VSC7372

VITESSE

HawX-G16™ – 16-Port 10/100/1000 Managed L2 Ethernet Switch

APPLICATIONS:

▸ Desktop Switch

▸ Workgroup Switch

▸ Control-plane Controller Hubs

▸ FTTH and Broadband Aggregation

▸ Backplane Controller Hubs

▸ AdvancedTCA

SPECIFICATIONS:

▸ 0.13um CMOS Technology

▸ 1.2V Core Power Supply

▸ 1.8 V/2.5 V and 2.5V/3.3V Interface Power Supplies

▸ 31 mm x 31 mm 896-ball TEPBGA Package

▸ 4.5 W Typical

FEATURES:	BENEFITS:
▸ 16 GbE Ports with Nonblocking Wire-speed Performance	▸ Ensures Maximum Data Throughput on even Highly Loaded Networks
▸ Triple-speed 10/100/1000 Mbps Operations with SGMII/SerDes Interfaces	▸ Significantly Simplifies PCB Layout and Supports Backplane Architectures
▸ 416KB On-chip Frame Buffer	▸ Eliminates the Need for External Buffer Memory
▸ Jumbo Frame Support	▸ Connects Effortlessly to Networks, Hosts, and Controllers that Utilize up to 12K Sized Jumbo Frames
▸ 8K MAC Addresses and 4K VLANs (IEEE Std 802.1Q)	▸ Stores a Large Amount of Stations a Wire-speed in the On-chip MAC Table, Ensuring Optimal Network Performance
▸ Selection Between External 8/16/32-bit CPU or On-chip 8051 CPU	▸ Enables Advanced Switch Management
▸ Programmable L2-L4 Classifier for QoS, Including IEEE Std 802.1p and DSCP (IPv4/IPv6) with 8 Classes of Service	▸ Prioritizes Traffic by Classifying into Multiple Clases of Service
▸ Per Queue and Port Shaping and Policing with CIR and PIR Policies	▸ Enforces Policies to Control Bandwidth Distribution
▸ Strict and Weighted Queuing with Guaranteed Minimum Bandwidth Allocation	▸ Provides Enhanced Traffic Control and Improved QoS
▸ Multicast and Broadcast Storm Control	▸ Eliminates Unwanted Flooding of Ports
▸ Port Based Access Control (IEEE Std 802.1X)	▸ Enables Extra Network Security and Database Controlled Network Access
▸ Full Duplex Flow Control (IEEE Std 802.3x) and Half Duplex Back Pressure	▸ Ensures Loss-less Data Transmission while Supporting Existing Legacy Ethernet Equipment
▸ Flexible Link Aggregation Compliant to IEEE Std 802.3ad	▸ Provdes High Bandwidth Uplinking Capabilities
▸ Multiple Protocol Support: IEEE Std 802.1D, IEEE Std 802.1w, IEEE Std 802.1s	▸ Supports Complex NetworkTopologies with Fast Failure and Recovery

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GENERAL DESCRIPTION:

The VSC7372 is a highly integrated, single chip Ethernet switch with 16 nonblocking 10/100/1000 ports. As part of Vitesse's HawX family of switches, the HawX-G16 enables intelligent local area network (LAN) switching solutions focused on quality of service (QoS), network security, and management to maximize network performance, utilization, and efficiency. With its sophisticated management feature set, the HawX family can be used for a variety of metropolitan area network solutions and control plane applications, in addition to desktop and workgroup switches.
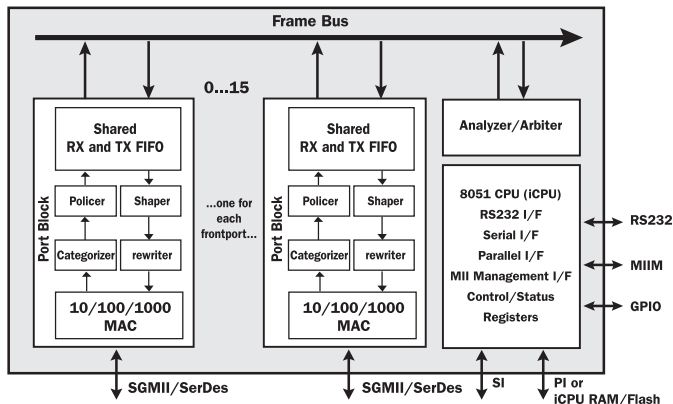
Managed LAN switches using the HawX-G16 can be used to easily upgrade enterprise networks, providing GbE to the desktop utilizing the existing cable infrastructure. Overall, network performance can be increased with minimal IT spending.

HawX-G16 supports 16 ports of triple-speed 10/100/1000Mbps SGMII/SerDes interfaces, wire-speed performance, and on-chip memory. Features include jumbo frame support, link aggregation, flow control, spanning tree, and port-based access control. All the HawX switches provide unparalleled QoS features necessary for building cost-effective layer 2 managed switch solutions. Key QoS benefits include programmable multi-layer classification with 8 priorities, minimum guaranteed bandwidth allocation, per queue shaping and policing with Committed Info Rate (CIR) and Peak Info Rate (PIR) policies, and Differentiated Services Code Point (DSCP) remarking.

The VSC7372 includes an extensive suite of software solutions, development tools, and technical support. Software API and SDK solutions are available and nearly 100% compatible to all other Vitesse Ethernet switches. Vitesse reference designs, coupled with the API and SDK solutions, enable vendors developing their own hardware and software systems to begin design immediately. For customers wanting simpler development, turnkey software solutions are available through 3rd party vendors.

BLOCK DIAGRAM:

For more information on Vitesse Products visit the Vitesse web site at www.vitesse.com or contact Vitesse Sales at (800) VITESSE or sales@vitesse.com

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