

V3021

Dual 10GbE Connectivity and Packet Processing AMC Module with PCI Express® Fabric

Benefits

- Facilitates 10 Gigabit line-rate packet inspection and manipulation via its high-performance hardware architecture
- Increases system functionality at reduced power consumption
- Software reconfigurability facilitates multi-mission/application use of common hardware
- Enables high-speed content-aware applications that combine packet and signal processing algorithms

Features

- Single-width mid-size or full-size AdvancedMC™
- Application acceleration IP and user programmability software kits (optional)
- Two 10 Gigabit Ethernet SFP+ optical ports
- Xilinx® Virtex®-5 XC5VLX110T FPGA (up to LX330T / FX200T optional)
- Up to 2GB SDRAM and 288Mbit SRAM
- PCI Express® x4 or x8 fat pipes
- Two 1GbE ports: one dedicated fabric and one selectable fabric or front-panel
- Pigeon Point™ Systems controller

Applications

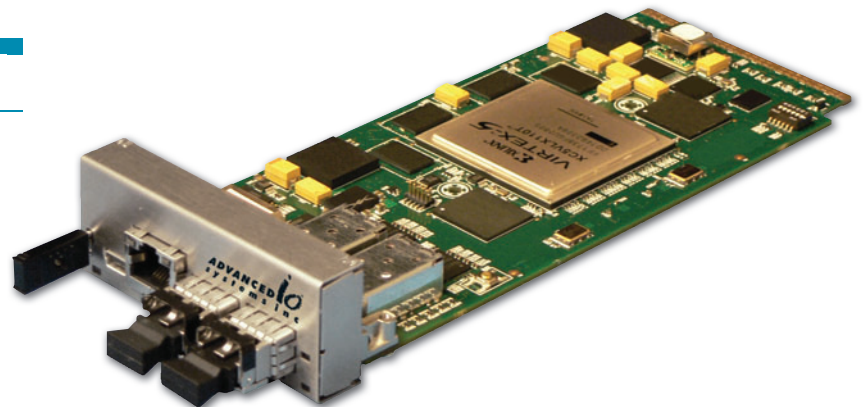
- Security
- Network Monitoring and Optimization
- Lawful Intercept

Overview

With always-on network connectivity becoming an essential part of the social and business fabric of the world's population, the infrastructure and equipment for wireless and wired networks is challenged to meet increasing bandwidth and security demands and more sophisticated service requirements. Furthermore, as recent years have demonstrated, network traffic patterns can change daily as well as over the course of months, as business and social use trends shift and evolve.

The V3021 mid-size or full-size AMC leverages AdvancedIO® Systems' proven expertise to provide 10GbE connectivity for μ TCA™ and AdvancedTCA® platforms in telecommunications, defense, and other embedded systems markets. The family is architected to be ideally suited for applications requiring wire-speed packet inspection and manipulation, which are essential functions for developing and deploying content-aware QoS and security functions. Its features include multiple independent high-speed memory buffers for implementing packet queues.

The V3021 architecture provides significant advantages for a range of broadband applications. The Xilinx® Virtex®-5 FPGA-based technology is particularly relevant to performing a combination of intelligent packet and signal processing of data streams at wirespeed, supplementing host processor or DSP performance. The V3021 is a member of AdvancedIO's V3000 family that supports the major switch fabrics for communication with the host and uses SFP+ technology to implement front-panel optical 10GbE interfaces.

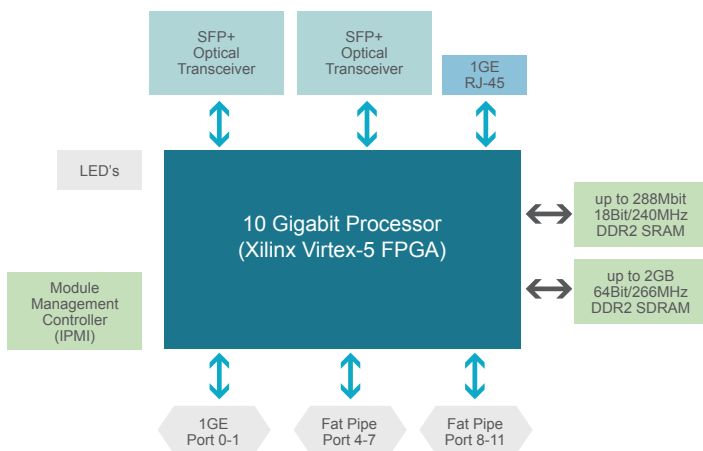


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Customization

AdvancedIO works with customers to achieve solutions that meet their connectivity and packet processing requirements, and offers consultation for FPGA application development. AdvancedIO's experienced FPGA design team can help customers design and optimize FPGA applications, saving them valuable development time and shortening the time to market of new product offerings.



> Block Diagram

Technical Specifications

PERFORMANCE

Two SFP+ optical ports supporting 10GBASE-SR (others optional)
One 10/100/1000 Base-T RJ-45 Ethernet port

PROCESSOR

Xilinx XC5VLX110T-1 FPGA (up to LX330T and FX200T, optional)

MEMORY

512MB to 2GB 64-bit/266MHz DDR2 SDRAM (1GB standard)
36Mbit to 288Mbit 18-bit/240MHz DDR2 SRAM (72Mbit standard)

FAT PIPE INTERFACE

Serial fabric interface on ports 4-7 and 8-11 supporting:
PCI Express® x4 or x8 interface
1 or 2 Gigabit Ethernet links on AMC fabric ports 0 and 1

COMPLIANCE

PICMG AMC.0 Specification R2.0
PICMG AMC.1 R1.0 Specification
PICMG MTCA.0 for MicroTCA R1.0
Intelligent Platform Management Interface V1.5
IEEE 802.3ae 2002 10GBASE LAN
Designed for:
FCC 47 CFR Part 15, Subpart B (USA)
EN 60950-1 (Europe)
RoHS 5/6

DIMENSIONS

181.5 mm x 73.5 mm single-width, mid-size (full-size optional)

TEMPERATURE

Operating: 0 to 50° C
Storage: -40 to 85° C

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