

Product Brief

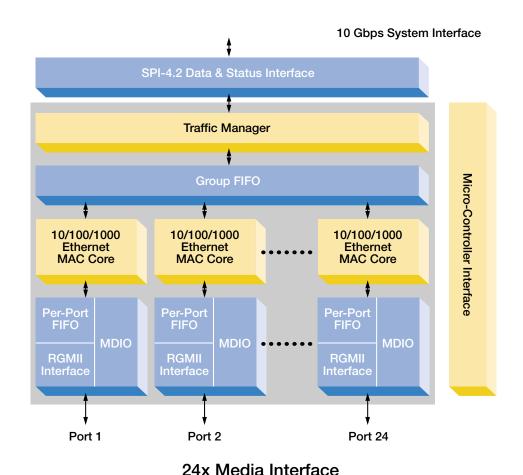
Cortina Systems® IXF1024 24-Port 10/100/1000 Mbps Ethernet Media Access Controller

Product Description

The Cortina Systems® IXF1024 24-Port 10/100/1000 Mbps Ethernet Media Access Controller (IXF1024 MAC) is a highly integrated device that allows 2:1 oversubscription, which helps lower the cost per port. A SPI-4.2 system interface allows direct connection to network processors and forwarding engines. Advanced data path management techniques are used to funnel 24 Gigabits of bandwidth across a 10 Gbps system interface. This oversubscription of bandwidth is practical as client server networks rarely utilize full bandwidth at the network edge.

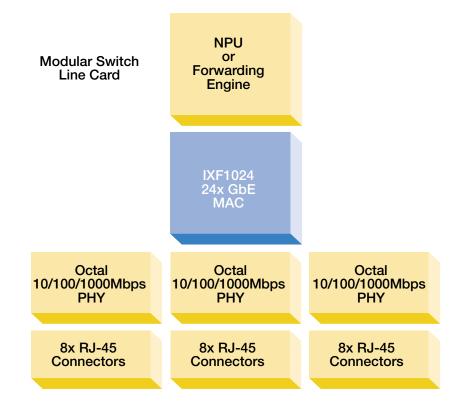
To implement oversubscription, Cortina Systems, Inc. (Cortina™) has included data path management functions such as rate limiting on a per port basis, priority queuing, IEEE 802.3* compliant flow control, and programmable packet filtering. The device provides per port traffic statistics for performance monitoring, according to RMON RFC2819.

The IXF1024 MAC is implemented in 0.13 μ CMOS technology and is packaged in a 672 Ball Grid Array (BGA) and requires two supply voltages, 1.2 V for the digital core and 2.5 V for the I/O.



IXF1024 MAC Block Diagram

Typical Application of the IXF1024 MAC



Features	Benefits
• 24-Port 10/100/1000 Mbps Ethernet MAC	 High integration allows practical implementations of 24, 48 and 96-port line cards
• 2:1 Oversubscription	 Optimizes bandwidth usage at the network edge and reduces cost per port
Advanced Data Path Management	 Enables oversubscription without switch congestion and packet loss
Automatic Flow Control per IEEE 802.3*	 Standard compliant method for flow control that reduces control processor load
 Packet Filtering and Priority Queuing 	 Allocates bandwidth to priority traffic
SPI-4.2 system side interface	 Connects directly to network processors or custom forwarding engines
Flexible CPU interface	Supports a variety of 8/16/32-bit configurations
Typical Power Consumption - 0.25 W per channel	Allows line card implementations with high port count

Key Applications

- Modular Ethernet Switching Equipment at the Network Edge
- Enterprise and Multi-service Edge Routers

Cortina in Communications

Cortina is a leading supplier of intelligent communication solutions through continuous innovations in advanced port processing and intelligent port connectivity to the Core, Metro, Access and Enterprise Market Segments. With our state-of-the-art high speed analog digital integration, we deliver a wide suite of products that address our customers'

performance, density and flexibility needs enabling faster time-to-market, longer time-in-market, and increased revenue opportunities. Working closely with our customers to understand their system requirements and anticipate their needs, we are creating the foundation ingredients for new generations of services.

 $\ensuremath{^{*}\text{Other}}$ names and brands may be claimed as the property of others.



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