

# VME-ISER8

## Intelligent Board for 10 Serial Interfaces

### Multiple Applications

- Data concentrator, terminal server, protocol converter, communication processor

### High Data Rates

- 10 asynchronous serial interfaces, 2 of them synchronous as well
- Max. 38.4 kBd on all 10 channels simultaneously
- Max. 115 kBd on two channels synchronously or asynchronously
- Max. 1 MBd on one channel synchronously

### Versatile Interfaces

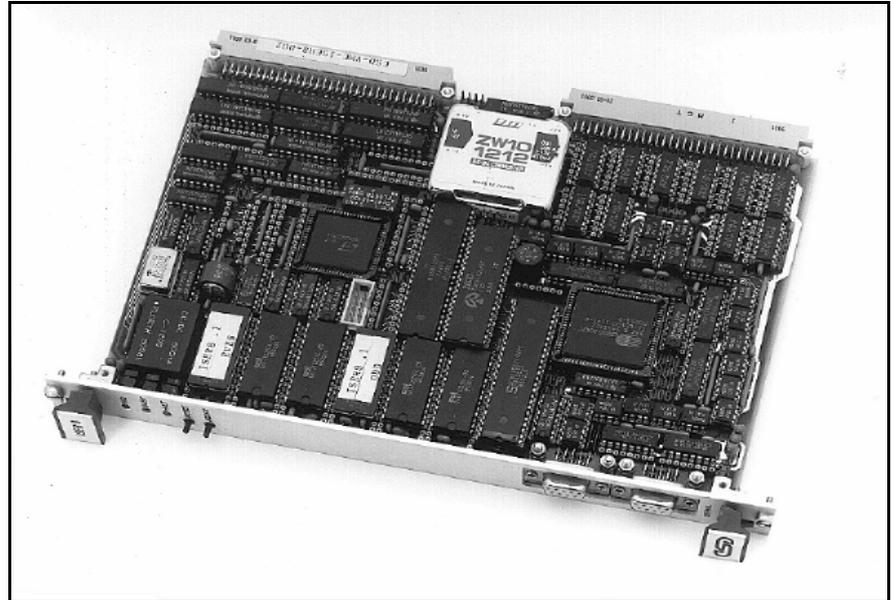
- RS-232, RS-422, RS-485 or TTY (active or passive selectable)
- Safety of operation by optocouplers

### Easy Access and Diagnostics

- Shared RAM access for easiest parameter handling
- 2 additional serial ports for diagnostic, service or programming purposes

### Standard Firmware

- Firmware for programming of VMEbus interface and serial interfaces as a standard



### Intelligent Interface Handling

VME-ISER8 is an intelligent interface board equipped with 10 serial process interfaces and two additional serial ports for programming and service purposes. It includes all necessary components on a VMEbus 6U board and needs only 1 slot.

### Parameters

The transfer frame of each serial channel can be separately selected between 5 and 8 bits with a parity bit as an option (odd, even, with or without parity) and one or two stop bits. The maximum baud rate when using all 10 serial channels simultaneously is 38.4 kBaud. For each channel a software handshake (XON/XOFF) or a hardware handshake can be selected.

**Two versions** of the VME-ISER8 are available:

#### Version A:

Each channel can be configured as RS-232, TTY current loop (active or passive) with line break detection.

All serial data lines and handshakes are optoisolated from the VMEbus section by fast optocouplers.  $\pm 12$  V are supplied by an on-board DC/DC converter.

#### Version B:

Each channel can be configured as RS-232, RS-422, RS-485 or TTY current loop (passive) with line break detection.

All serial data lines and handshakes are optoisolated from the VMEbus section by fast optocouplers.  $\pm 5$  V is supplied by an on-board DC/DC converter.

### Wiring

Serial interfaces of 1 to 9 are fed to the P2 connector. Channel 10 is located at the front panel. **esd** recommends an adapter for the P2 connector, which ends in DSUB9 connectors for easy connection of the board to the system.

### Software Support

For the 2 synchronous transfer channels several bit-oriented protocols (BOP: HDLC, SDLC, X.25, X.75) and character-oriented protocols (COP: BISYNC, DDCMP) with CRC generation and detection and several data code formats (e.g. NRZ, NRZI, FM0, FM1, Manchester) are available.

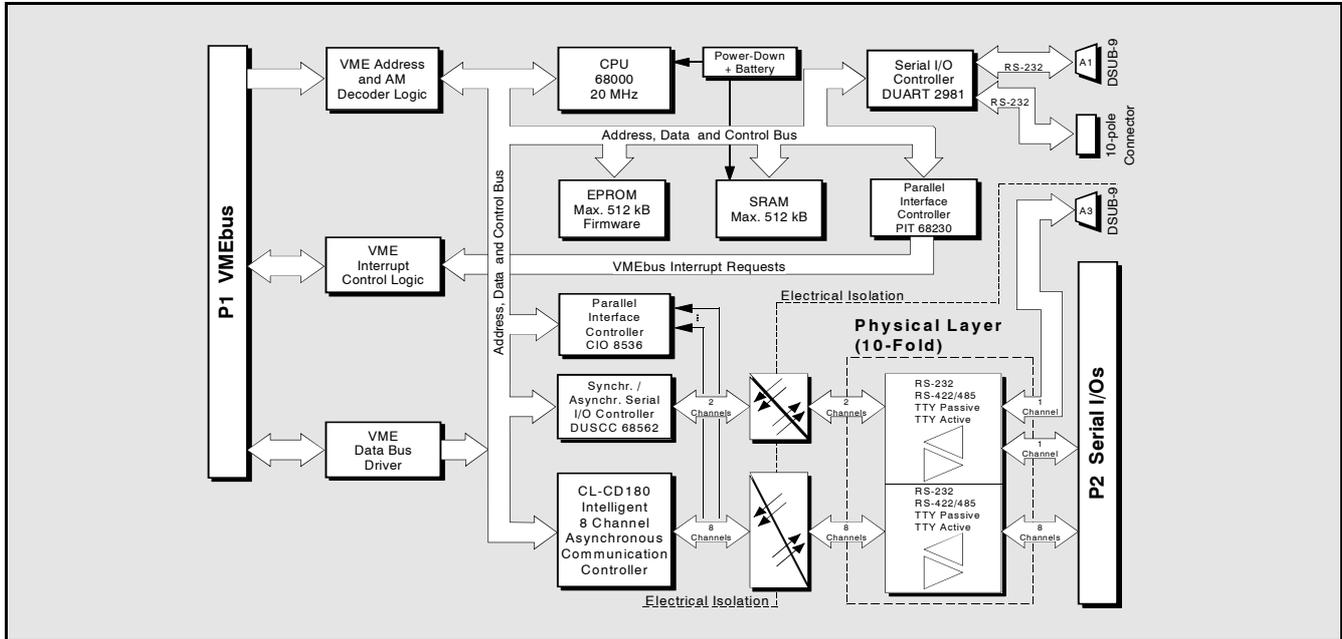
A channel-oriented shared RAM interface is included as firmware for the local CPU as well as a complete diagnostic and test software package. The shared RAM interface makes the implementation of different operating systems, e.g. OS-9, UNIX, PDOS, VxWorks, VRTX32 or RTOS-UH easy to realize. Drivers for all popular operating systems are available.

Various asynchronous data transfer protocols such as the German protocols SAE8, TWG, ZM400, SEAB, SINEC, 3964R or Multidrop are available.

(This product is not recommended for new designs.)

# VME-ISER8

## Intelligent Board for 10 Serial Interfaces



### Technical Specifications:

#### Process section:

Serial interfaces:	10 asynchronous, 2 of them synchronous serial interfaces as well
Physical layer:	RS-232, RS-422, RS-485 TTY current loop (active or passive)
Baud rate:	up to 38.4 kBaud, for 2 channels up to 115 kBd async., for 1 channel up to 1 Mbd sync.
Synchronous protocols:	BOP: HDLC, SDLC, X.25, X.75 COP: BISYNC, DDCMP
Data coding:	NRZ, NRZI, FM0, FM1, Manchester
Electrical isolation:	by fast optocouplers

#### Controller section:

CPU:	MC 68000, 20 MHz
Memory:	up to 512 kbytes battery-backed SRAM and up to 512 kbytes EPROM

#### VMEbus section:

Base address:	selectable by jumpers over the whole address range of 4 Gbytes/16 Mbytes. The board covers 1 Mbyte.
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:	SADO32, SD16

#### General:

Ambient temperature:	0...50 /C
Humidity:	max. 90%, non-condensing
Connector types:	P1: DIN 41612-C96 P2: DIN 41612-C96

#### General (continued):

Board size:	160 mm x 233 mm
VME dimensions:	6U height, 1 slot width
Weight:	620 g
Power supply:	DC to DC converter for all supply voltages ( $\pm 12$ V) of the serial interfaces
Power consumption:	P1: 2.5 A at +5 V $\pm 5\%$ max. 0.4 A at +12 VDC $\pm 5\%$ max. 0.4 A at -12 VDC $\pm 5\%$

#### Order information:

Designation		Order no.
VME-ISER8-A	Intelligent interface board with 10 serial channels with 12 V DC to DC converter, 128 kbyte SRAM, 128 kByte EEPROM	V.1402.02
VME-ISER8-B	Intelligent interface board with 10 serial channels with 5 V DC to DC converter, 128 kbyte SRAM, 128 kByte EEPROM	V.1402.04
VME-ISER-RS422	RS-422 add-on for 1 channel (max. 10 per board), for VME-ISER8-B only	X.1930.02
VME-ISER-RS485	RS-485 add-on for 1 channel (max. 10 per board), for VME-ISER8-B only	X.1930.04
VME-ISER-TTY	TTY add-on for 1 channel (max. 10 per board)	X.1930.06
VME-ISER-ADAPT	Adapter module with 9 x DSUB9 connectors, connection to P2 by 9 ribbon cables (length 1 m each)	V.1402.10
VME-ISER8-OS9	C driver for OS-9 as source code	P.1402.50
VME-ISER8-VxW	C driver for VxWorks as source code	P.1402.56