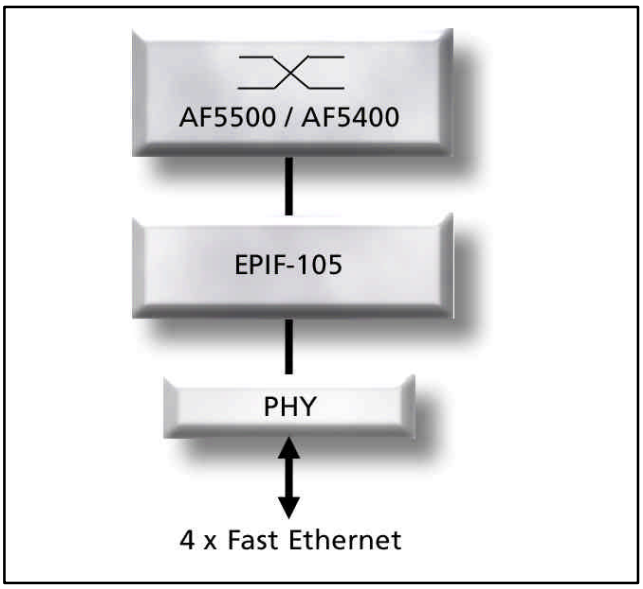
EPIF-105 PACKET PROCESSOR PRODUCT OVERVIEW

Product Description



Cost Optimized Quad Fast Ethernet packet processor

The EPIF-105 is a quad Fast Ethernet packet processor and a member of MMC Networks' industry leading AnyFlow family of Network Processors.

Processor optimized for networking applications

With its multi-tasking architecture, and special purpose processor optimized for networking applications, it provides wirespeed packet processing at gigabit rates.

Fast Ethernet interfaces

The EPIF-105 interfaces with a Quad PHY on the line side and an MMC Networks fabric on the switch side.

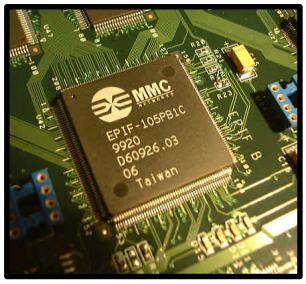
Breakthrough performance

The EPIF-105 supports wirespeed Layer 3+ packet processing, with a throughput of 600,000 packets-per-second.

Enterprise applications

The EPIF-105 is ideally suited to provide packet processing in cost sensitive wiring closet Network Equipment Vendor (NEV) products. Features and services that can be enabled by the EPIF-105 include Differentiated Services.

MMC Networks' Network Processors provide fast time to market for wirespeed features



With MMC Networks' industry proven track record and total product solution, including development systems, field-proven programmable silicon and extensive software, customers can get to market quickly with advanced features operating at wirespeed.

Proven track record

Network Processors shipping since 1995 – MMC Networks is the pioneer and market leader of the Network Processor industry. Indeed MMC Networks has productized multiple generations of Network Processor silicon.

Proven in Tier One customer applications – Existing customers of MMC Networks' Network Processors include Cisco, Lucent, Nortel, IBM, Siemens and Alcatel.

Products can ship in *less than six months* with MMC Networks' complete solution

Software – The EPIF-105 solution contains the optimum mix of MMC Networks developed and partners' software to provide a complete software suite for intelligent managed L2/L3 switches.

Support tools – MMC Networks has partnered with the leaders in the embedded software industry, Wind River Systems and Mentor Graphics, to offer a complete suite of simulation and de-bugging platforms to accelerate code development, testing and debugging, thus reducing overall system development times.

Code compatibility – MMC Networks' code is backward compatible across all packet processors, dramatically reducing new product development times.

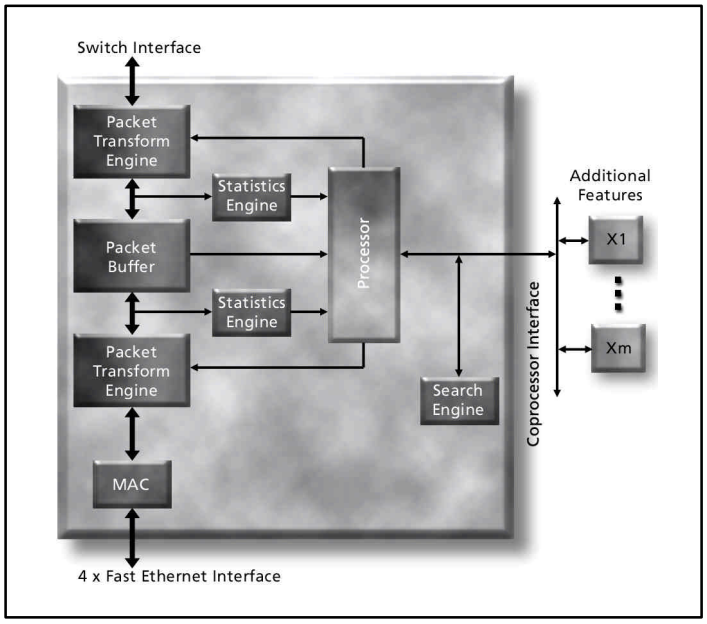
Extensive consulting services – MMC Networks' experienced system design team leverages the knowledge gained by having taken more than 60 customer designs through to production. This proactive service has significantly reduced customers' time-to-market.

Features at wirespeed

Customized processor – The EPIF-105' s special purpose multi-tasking 64-bit processor is optimized for networking applications, enabling it to perform networking features more effectively than general purpose processors.

Dedicated multi-tasked specialist modules – Multi-tasked programmable packet transform, statistics and policy-engines operate in parallel to the processor, which is then free to perform customer defined value added functions, such as DiffServ.

Integrated Search Engine - Embedded in the EPIF-105 is a programmable Search Engine that can support wirespeed Layer 2 with VLAN bridging and Layer 3 with longest prefix match routing.



Highly differentiable NEV products

Programmable engines – Software programmable special purpose processor, together with packet transform and statistics engines provide unparalleled ability for NEVs to differentiate their product offerings.

Diverse feature set – Software programmability enables advanced networking functions, such as VPNs, QoS, protocol translation, and protocol termination, over-and-above the more traditional multiprotocol routing.

Extend NEV product lifetime

Evolving standards and specifications – Software modifications can support emerging or changing industry standards and specifications, consequently extending the NEV' s product' s lifetime.

Scaleable architecture – Standardized co-processor interface allows connection to external devices such as customer specific logic or large content addressable memories.

"Mid-life kickers" – NEVs can easily and rapidly extend a product' s lifetime by adding new features through software downloads. Additionally, in legacy switches, Network Processor-enhanced line card upgrades can add a whole new feature set and extend network services from the core to the edge - end-to-end across a network.

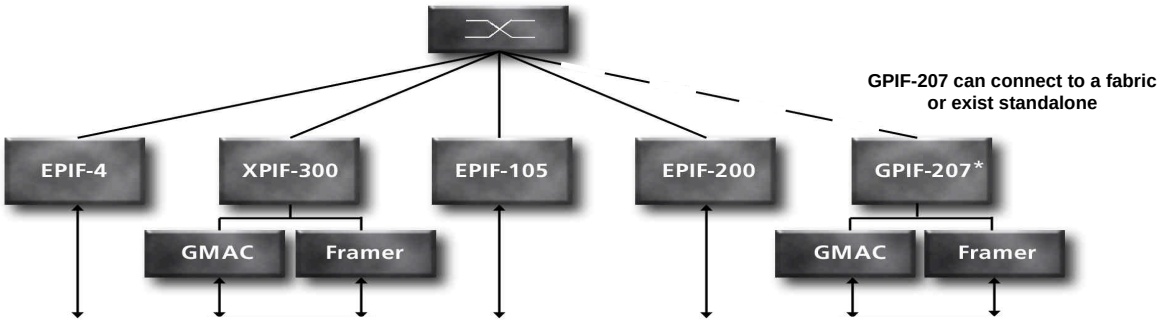
NEV investment protection

Consistent design methodology – The consistency of the Network Processors' architecture and instruction set enables OEM engineers to transfer and apply knowledge across all MMC Networks products and into a broad product range spanning diverse market segments.

Reliable next generation solutions

MMC Networks has extensive expertise and a proven track record in building Network Processors. More than thirty successful NEV products containing MMC Networks' Network Processors have been validated and thoroughly tested in real world networks. The chronology of MMC Networks' packet processors illustrates an adherence to a design methodology where-by incremental steps are taken when adding new features. Next generation products

build upon a stable and reliable foundation of working silicon. As further functions such as MACs, search machines and policy engines are integrated into the packet processors, and as the speed of the devices' cores increase, the incremental approach minimizes MMC Networks customers' time-to-market.



	EPIF-4	XPIF-300	EPIF-105	EPIF-200	GPIF-207*
Availability	3Q97	1Q99	1Q99	3Q99	4Q99
Fast Ethernet	4 Ports	—	4 Ports	4 Ports	—
Gigabit Ethernet	—	1 Port	—	—	2 Ports
PoS	—	1 Port	—	—	2 Ports
Processor	50 MHz	200 MHz	50 MHz	165 MHz	200 MHz
Statistics Engine	✓	✓	✓	✓	✓
Packet Transform Engine	✓	✓	✓	✓	✓
Search Engine	✓	—	✓	✓	—
Policy Engine	—	—	—	✓	✓

Product Features

- Quad Fast Ethernet Packet Processor
- Integrated quad 10/100 MAC
- Wire-speed Layer 3+ packet processing of 600,000 packets per second
- Multi-tasking 50 MHz processor, optimized for packet processing
- In-line multi-tasking packet manipulation engine
- Search Engine supporting wirespeed L2 with VLAN bridging and L3 with longest prefix match routing
- General purpose co-processor interface supports external multitasking search engines and custom features
- RMON statistics gathering in hardware
- 0.25µ technology
- Plastic QFP 208 pin package

MMC Networks
1134 East Arques Avenue
Sunnyvale, CA 94086

For more information, please call (408) 731 1600, or visit http://www.mmcnet.com