

Ready-to-Plug SONiC Switch

E.C.I. NETWORKS' Ready-to-Plug SONiC Switches provide a comprehensive, hassle-free solution for businesses aiming to establish their network infrastructure using open hardware switches and the Microsoft SONiC open-source NOS (Network Operating System). Pre-loaded with the SONiC Distribution by Broadcom and backed by maintenance and support services, these switches empower businesses to efficiently construct, operate, and manage their networks.



Key Features

- High-performance hardware for advanced networking including AI needs.
- Open hardware: Our switches are built using open hardware platforms.
- Speed and feed options: Our switches support a range of speed and feed options, including 1G, 10G, 40G, 100G, 400G and 800G, making them suitable for networks of all sizes.
- Ready to Plug switches are preloaded with the Broadcom SONiC Enterprise Base package.
- The Enterprise Base Package comprises the following essential components:
 - Underlay features (RoCEv2, eBGP, ZTP, programmatic API, QoS, ACL)
 - Overlay features (BGP EVPN, VXLAN)
 - Enterprise Features (RPVST+, IP Multicast/IGMP)
 - Base telemetry features: Thresholds and Snapshots (BST)
- Other packages are available upon request.
 - Enterprise Advanced Package:
 - Includes all features in Enterprise Base
 - Inband Flow Analyzer (IFA, version 2.0), Tail Stamping, Drop Monitor
 - Linux PTP (KNETSync)
 - Broadcom Debug Tool
 - Cloud Base Package:
 - Features/functionality (e.g., eBGP, ZTP, programmatic API, QoS,

- ACL, TACACS+)
 - Base telemetry features: Thresholds and Snapshots (BST)
- Cloud Advanced Package:
 - Includes all features in Cloud Base
 - Inband Flow Analyzer (IFA, version 2.0), Tail Stamping, and Drop Monitor
 - Linux PTP (KNETSync)
- Campus Package:
 - Includes L2/L3 features
 - Additional features:
 - POE, POE+, POE-bt
 - Port Access Control (IEEE 802.1X, MAB, dynamic ACLs, RADIUS-assigned VLANs, RADIUS support)
 - LLDP-MED
 - Port Security
 - Digital Optical Monitoring and Time Domain Reflectometry
 - EVPN VXLAN
- **NEW AI Package**
 - Supported Platforms
 - Tomahawk 4 & Tomahawk 5 only (see Supported Platforms mapping).
 - Enabled by Default
 - RoCEv2 (PFC, ECN)
 - QPN-based ECMP hashing
 - ECMP enhancements (flexible keys, algorithm selection)
 - L3 VXLAN on TH5
 - Dynamic Load Balancing (DLB) on TH4 & TH5

Applications

Ready-to-Plug SONiC Switches offer various hardware options:

- Data Center Switch: Engineered for large-scale deployments, featuring 32-64x 40G/100G/400G Ethernet ports. Ideal for Leaf/Tor/Spine/Superspines applications.
- Campus Switch: Versatile for campus and enterprise networks, with 48x 1G/2.5G/10G ports and PoE, supporting up to 6x 40G/100G uplinks.
- Management Switch: Compact and cost-effective, featuring 48x 1G Ethernet ports and up to 6x 10G/25G/100G uplinks.

Benefits of Adopting and adapting SONiC



adopting and adapting SONiC as a network operating system offers businesses various benefits such as flexibility, scalability, cost-effectiveness, and reliability.

- **Openness:** SONiC is open-source, allowing businesses to customize their network infrastructure without being locked into proprietary solutions.
- **Flexibility:** SONiC is hardware-agnostic, enabling businesses to choose the hardware that best fits their needs without vendor restrictions.
- **Scalability:** SONiC is highly scalable, suitable for networks of all sizes, with support for various hardware options and port densities.
- **Reliability:** Built on a stable codebase, SONiC has been extensively tested in real-world environments.
- **Security:** SONiC includes built-in security features like MACsec for network protection against unauthorized access and data breaches.
- **Cost Savings:** Businesses can save up to 40% over five years with SONiC due to lower hardware costs, licensing fees, and maintenance expenses.

Customer use cases included.

- Data Center L3 CLOS (underlay) use case.
- Network Fabric Underlay for VMware Deployments (NSX, ESX, vSAN).
- Multi-Tenancy with VXLAN EVPN.
- Data Center Interconnect (DCI) with three distinct use cases:
 - MultiPod: Enables VXLAN tunnels stretched across multiple PODs.
 - Multi-Fabric: VXLAN tunnels terminated locally in each pod.
 - Multi-Site: Provides a scalable and controlled way of stretching L2/L3 services across DCI.
- IP Storage Networking in Converged Fabric (RoCEv2).
- Campus Use case with Access/Aggregation:
 - Power over Ethernet (PoE, PoE+, PoE-bt 802.3bt) and LLDP-MED supporting IP Phones, APs, CCTV, IoT devices.
 - Integration with Cisco ISE, Aruba Clearpass, and Free Radius.
- **AI/ML Fabric Optimization**
 - Bundled with Broadcom's AI package
 - RoCEv2-Optimized, Lossless Fabric
 - Default PFC (Priority Flow Control) and ECN for zero-loss RDMA.
 - ToS over VXLAN for maximal GPU-to-storage throughput.
 - Traffic Steering & Low Latency
 - Cut-through switching on TH5 (and TH3/TH4/TD3-X7/TD4-X11) for minimal per-hop delay.
 - Dynamic Load Balancing (DLB) steering flows away from congestion.
 - Advanced ECMP Enhancements
 - QPN-based hashing and flexible key selection (port, QPN, custom

- offsets).
- Algorithm selection beyond traditional CRC for uniform path utilization.
 - L3 VXLAN & AI-Only Package
 - L3 VXLAN on TH5 and DLB on TH4/TH5 enabled by default.
 - Lean AI package excludes unused L2 features (STP, IGMP, MC-LAG, NAT, DHCP).
 - Scalable to Trillion-Parameter Models
 - 100G–800G leaf, spine, and super-spine models support clusters of hundreds to thousands of GPUs and NVMe devices.
 - Plug-and-Play Transceivers & Cables
 - OEM-validated optics, DAC/AOC/ACC assemblies fully compatible with NVIDIA and other AI accelerators.

Maintenance and Support Included

Ready-to-Plug SONiC Switches come bundled with a minimum of 3-year standard maintenance and support services, including:

1. Technical support: Access to experienced network engineers for issue resolution.
2. Level 3 support by Broadcom
3. Software updates and patches: Ensuring switches are always secure and up to date.
4. Hardware warranty: Protection against defects or malfunctions.
5. Optional 24x7 premium support services are available.

Ordering Information

Ready-To-Plug Switch Kits

Part Number	Sales Description
SONiC400-3Y-AC-F-US	Ready to Plug SONiC switch 400G Kit contains a 32x400G ports Switch with SONiC+ version pre-installed, F2B, AC PSU + SONiC 400G Maintenance & Support-3 Year (per switch)
SONiC400-3Y-DC-F-US	Ready to Plug SONiC switch 400G Kit contains a 32x400G ports Switch with BROADCOM SONiC version pre-installed, F2B, DC PSU + SONiC 400G Maintenance & Support-3 Year (per switch)
SONiC100-3Y-AC-F-US	Ready to Plug SONiC switch 100G Kit contains a 32x100G ports Switch with BROADCOM SONiC version pre-installed, F2B, AC PSU + SONiC 40G/100G Maintenance & Support-3 Year (per switch)
SONiC100-3Y-DC-F-US	Ready to Plug SONiC switch 100G Kit contains a 32x100G ports Switch with BROADCOM SONiC version pre-installed, F2B, DC PSU + SONiC 40G/100G Maintenance & Support-3 Year (per switch)
SONiC25-3Y-AC-F-US	Ready to Plug SONiC switch 25G Kit contains a 48x10G/25G SFP28 +8x100G QSFP28 ports Switch with BROADCOM SONiC version pre-installed, F2B, AC PSU + SONiC 25G Maintenance & Support-3 Year (per switch)
SONiC25-3Y-DC-F-US	Ready to Plug SONiC switch 25G Kit contains a 48x10G/25G SFP28 +8x100G QSFP28 ports Switch with BROADCOM SONiC version pre-installed, F2B, DC PSU + SONiC 25G Maintenance & Support-3 Year (per switch)
SONiC1-3Y-AC-F-US	Ready to Plug SONiC switch 1G Kit contains a 48x1G Copper+4x10G SFP+ Switch with BROADCOM SONiC version pre-installed, F2B, AC PSU + SONiC 1G Maintenance & Support-3 Year (per switch)
SONiC1-3Y-DC-F-US	Ready to Plug SONiC switch 1G Kit contains a 48x1G Copper+4x10G SFP+ Switch with BROADCOM SONiC version pre-installed, F2B, DC PSU + SONiC 1G Maintenance & Support-3 Year (per switch)

SONiC support services only

Part Number	Description
EN-BRSONIC-1G-L3-3Y	Broadcom SONiC (standard package) Support & Maintenance Level 3 Only 1G-3 Year
EN-BRSONIC-1G-8x5-3Y	Broadcom SONiC (standard package) Support & Maintenance 1G- standard 8x5, 3 Year
EN-BRSONIC-1G-24x7-3Y	Broadcom SONiC (standard package) Support & Maintenance 1G- Premium 24x7, 3 Year

EN-BRSONIC-10G-L3-3Y	Broadcom SONiC (standard package) Support & Maintenance Level 3 Only 10G-3 Year
EN-BRSONIC-10G-8x5-3Y	Broadcom SONiC (standard package) Support & Maintenance 10G- standard 8x5, 3 Year
EN-BRSONIC-10G-24x7-3Y	Broadcom SONiC (standard package) Support & Maintenance 10G- Premium 24x7, 3 Year
EN-BRSONIC-25-L3-3Y	Broadcom SONiC (standard package) Support & Maintenance Level 3 Only 25G-3 Year
EN-BRSONIC-25-8x5-3Y	Broadcom SONiC (standard package) Support & Maintenance 25G- standard 8x5, 3 Year
EN-BRSONIC-25-24x7-3Y	Broadcom SONiC (standard package) Support & Maintenance 25G- Premium 24x7, 3 Year
EN-BRSONIC-100-L3-3Y	Broadcom SONiC (standard package) Support & Maintenance Level 3 Only 100G-3 Year
EN-BRSONIC-100-8x5-3Y	Broadcom SONiC (standard package) Support & Maintenance 100G- standard 8x5, 3 Year
EN-BRSONIC-100-24x7-3Y	Broadcom SONiC (standard package) Support & Maintenance 100G- Premium 24x7, 3 Year
EN-BRSONIC-400-L3-3Y	Broadcom SONiC (standard package) Support & Maintenance Level 3 Only 400G-3 Year
EN-BRSONIC-400-8x5-3Y	Broadcom SONiC (standard package) Support & Maintenance 400G- standard 8x5, 3 Year
EN-BRSONIC-400-24x7-3Y	Broadcom SONiC (standard package) Support & Maintenance 400G- Premium 24x7, 3 Year