

InterPort™ RSTP / MSTP software module

The Rapid Spanning-Tree Protocol (RSTP) / Multiple Spanning Tree Protocol (MSTP) InterPort Software Module is an optimized implementation of the Spanning Tree Protocol (STP) algorithm that eliminates bridged network loops in Carrier Ethernet devices. The STP algorithm calculates the most efficient path, provides a loop free topology for any bridged Local Area Network (LAN) and prevents multiple paths between network segments.

The Kuatro RSTP / MSTP InterPort Software Module implements RSTP protocol to accelerate the spanning tree reconfiguration and restoration after changes to network topology caused by link failures. The module includes an implementation of MSTP protocol that enables VLAN-aware bridges to use multiple spanning trees thereby providing the ability for traffic belonging to different EVCs to flow over different paths within network. The implementation is conformant with the updated IEEE standards (IEEE 802d-2004 and IEEE 802.1q-2005).

features

The InterPort RSTP/MSTP Software Module includes a complete set of Application Programming Interfaces (APIs) to implement control plane components as defined by the STP, RSTP and MSTP standards (IEEE 802.1D-2004, IEEE802.1w and IEEE 802.1s) and as they have been updated by IEEE 802.1q-2005. The module supports stateless and stateful High Availability.

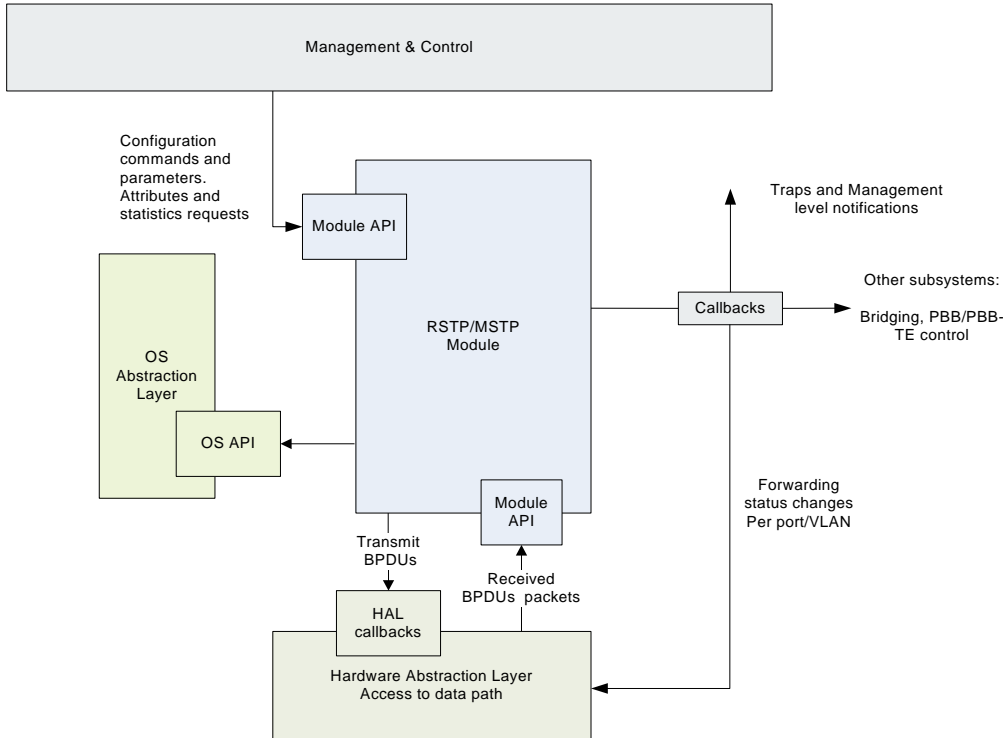
Feature	InterPort™ RSTP/MSTP Software
Complete implementation of Rapid Spanning Tree Protocol	Yes
Complete implementation of Multiple Spanning Tree Protocol	Yes
Configurable number of instances (MSTIs)	Yes
MST region and boundary detection	Yes
On demand backward compatible operations in Rapid Spanning Tree Mode and Spanning Tree Protocol	Yes
Supports fast reconfiguration of edge ports	Yes
Supports protocol migration and per port protocol detection	Yes
Easy extensions for rapid ring protection	Yes
Stateless High Availability	Yes
Stateful High Availability	Yes

benefits

- > Up to 50% time to market reduction
- > 25 to 35% savings in development costs
- > Pre-tested software modules minimize project risks
- > Integrated solution delivery by Kuatro's R&D design services
- > Portable to any OS and hardware platform
- > Accelerates failure recovery

architecture

InterPort RSTP/MSTP software module has well defined interfaces including OS abstraction APIs, Hardware Abstraction Layer (HAL) callbacks and APIs to management and control layer software. These APIs enable portability to various platforms using different operating systems and different data plane designs whether FPGA, network processor, Ethernet silicon or virtual platform based.



supported standards

- > STP (IEEE 802.1D - 1998),
- > RSTP (IEEE 802.1w and IEEE 802.1d-2004)
- > MSTP (IEEE 802.1s and IEEE 802.1q-2005)
- > Attributes as per RFC4188, RFC4318 and IEEE 802.1ap standard MIBs

deliverables

- > Source code in C
- > Programmer's Reference Guide
- > Porting Guide and Release Notes



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