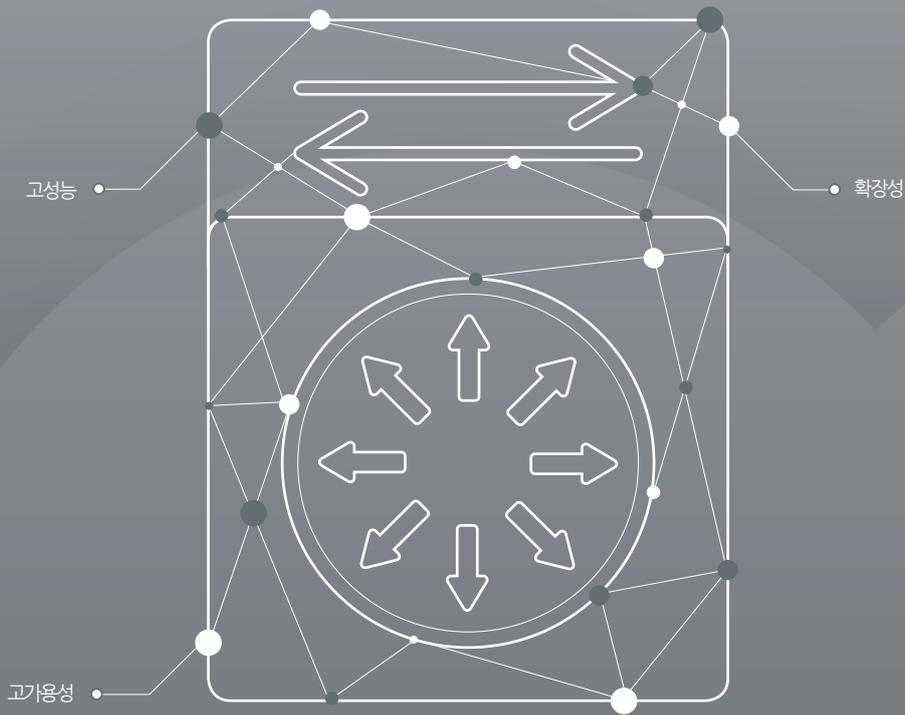


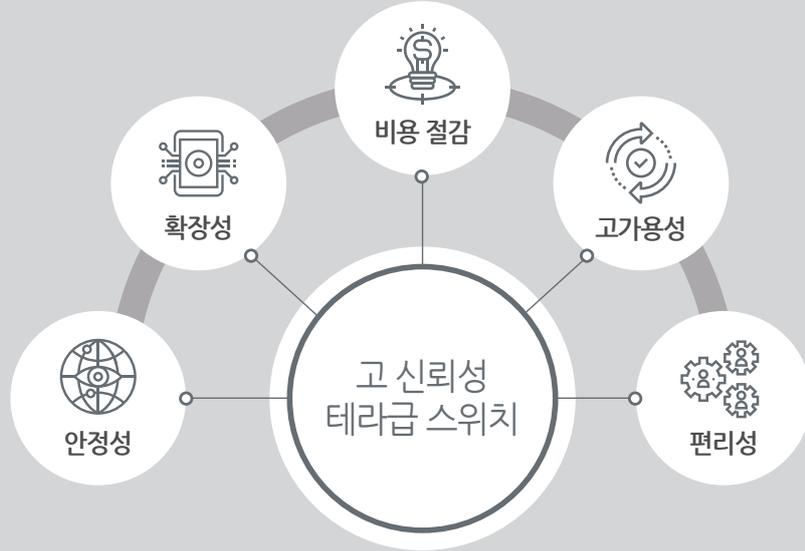
# TiFRONT

백본스위치



# TiFRONT 백본스위치

안정적인 무중단 네트워크 서비스를 제공합니다.



백본스witch는 네트워크 구성의 중추적인 역할을 합니다. 방화벽, 워크 그룹 스위치, 서버 등과 연결해 대용량 트래픽을 처리해야 하기 때문에 대용량, 고성능, 고가용성, 확장성이 필수적입니다.

파이오링크 백본스witch는 테라비트 스위칭 용량으로 데이터 센터, 대학, 기업에서 급증하는 코어 망의 트래픽을 안정적으로 처리합니다.

## BS9700 시리즈



BS9706



BS9710

## BS9600 시리즈



BS9609



BS9613

**BS9700** 시리즈는 3테라비트 캐리어급 코어스위치입니다. VPN, 네트워크 보안, 플로우 분석, 가상화, 고가용성, 루프 보호 등 신뢰할 수 있는 기술을 통해 서비스 운영을 보장합니다. 특히 가상 스위칭 시스템(Virtual Switching System)을 지원하여 독립된 물리 장비만큼 우수한 성능과 신뢰성, 유연성, 그리고 관리 편의성을 제공합니다.

TIFRONT	BS9706	BS9710
<b>Interface</b>	<ul style="list-style-type: none"> <li>• Line cards : 6 EA</li> <li>• Service Line Cards : 4 EA                             <ul style="list-style-type: none"> <li>- Max. 192 x 1GbE ports</li> <li>- Max. 48 x 10GbE ports</li> </ul> </li> <li>• 2 EA Power Supply Unit slot</li> </ul>	<ul style="list-style-type: none"> <li>• Line cards : 10EA</li> <li>• Service Line Cards : 8EA                             <ul style="list-style-type: none"> <li>- Max. 384 x 1GbE ports</li> <li>- Max. 96 x 10GbE ports</li> </ul> </li> <li>• 2 EA Power Supply Unit slot</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>• 512 MB Main Memory</li> <li>• 64 MB Flash Memory</li> </ul>	<ul style="list-style-type: none"> <li>• 512 MB Main Memory</li> <li>• 64 MB Flash Memory</li> </ul>
<b>Dimension (WxDxH, mm)</b>	<ul style="list-style-type: none"> <li>• 19" Rack Mount Type</li> <li>• 482 x 548 x 399, 9U</li> </ul>	<ul style="list-style-type: none"> <li>• 19" Rack Mount Type</li> <li>• 482 x 548 x 533, 12U</li> </ul>
<b>Weight (empty chassis)</b>	<ul style="list-style-type: none"> <li>• 26 Kg</li> </ul>	<ul style="list-style-type: none"> <li>• 30.5 Kg</li> </ul>
<b>Power Input</b>	<ul style="list-style-type: none"> <li>• AC 100~240V, 50 / 60Hz ±10%</li> </ul>	<ul style="list-style-type: none"> <li>• AC 100~240V, 50 / 60Hz ±10%</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>• Max. 601 W</li> </ul>	<ul style="list-style-type: none"> <li>• Max. 987 W</li> </ul>
<b>Switch Fabric</b>	<ul style="list-style-type: none"> <li>• 3 Tbps non-blocking</li> </ul>	<ul style="list-style-type: none"> <li>• 3 Tbps non-blocking</li> </ul>
<b>Forwarding Rate</b>	<ul style="list-style-type: none"> <li>• 720 Mpps</li> </ul>	<ul style="list-style-type: none"> <li>• 1440 Mpps</li> </ul>
<b>Routing Entries</b>	<ul style="list-style-type: none"> <li>• Up to 192 K</li> </ul>	<ul style="list-style-type: none"> <li>• Up to 192 K</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Operating temperature/humidity: 0°C~50°C/10%-90%</li> </ul>	<ul style="list-style-type: none"> <li>• Operating temperature/humidity: 0°C~50°C/10%-90%</li> </ul>

**공통기능**

<b>Mac Address</b>	<ul style="list-style-type: none"> <li>• Dynamic learning &amp; static entry</li> <li>• Check &amp; clear MAC address</li> <li>• Aging time</li> <li>• Limit on the number of MAC address learning</li> <li>• MAC address filtering</li> <li>• Black-hole MAC address</li> <li>• Up to 128K MAC management</li> </ul>	<b>MPLS</b>	<ul style="list-style-type: none"> <li>• LDP protocol</li> <li>• Multi-VRF(VRF-Lite)</li> <li>• P/PE of MPLS VPN</li> <li>• MPLS Traffic Engineering (TE)</li> <li>• MPLS Operations, Administration, and Maintenance (OAM)</li> </ul>
<b>VLAN</b>	<ul style="list-style-type: none"> <li>• 4K VLAN entries</li> <li>• GVRP</li> <li>• 1:1 &amp; N:1 VLAN mapping</li> <li>• Basic QinQ &amp; selective QinQ</li> <li>• Private VLAN</li> </ul>	<b>QoS</b>	<ul style="list-style-type: none"> <li>• Traffic classification of each field of L2/L3/L4 protocol headers</li> <li>• CAR traffic control</li> <li>• 802.1P/DSCP priority remark</li> <li>• Multiple queuing algorithms such as SP</li> <li>• WRR or SP+WRR Tail-Drop</li> <li>• WRED, Traffic supervision and traffic shaping</li> </ul>
<b>Spanning-Tree Protocol</b>	<ul style="list-style-type: none"> <li>• 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP), PVST</li> <li>• BPDU guard, Root guard, loop guard</li> <li>• Backbonefast, uplinkfast &amp; Portfast</li> </ul>	<b>Security features</b>	<ul style="list-style-type: none"> <li>• Identification and filtering of L2/L3/L4 based ACL</li> <li>• Defend against DOS or TCP attacks</li> <li>• Suppression of broadcast, multicast and unknown unicast packet</li> <li>• Port isolation</li> <li>• Port security, IP+MAC+port binding</li> <li>• DHCP Snooping, DHCP Option 82 IEEE 802.1x authentication</li> <li>• Radius and Tacacs+ authentication</li> <li>• uRPF</li> <li>• Command line authority control based on user levels</li> </ul>
<b>Multicast</b>	<ul style="list-style-type: none"> <li>• IGMP v1/v2/v3</li> <li>• IGMP Snooping</li> <li>• IGMP Fast Leave</li> <li>• Multicast group policy &amp; multicast number limit</li> <li>• Multicast traffic duplication across VLAN</li> <li>• PIM-SM and PIM-DM</li> </ul>	<b>Reliability</b>	<ul style="list-style-type: none"> <li>• Master Control Redundancy</li> <li>• Power 1+1 backup</li> <li>• Master control, service card hot swap and service automatic recovery</li> <li>• Static/LACP link aggregation and cross service card link aggregation</li> <li>• Ring network protection including EAPS Reliability</li> <li>• VRRP</li> <li>• Ethernet OAM 802.3ah/802.1ag/ITU-Y.1731 GR for OSPF and BGP</li> <li>• BFD for OSPF and BGP</li> </ul>
<b>Routing</b>	<ul style="list-style-type: none"> <li>• Static routing, RIP v1/v2, OSPF and BGP</li> <li>• Policy routing</li> <li>• Load balance through equal-cost routing</li> <li>• Graceful Restart of OSPF and BGP</li> <li>• BFD for OSPF and BGP</li> <li>• ICMPv6, DHCPv6, ACLv6, IPv6 Telnet</li> <li>• IPv6 Neighbor Discovery</li> <li>• Path MTU Discovery</li> <li>• MLD and MLD Snooping</li> <li>• IPv6 static routing, RIPv6, OSPFv3 and BGP4</li> <li>• Manual tunnel, ISATAP tunnel and 6-to-4 tunnel</li> </ul>	<b>Management and Maintenance</b>	<ul style="list-style-type: none"> <li>• Console, Telnet and SSH</li> <li>• SNMP v1/v2/v3</li> <li>• Upload and download of TFTP files</li> <li>• Remote Network Monitoring (RMON)</li> <li>• Statistics analysis of sFLOW, Netflow</li> </ul>

**BS9600** 시리즈는 2.4 및 4테라비트, 대용량 버퍼, 100만 회선 라우팅 기능을 제공하는 고가용성 백본스위치로서 대용량 트래픽이 발생하는 데이터센터, 대학, 엔터프라이즈 망에 적합합니다.

또한 동일 시리즈 내에서 라인 카드 및 운영체제 소프트웨어를 혼용할 수 있어 확장성을 높이고, 저전력 설계로 운용 비용을 낮춰줍니다.

TIFRONT	BS9609	BS9613
Interface	<ul style="list-style-type: none"> <li>Line Cards : 9EA                             <ul style="list-style-type: none"> <li>- 2 EA Processor Fabric Cards</li> <li>- 1 EA Fabric Card</li> </ul> </li> <li>Service Line Cards : 6EA                             <ul style="list-style-type: none"> <li>- Max. 288 x 1GbE ports</li> <li>- Max. 120 x 10GbE ports</li> <li>- Max. 12 x 100GbE ports</li> </ul> </li> <li>4 EA Power Supply Unit Slots</li> </ul>	<ul style="list-style-type: none"> <li>Line Cards : 13EA                             <ul style="list-style-type: none"> <li>- 2 EA Processor Fabric Cards</li> <li>- 1 EA Fabric Card</li> </ul> </li> <li>Service Line Cards : 10EA                             <ul style="list-style-type: none"> <li>- Max. 480 x 1GbE ports</li> <li>- Max. 200 x 10GbE ports</li> <li>- Max. 20 x 100GbE ports</li> </ul> </li> <li>4 EA Power Supply Unit Slots</li> </ul>
Memory	<ul style="list-style-type: none"> <li>16 GB Main Memory</li> <li>2 GB Nand Flash Memory</li> <li>16 MB for Boot</li> </ul>	<ul style="list-style-type: none"> <li>16 GB Main Memory</li> <li>2 GB Nand Flash Memory</li> <li>16 MB for Boot</li> </ul>
Dimension (W×D×H, mm)	<ul style="list-style-type: none"> <li>19" Rack Mount Type</li> <li>440 x 567 x 532</li> </ul>	<ul style="list-style-type: none"> <li>19" Rack Mount Type</li> <li>440 x 567 x 885</li> </ul>
Power Input	<ul style="list-style-type: none"> <li>DC +24V/-48V (N+1, N+N 이중화 지원)</li> </ul>	<ul style="list-style-type: none"> <li>DC +24V/-48V (N+1, N+N 이중화 지원)</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>Max. 1,542 W</li> </ul>	<ul style="list-style-type: none"> <li>Max. 2,254 W</li> </ul>
Switch Fabric	<ul style="list-style-type: none"> <li>2.4 Tbps non-blocking</li> </ul>	<ul style="list-style-type: none"> <li>4 Tbps non-blocking</li> </ul>
Forwarding Rate	<ul style="list-style-type: none"> <li>1.7 Bpps wire-speed L2/L3 Switching/Routing</li> </ul>	<ul style="list-style-type: none"> <li>2.9 Bpps wire-speed L2/L3 Switching/Routing</li> </ul>
IPv6	<ul style="list-style-type: none"> <li>H/W based Supported</li> </ul>	<ul style="list-style-type: none"> <li>H/W based Supported</li> </ul>
Mac Address	<ul style="list-style-type: none"> <li>Up to 128K MAC Management</li> </ul>	<ul style="list-style-type: none"> <li>Up to 128K MAC Management</li> </ul>
Routing Entries	<ul style="list-style-type: none"> <li>Up to 1M</li> </ul>	<ul style="list-style-type: none"> <li>Up to 1M</li> </ul>

공통기능

<b>Routing</b> <ul style="list-style-type: none"> <li>IPv4/IPv6 Static, 16 ECMP</li> <li>Loopback Interface, Multiple Default Gateway</li> <li>VRRP</li> <li>DHCP</li> <li>RIP / RIPv2</li> <li>OSPFv2/v3</li> <li>BGPv4, BGP4+</li> <li>ISIS</li> <li>BFD with OSPF, BGP 지원</li> <li>Policy-Based Routing 지원</li> </ul>	<b>Filtering, Security, QoS</b> <ul style="list-style-type: none"> <li>Port별 / Class별 Rate-limit</li> <li>IEEE 802.1p QoS, ToS, Diff-serv 지원</li> <li>5-Tuple, DSCP 별 Classification 지원</li> <li>Bandwidth Sharing, Strictly Priority, WRR 지원</li> <li>5-Tuple Traffic Filtering</li> <li>Source Spoofing 방지</li> <li>Unicast / Broadcast Storm Control 지원</li> <li>Access Control List 기반 Traffic Control</li> <li>포트별 Egress Traffic Shaping</li> <li>Flow / Packet별 Ingress Traffic Policer</li> <li>L2/L3 Destination Lookup Fail</li> <li>SYN / ICMP / IGMP / ARP Attack 방지</li> <li>Dynamic ARP Inspect</li> <li>CPU로 유입되는Control Plane 보호기능 지원</li> <li>Telnet / FTP / SNMP 등 장비 접근 통제기능 지원</li> <li>보안적합성 지원</li> </ul>
<b>Multicasting</b> <ul style="list-style-type: none"> <li>IGMP v2/v3</li> <li>IGMP snooping</li> <li>PIM-SM / SSM</li> </ul>	<b>Basic Function</b> <ul style="list-style-type: none"> <li>Up to 4K VLANs</li> <li>802.1Q Tag VLAN</li> <li>STP</li> <li>RSTP</li> <li>MSTP</li> <li>RPVST+</li> <li>LACP</li> </ul>
<b>Management</b> <ul style="list-style-type: none"> <li>Port Based Mirroring 지원</li> <li>NetFlow 지원</li> <li>5-Tuple 별 Traffic 모니터링 기능 지원</li> <li>Telnet</li> <li>SSH</li> <li>TFTP, FTP</li> <li>NTP</li> <li>TACACS+</li> <li>Syslog</li> <li>SNMPv1/v2/v3</li> <li>RMON</li> </ul>	

- 이 문서의 내용은 제품의 성능 및 기능 향상, 인쇄상의 오류 수정 등으로 인해 사전 예고 없이 변경될 수 있습니다.
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