current loop interfaces, power of  $\pm 12$  V can be supplied externally via P2 or internally via VMEbus (selectable by jumpers). The current sources for transmitting and receiving signals are located on the board (active current source). For operation as RS-232C interface all data lines and handshakes are available even in the base version.

### **VMEbus Interrupt**

An interrupt logic with priority control generates a common interrupt on the VMEbus for each pair of channels. The interrupt level is selectable from 1 to 7 by jumpers. An interrupt is also generated on a line break of the 20 mA current loop.

### **Serial Controller**

Handling of the channels is managed by up to 8 DUART 68681 (depending on the number of equipped channels). A LED display on the front panel shows the actual interrupt state of each DUART. Additionally LEDs for the signals "BUSY" (board select) and "IRQ" (common interrupt) are available.

### **P2 Adapter**

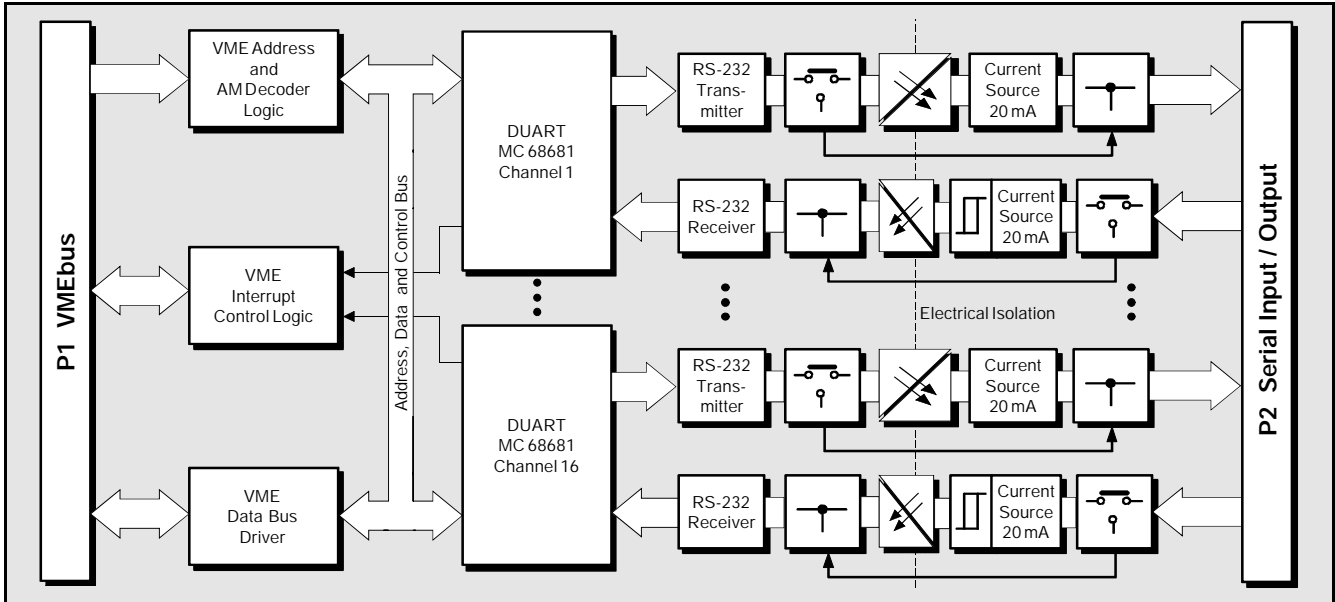
esd recommends an adapter for the P2 connector, which contains connectors for easy connection of the board to the system.

### **Software Support**

The user manual contains a detailed programming instruction for the initialization of the I/O components DUART 68681. Drivers can be supplied for all popular operating systems, such as VxWorks, OS-9 etc.

# VME-ASIO16

## 16 Serial Interfaces



### Technical Specifications:

#### Process section:

I/Os: max. 16 channels RS-232 or 20 mA current loop (active - optionally passive - current source) selectable via jumpers  
 alternatively: max. 12 channels RS-422 (optoisolated) plus 4 channels RS-232

Bit rate: RS-232: max. 38.4 kbit/s  
 TTY: max. 9600 bit/s  
 RS-422: max. 38.4 kbit/s  
 for each channel separately adjustable

Interrupt level: I(1-7) static

LED array: 8 x display of interrupt state BUSY (board select), IRQ (common interrupt)

Electrical isolation: 20 mA current loops and RS-422 interfaces each with optocouplers

#### VMEbus section:

Base address: selectable by jumpers over the whole address range of 16 Mbyte.  
 The board covers 256 bytes.

Address modifier (AM): full AM decoding additionally with don't care mode for 'supervisory'/'nonprivileged' mode

VMEbus revision compatibility: IEEE 1014 rev. C.1

Data transfer options: SADO24, SD16

#### General:

Ambient temperature: 0...70 °C

Humidity: max. 90%, non-condensing

Connector types: P1: DIN 41612-C96  
 P2: DIN 41612-C64

Board size: 160 mm x 233 mm

VME dimensions: 6U height, 1 slot width

Weight: 420 g

Power consumption: max. 0.7 A at +5 VDC  
 max. 0.2 A at ±12 V (16 x RS-232)  
 max. 0.8 A at ±12 V (16 x TTY)

#### Order information:

Designation		Order no.
VME-ASIO16-16	16 channels RS-232 and TTY	V.1401.16
VME-ASIO16-12	12 channels RS-232 and TTY	V.1401.12
VME-ASIO16-8	8 channels RS-232 and TTY	V.1401.08
VME-ASIO16-6	6 channels RS-232 and TTY	V.1401.06
VME-ASIO-422-12	Add-on with 12 x RS-422 + 4 x RS-232	V.1401.00
VME-ASIO16-ADAPT	Adapter module for P2 connector, to connect DSUB connectors	V.1401.02
VME-ASIO-DSUB	Flat cable with DSUB-25 female	V.1401.04
VME-ASIO16-OS9	C driver for OS-9 as source code	P.1401.50
VME-ASIO16-VxW	C driver for VxWorks as source code	P.1401.56