



CORTINA

Product Brief

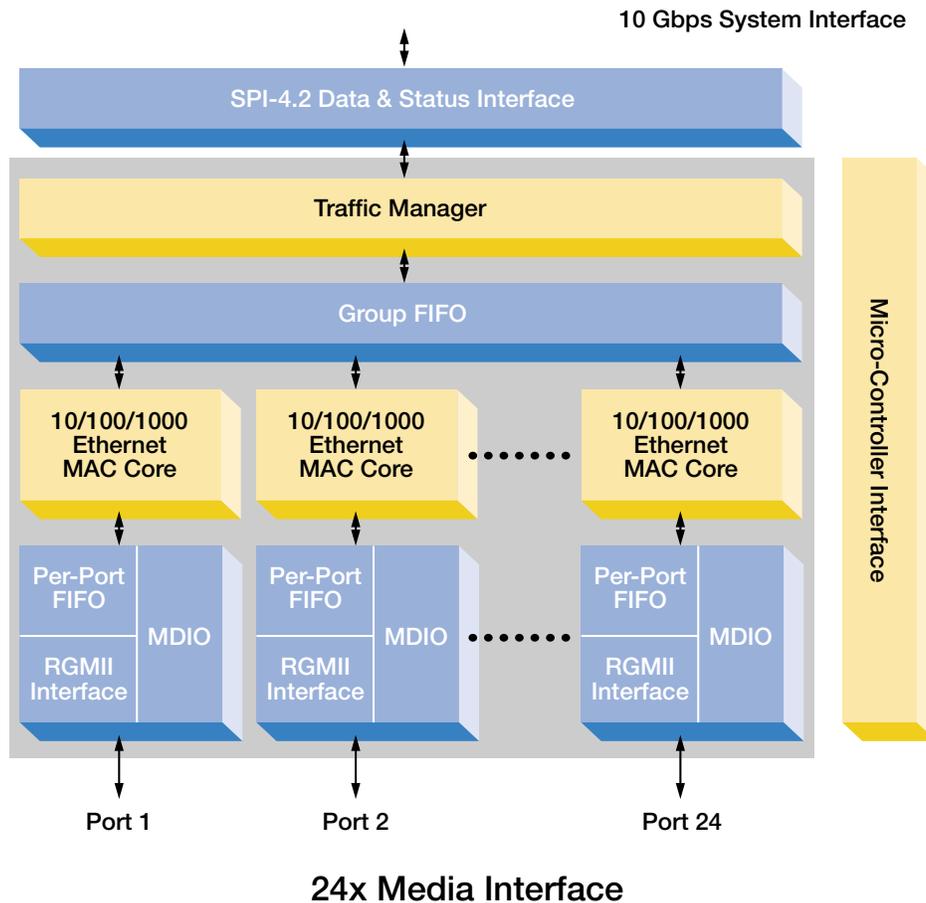
Cortina Systems® IXF1024 24-Port 10/100/1000 Mbps Ethernet Media Access Controller

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.

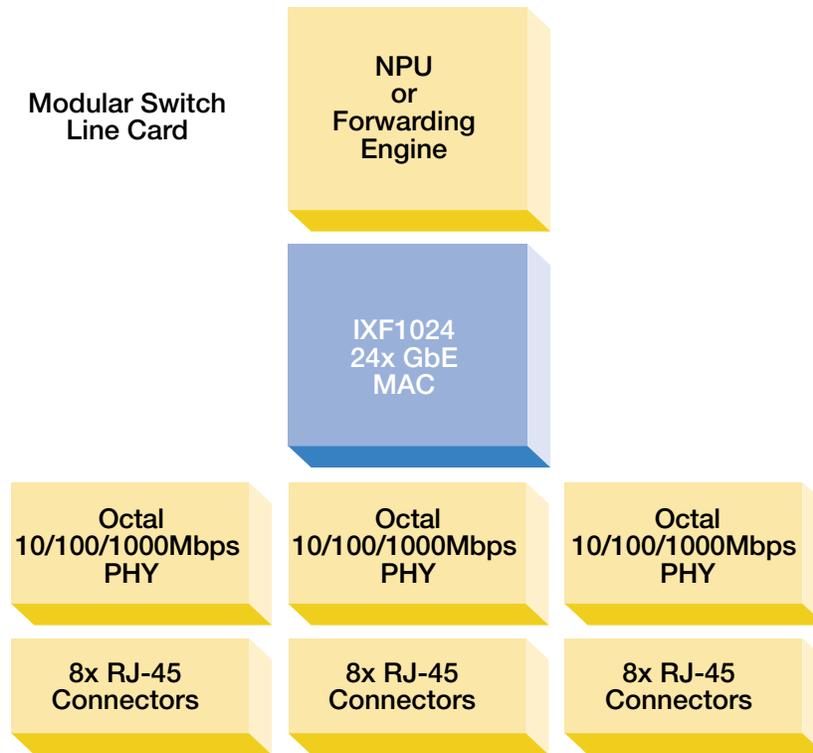
To implement oversubscription, Cortina Systems, Inc. (Cortina™) has included data path management functions such as rate limiting on a per port basis, priority queuing, IEEE 802.3* compliant flow control, and programmable packet filtering. The device provides per port traffic statistics for performance 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
<ul style="list-style-type: none"> • 24-Port 10/100/1000 Mbps Ethernet MAC 	<ul style="list-style-type: none"> • High integration allows practical implementations of 24, 48 and 96-port line cards
<ul style="list-style-type: none"> • 2:1 Oversubscription 	<ul style="list-style-type: none"> • Optimizes bandwidth usage at the network edge and reduces cost per port
<ul style="list-style-type: none"> • Advanced Data Path Management 	<ul style="list-style-type: none"> • Enables oversubscription without switch congestion and packet loss
<ul style="list-style-type: none"> • Automatic Flow Control per IEEE 802.3* 	<ul style="list-style-type: none"> • Standard compliant method for flow control that reduces control processor load
<ul style="list-style-type: none"> • Packet Filtering and Priority Queuing 	<ul style="list-style-type: none"> • Allocates bandwidth to priority traffic
<ul style="list-style-type: none"> • SPI-4.2 system side interface 	<ul style="list-style-type: none"> • Connects directly to network processors or custom forwarding engines
<ul style="list-style-type: none"> • Flexible CPU interface 	<ul style="list-style-type: none"> • Supports a variety of 8/16/32-bit configurations
<ul style="list-style-type: none"> • Typical Power Consumption - 0.25 W per channel 	<ul style="list-style-type: none"> • 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.

*Other names and brands may be claimed as the property of others.

