



Features

- PC/104 bus compatible and board compliant.
- Can be utilized as a PC/104 module or as a stand alone prototype, development or production circuit board.
- Configured with 4 Anadigm AN221E04 Field Programmable Analog Array (FPAA) components.
- Configured with a Xilinx 95288 In-System Programmable CPLD.
- 25 Differential or Single-ended analog inputs/outputs (16 dedicated inputs/outputs, 9 additional muxed inputs/outputs).
- 5 additional dedicated Differential or Single-ended analog outputs.
- The outputs of the 8 bit A-D converter located within each AN221E04 can be sent directly into the CPLD for digital signal processing.
- Each FPAA is completely configurable and programmable through the CPLD.
- 42 user programmable digital I/O lines.
- Programmable 0 to 33Mhz Direct Digital Synthesis (DDS) source clock for the CPLD and FPAAs.
- CPLD Global Clocks include PC/104 bus, 50Mhz on board oscillator, and the 0 to 33Mhz DDS programmable output.
- FPAA can be programmed and configured through the PC/104 bus, an on board FPGA serial PROM or directly by the AnadigmDesigner 2 software through an on board RS232 port.
- FPAAs are fully supported by the complimentary AnadigmDesigner 2 software.
- CPLD is supported by the Xilinx free ISE Webpack software.
- IEEE 1149.1 JTAG compliant input/output to the CPLD allowing the CPLD to be programmed with custom system configurations.
- 4 user defined LEDs and 4 user defined switches.
- Can be powered through the PC/104 bus or by an external DC power source.
- Available in commercial or industrial temperature.

Description

Jacyl Technology, Inc. has developed a PC/104 board based upon the Anadigm FPAA. The AXR-16 harnesses the power of the FPAA's fundamental characteristics of being a reprogrammable and reconfigurable based technology and combines it with the small form factor of the PC/104 platform. The AXR-16 features 4 Anadigm AN221E04 FPAA components, a Xilinx XC95288 CPLD, a programmable Direct Digital Synthesis (DDS) component (programmable up to 33Mhz), 25 differential or single-ended analog inputs/outputs, 5 additional dedicated differential or single-ended analog outputs and 42 user configurable digital I/O lines.

The AXR-16 features four Anadigm AN221E04 FPAAs. On the AVX-16 each FPAA can be configured to function independently of each other or can have all four of the FPAAs cascaded together.

The Xilinx XC95288 is incorporated on the AXR-16 as a central signal routing, source clock control, FPAA configuration logic interface, and PC/104 bus interface for the entire board. All configuration control lines for each Anadigm AN221E04, all clock signals, configuration control lines for the DDS and defined PC/104

data, address and bus logic signals are routed to the CPLD. The AXR-16 was designed with the Xilinx CPLD in order to allow the AXR-16 to be as versatile as possible.

The AXR-16 provides 3 separate digital clock sources for the CPLD for each of the FPAAs: a 50MHz digital clock source, the 12MHz master clock from the PC/104 bus and a programmable Direct Digital Synthesis (DDS) component. Each of the clock sources is routed through the CPLD and can be utilized in multiple combinations for each of the FPAAs.

the AXR-16 is that it has the versatility of being powered from the PC/104 bus or can be powered from an external DC source. This provides the capability the AXR-16 to be utilized as a stacked module in PC/104 applications or as a standalone product design platform allowing the AXR-16 to be an integral part of a larger embedded PC/104 stack or to be utilized as a stand alone circuit board for development platforms, design prototypes or production products.