



**PRESTERA™**

The Marvell® Prestera™-DX family of packet processors offers new levels of integration and performance targeted at desktop Gigabit Ethernet (GbE) switches in Small-to-Medium Size Business (SMB) networks. The Prestera-DX GbE packet processors are available in 8-port (98DX81), 16-port (98DX161) and 24-port (98DX241) configurations, integrating Gigabit MACs with embedded buffer memory and integrated SERDES in each port. It is a complete System-On-Chip (SOC) solution that supports full-wire-speed switching performance with advanced Quality of Service (QoS) features including IEEE 802.1p, DiffServ and four priority levels per port. Addressing the cost-sensitive unmanaged desktop switching market, the Prestera-DX81/DX161/DX241 devices enable system vendors to design affordable, plug-and-play, high-density, small form factor standalone switches.



## BENEFITS

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Eight, sixteen and twenty-four 10/100/1000 Mbps Ethernet ports with MGII interface</li></ul>  | <ul style="list-style-type: none"><li>• Enables high-density, small form factor GbE switching solutions</li></ul>                                    |
| <ul style="list-style-type: none"><li>• 4K Media Access Control (MAC) addresses</li></ul>   | <ul style="list-style-type: none"><li>• Provides large MAC table for desktop applications</li></ul>  |
| <ul style="list-style-type: none"><li>• Integrated on-chip buffer memory and SERDES on all GbE ports</li></ul>  | <ul style="list-style-type: none"><li>• Simplifies PCB design and layout</li></ul>   |
| <ul style="list-style-type: none"><li>• Supports manual or Auto-Negotiation setting for speed, duplex and 802.3x flow control</li></ul>   | <ul style="list-style-type: none"><li>• Provides flexible and reliable control on packet transaction</li></ul>                                       |
| <ul style="list-style-type: none"><li>• Four priority queues per port</li></ul>   | <ul style="list-style-type: none"><li>• Provides differentiated level of support</li></ul>   |
| <ul style="list-style-type: none"><li>• Priority assignment per 802.1p tag, Port or DiffServ Code Point (DSCP) field</li></ul>  | <ul style="list-style-type: none"><li>• Meets QoS requirement in SMB network environment</li></ul>   |
| <ul style="list-style-type: none"><li>• Weighted round robin and strict priority</li></ul>  | <ul style="list-style-type: none"><li>• Ensure reliable transmission of high-priority traffic for delay-sensitive or critical applications</li></ul> |
| <ul style="list-style-type: none"><li>• Multicast/broadcast rate limiting</li></ul>   | <ul style="list-style-type: none"><li>• Provides network security</li></ul>  |
| <ul style="list-style-type: none"><li>• Ease-of-design<ul style="list-style-type: none"><li>– Only two voltage supplies: 1.2V and 2.5V</li><li>– Single 25 MHz external clock reference</li><li>– Built-in diagnostics: CRC checker, packet counters and pattern generator</li><li>– LED interface for ports link status and system debug</li></ul></li></ul> | <ul style="list-style-type: none"><li>• Enables unprecedented ease in PCB design, board bring-up and design debug</li></ul>                          |





## FEATURES

- Two-wire interface for EEPROM initialization
- Low power: 1.5W (98DX81), 4W (98DX161/98DX241) max.
- 128 LQFP, 20mm x 14mm (98DX81)  
480 SBGA, 31mm x 31mm (98DX161/98DX241)

## BENEFITS

- Allows for easy system configuration
- Enables low system cost
- Provides cost-effective package

## APPLICATIONS

The Prester<sup>TM</sup>-DX81/DX161/DX241 GbE packet processors deliver the optimal desktop switching solution for the SMB market. The Prester<sup>TM</sup>-DX241 device enables cost-effective, plug-and-play, high-port density standalone desktop switches, accelerating the market transition from Fast Ethernet to Gigabit Ethernet.

The Prester<sup>TM</sup>-DX family provides a complete line of GbE switching solutions. To shorten system manufacturers' design cycle and accelerate time-to-market, Marvell provides complete Prester<sup>TM</sup>-DX development platforms and reference designs with schematics and layout files.

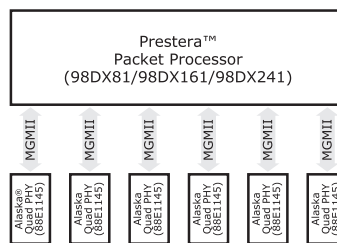


Fig 2. Prester<sup>TM</sup> GbE Unmanaged Desktop Switching Solutions (98DX81, 98DX161, 98DX241) Diagram

**THE MARVELL ADVANTAGE:** The Marvell Prester<sup>TM</sup>-DX81/DX161/DX241 GbE packet processors come with a complete set of hardware and software development tools to assist network hardware engineers with product evaluation. Marvell's worldwide field applications engineers collaborate closely with network equipment vendors to develop and deliver new competitive products to market on time. Marvell utilizes recognized world-leading semiconductor foundry and packaging services to reliably deliver high-volume and low cost total solutions.

For more information, visit our website at [www.marvell.com](http://www.marvell.com).



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98DX81/98DX161/98DX241-001 04/03