

Interface	Compatible with all OMNIBUS host products Consumes one interrupt to host
Power Requirements	TBD
Physicals	OMNIBUS mezzanine card; 2.000" X 4.600"
Digital I/O	Differential, 12 pairs RCV + 12 pairs, data rates to 10Mbaud TX TTL, 24 bits total, split in sets of 8 on three separate connectors
Async Serial	Quad UART with four RS232/RS422 drivers, data rates to 115kbaud (optional LVDS drivers to 50Mbps)
LEDs	16
Access Speed	OMNIBUS interface determined by host
Flash PROM	AT17LV01
Xilinx Debug Port	For parallel cable 3

Serial I/O - Custom Interface - Hardware Based Processing Module

The Serial I/O module is an open-platform for implementing custom digital interfaces and hardware-assisted processing between the DSP on the host board (Modular or Solomente Series DSP board) and external hardware

This card is an excellent platform for receiving/sending and processing serial digital data from/to remote analog systems, developing synchronous and asynchronous custom interfaces to special hardware, integrating hardware-assisted processing like serializing/de-serializing, data merging, time stamping, peak detection, filtering, quadrature decoding, modulation, etc.

Common applications for this module include: Remote Analog Interfaces, Serial Communication Format Conversion, Serial Data Collection/Transmission.

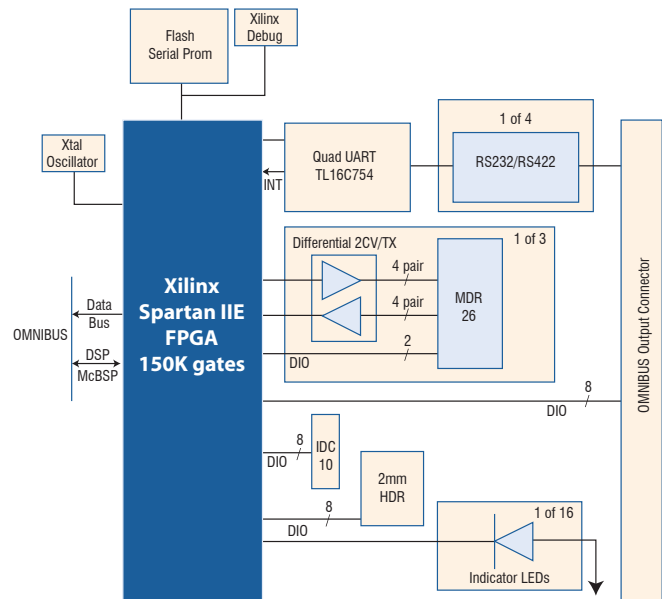
A Xilinx Spartan-IIE Field Programmable Gate Array with 150,000 gates is the heart of this board and is used by logic designers to give the board it personality. The FPGA digital I/O are presented on several ports:

- Twelve pairs of differentially-driven inputs and outputs are distributed on three high-density shielded MDR26 connectors.
- One quad UART interfaces to four software selectable RS232/RS422 drivers.
- Three sets of 8 DIO straight-out of the FPGA, presented on one IDC10 connector, one 2mm header and on the OMNIBUS output connector.

A total of (16) LED indicators serve the developer during code debugging and system integration. A flash serial PROM can store firmware to facilitate system boot-up and can be used for writing/reading user variables.

The OMNIBUS interface provides EMIF access and serial porting to one McBSP serial port of the DSP.

Firmware source code illustrating a typical external interface as well as some EMIF and McBSP data exchange with the DSP is provided with the host-board software toolset. This code is VHDL, compiled using Xilinx ISE tools. Expertise in VHDL coding is required to use this board. Contact our sales department for engineering consultation.



OMNIBUS Modules

Ordering Information

Serial I/O

80020-35