BORN elegant creation

BC324TGM2QT

Data center switch series

Ideal for:

- Telecom
- Hotels & Resorts
- Universities
- Healthcare
- Public Places
- Airport
- Transport
- Industries

Product overview

- BC324TGM2QT is a new generation of high-performance data center TOR switch launched by N-net®for high-performance cloud computing, data center and campus network. The product adopts advanced hardware architecture design to provide the industry's highest exchange performance and rich data center business features.

- BC324TGM2QT supports 24*10G copper(RJ45) with 2*100G fiber port(QSFP28), it can provide high-density 10G / 25G / 100G data center access capability. In order to meet the requirements of cloud computing, the product supports rich VXLAN, EVPN, M-LAG, RDMA,MPLS,NETCONF and other data center features;

Product Image

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Product advantage

Advanced hardware architecture design, industry-leading strong processing power

- Adopt the industry advanced hardware architecture design, high-density data center access design;
- Support 24*10G RJ45 + 2*100G ports(QSFP28);
- Embed in high-performance ASIC switch chip and multi-core processor, support up to 880Gbps switch capacity, to meet the requirements of high performance, high capacity, high density and scalable data center;
- Standard data center front and rear cooling air duct design, Support air duct front and rear flexible selection;

Rich data center business feature

- Support for data center features such as VXLAN, EVPN, M-LAG, NETCONF, etc;
- Meet the data center Overlay network deployment requirements;
- OAM based on the IEEE802.1ag and ITU-T Y. 1731 enables Ethernet service providers to proactively monitor their business and measure end-to-end performance;
- Support Telemetry, can fine monitor equipment and business health;

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Data-center level high reliability

- Based on the HPS (Hitless Protection System) non-interrupt protection system, the power supply system adopts a redundant modular plug-and-plug design to support seamless switching during failure without service interruption;
- Support STP / RSTP / MSTP protocol, support VRRP protocol, and support ring network protection, dual uplink main and standby link protection, LACP link aggregation and other simple and efficient redundant protection mechanism;
- Support ISSU (In-Service Software Upgrade) service does not interrupt the system upgrade, to ensure the uninterrupted forwarding of user data during the system upgrade and master switch;
- The ultra-high precision BFD two-way link detection mechanism realizes the millisecond fault detection and service recovery, which greatly improves the reliability of the network system;

Rich business features

- Support rich L2 and L3 business features;
- Support IPv4 / IPv6 dual protocol stack and rich unicast, multicast routing protocol;

Perfect security mechanism

- With multiple reliability protection at equipment level and link level;
- Support 50-200 ms link fault switch, ensure that key services do not interrupt transmission;
- Support cross-device link aggregation, convenient access server / switch to achieve dual live link;

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Innovative Green environmental protection design

- Intelligent power management system：Using advanced power system architecture design, to achieve efficient power conversion, unique power monitoring, slow start and other functions, real-time monitoring of the running state of the whole machine, intelligent adjustment, deep energy saving;
- Intelligent fan management system：Intelligent fan design supports the flexible selection of front to rear or rear to front air duct, supports the automatic speed regulation of the fan, effectively reduce the speed, reduce noise, and prolong the service life of the fan;

Basic specifications

Ethernet Ports	24*10G RJ45+ +2*100G QSFP28
Management I/F	1*Console (RJ45) 1* 1000Base-T(RJ45) 1* USB Store
Cooling	2* Hot-pluggable Fan module
Airflow	Front to rear
Power Supply	2*250W Hot-pluggable power module
Chipsets	Centec/BCM(Optional）
FLASH	8GB（Max）
DRAM	2GB（Max）
Switch capacity	880Gbps

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	442 x290x 44.5 mm
Weight	5kg
Operating Temperature	0ºC to 45ºC
Store Temperature	-40ºC to 70ºC
Running Humidity	10% to 90% (No condensation)
Store Humidity	0 to 95% (No condensation)

Software Feature

Item	Sub Item	Feature	Description	License Standard	License Professional
Ethernet basic features	Ethernet	Interface	operating modes(Speed,FD/HD, auto-negotiation)	√	√
			Jumbo Frame	√	√
			port connect	√	√
		Flow-control	Flow-control tx/rx	√	√
		Storm-control	Port based storm-control	√	√
			VLAN based storm-control	√	√
		Port-block	Port-block	√	√
		Port-isolate	L2/L3/All Port-isolate	√	√
			Uni-direction isolate	√	√
		L2 Protocol	L2 protocol tunnel (support	√	√

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		Tunnel			
	Swich mode	Store-and-forward	√	√
		Cut-through	√	√
	VLAN Access mode	Access/Trunk	√	√
		Default VLAN	√	√
	VLAN Classification	VLAN Classification	√	√
VLAN	QinQ	Basic QinQ	√	√
		Selective QinQ	√	√
		VLAN Mapping(1:1 VLAN Translation)	√	√
		VLAN Mapping(N:1 VLAN Translation)	√	√
	VLAN Statistics	VLAN Statistics	√	√
	Private VLAN	Private VLANv	√	√
	Voice VLAN	Voice VLAN	√	√
	Guest VLAN	Guest VLAN	√	√
MAC	MAC Address Table	Automatic learning and aging of MAC addresses	√	√
		Refresh the FDB based on ports and vlans	√	√
		Hardware Learning	√	√
		Static and dynamic MAC address entries	√	√
		Blackhole MAC	√	√
	MAC Flapping detect	MAC Flapping detect	√	√
	Port bridge	Port Bridge	√	√

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	LAG	Lin kaggregation	Static-LAG & LACP	√	√
			LAG load balance(SLB)	√	√
			LAG load balance(DLB)	√	√
			LAG load balance(RR)	√	√
			LAG Self-healing	√	√
			Link aggregation weighting	√	√
Ethernetprotection	xSTP	STP	Spanning-Tree Protocol	√	√
		RSTP	Rapid Spanning-Tree Protocol	√	√
		MSTP	Multi-instance Spanning-Tree Protocol	√	√
		Spanning-Tree Protocol	BPDU Filter/Guard	√	√
			Root Guard	√	√
			Loop Guard	√	√
			Anti TC-BPDU attack	√	√
	ERPS	ERPS	Single ERPS ring	√	√
			tangent ERPS rings	√	√
			intersecting ERPS rings	√	√
			compatible with RRPP	√	√
	G.8031	G.8031	G.8031(Ethernet Linear Network Protection)	√	√
	G.8032	G.8032	G.8032 V1 & V2	√	√
			Single Ring	√	√
			Sub Ring	√	√
	Loopback Detect	Loopback Detect	Loopback detection	√	√
Layer2 Multicast	Layer2 Multicast	IGMP snooping	IGMPv1/v2/v3 Snooping	√	√
			Fast leave	√	√
			Static IGMP snooping group	√	√
		MVR	MVR(Multicast VLAN	√	√

			Registration)		
IPv4 Forwarding	ARP	ARP	Static and dynamic ARP entries	√	√
			Aging of ARP entries	√	√
			Gratuitous ARP	√	√
		ARP proxy	basic ARP-Proxy	√	√
			local ARP-Proxy	√	√
	IPv4 Unicast Routing	IPv4 Static Routing	IPv4 Static Routes	√	√
			Black hole Routes	√	√
			co-work with IP SLA	√	√
			VRF(Virtual Routing and Forwarding)	√	√
			uRPF check	√	√
		RIP	RIP v1/v2	√	√
		OSPFv2	OSPF v2	√	√
		IS-IS	IS-IS	√	√
			segment-routing based on IS-IS protocol extension	X	√
		BGP	IBGP	√	√
			EBGP	√	√
			Graceful-Restart helper	√	√
		Route policy	Route-map	√	√
			IPv4 prefix-list	√	√
		PBR	PBR(Policy-based Routing)	√	√
		ICMP	ICMP redirect	√	√
			ICMP unreachable	√	√
		ECMP	ECMP(SLB)	√	√
			ECMP(DLB)	√	√
			ECMP(RR)	√	√

			ECMP Self-healing	√	√
		IP unnumbered	IP unnumbered	√	√
	IPv4 Multicast Routing	IGMP	IGMP v1/v2/v3	√	√
			IGMP-proxy	√	√
			IGMP SSM mapping	√	√
		PIM	PIM-SM	√	√
			PIM-SSM	√	√
			PIM-DM	√	√
IPv6 Forwarding	IPv6 Basic Protocol	ICMPv6	ICMPv6	√	√
		NDP	NDP	√	√
		PMTU	PMTU	√	√
	IPv6 Unicast Routing	IPv6 Static Routes	IPv6 Static Routes	√	√
			IPv6 Blackhole Routes	√	√
		RIPng	RIPng	√	√
		BGP4+	BGP4+	√	√
		OSPFv3	OSPF v3	√	√
		IS-IS	IS-IS	√	√
		VRRP v3	VRRP v3	√	√
	Pv6 Multicast Routing	MLD v1/v2	MLD v1/v2	√	√
		MLD snooping v1/v2	MLD v1/v2 Snooping	√	√
		MVR6	MVR6	√	√
		PIM-SM v6	PIM-SM v6	√	√
	IP Tunnel	IPv6 over IPv4 Tunnel	IPv6 over IPv4 tunnel	√	√
		6to4 Tunnel	6to4 tunnel	√	√
		ISATAP Tunnel	ISATAP tunnel	√	√
	ISATAP Tunnel	DHCPv6	DHCPv6 Relay	√	√
			DHCPv6 snooping	√	√

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		IPv6 Prefix List	IPv6 Prefix-list	√	√
Reliability	BFD	BFD	Detecting BFD for static routes	√	√
			Detecting BFD for OSPFv2	√	√
			Detecting IS-IS BFD. Procedure	√	√
			Detecting BGP BFD	√	√
			Detecting BFD for VRRP/Track	√	√
			Detecting BFD for the PBR	√	√
	VRRP	VRRP	VRRP	√	√
			Track for VRRP	√	√
	Smart link	Smart link	multi-instance	√	√
			load balance	√	√
			Multi-Link	√	√
			Monitor-link	√	√
	MLAG	MLAG	MLAG basic	√	√
			MLAG orphan Port	√	√
Ethernet OAM	EFM	EFM (802.3ah)	Auto detection	√	√
			Network fault detection	√	√
			Network fault handle	√	√
			remote loop back	√	√
	CFM	CFM (802. 1ag)	Hardware CCM detect	√	√
			MAC Ping	√	√
			MAC Trace	√	√
	Y.1731	Y.1731	Latency and Jitter measure	√	√
QoS	QoS	Traffic	Traffic classification based on	√	√

		classification	COS/ DSCP (simple classification)		
			Traffic classification based on ACL (complex classification)	√	√
			Traffic classification based on inner header of the tunnel packets	√	√
		Traffic behaviors	Queue scheduling	√	√
			Remark the priority fields(COS/DSCP) of the packet based on ACL	√	√
			Remark the priority fields(COS/DSCP) of the packet based on Table Map	√	√
			Flow redirection	√	√
			Flow mirror	√	√
		Traffic policing	Traffic policing based on direction(in/out) of Port	√	√
			Traffic policing based on direction(in/out) of VLAN	√	√
			Traffic policing based on direction(in/out) of flow	√	√
			Traffic policing based on direction(in/out) of aggregated flow	√	√
		Traffic shaping	Queue based traffic shaping	√	√
			Port based traffic shaping	√	√
		Congestion management	SP(Strict Priority)scheduling	√	√
			WDRR(Weighted Deficit Round Robin)scheduling	√	√

			SP + WDRR mixed scheduling	√	√
		Congestion avoidance	TD(Tail Drop)	√	√
			WRED(Weighted Random Early Detection)	√	√
		Traffic statistics	Packet counts and bytes statistics based on traffic classification	√	√
			Packet counts and bytes statistics based on the color after traffic policing	√	√
			Forwarded and discarded packet counts and bytes statistics	√	√
		ECN (Explicit congestion)	Tail Drop-based ECN tag	√	√
			WRED based ECN tagx	√	√
			Shape rate speed based ECN tagx	√	√
Network virtualization	VARP	Virtual gateway	VARP （Virtual-ARP）	√	√
			Support IPv4	√	√
			Support IPv6	√	√
			VARP support subnet	√	√
	Tunnel	VxLAN	Manual configure VxLAN tunnel	√	√
			VxLAN distributed gateway	√	√
			VxLAN active-active access	√	√
			VxLAN realize Overlay network	√	√
			L2 Protocol packet pass through	√	√
			Modify the DSCP of the outer	√	√

			VxLAN header		
			Edit DSCP in VxLan outer header	√	√
			BGP EVPN	X	√
			Support to enable/disable overlay split horizon per-VNI	√	√
			Support IPv4	√	√
			Support IPv6	√	√
		GRE Tunnel	GRE Tunnel	√	√
		NVGRE Tunnel	NVGRE Tunnel	√	√
		GENEVE Tunnel	GENEVE Tunnel	√	√
Network convergence	DCB	DCBX	LLDP support DCBX TLV	√	√
		PFC	PFC	√	√
Metropolitan Network	IPRAN	LDP	LDP	X	√
		MPLS Forwarding	MPLS Forwarding	X	√
		VPWS	VPWS	X	√
		VPLS	VPLS	X	√
		MPLS OAM	MPLS OAM	X	√
		MPLS Stats	MPLS Stats	X	√
		L2VPN	L2VPN	X	√
		L3VPN	L3VPN	X	√
		ACL	MPLS ACL	X	√
		QoS	MPLS QoS	X	√
		SR	Segment-routing based on MPLS	X	√
Networks Safety	System Security	SSH	SSH v1/v2	√	√
			RSA Key generation	√	√
		RADIUS	RADIUS	√	√
		TACAS+	TACAS+	√	√

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				√	√
		AAA	Authentication	√	√
			Authorization	√	√
			Accounting	√	√
		Dot1x	Port based dot1x	√	√
			MAC based dot1x	√	√
			Guest VLAN	√	√
		ACL	MAC/ IP ACL	√	√
			Basic Mode ACL	√	√
			Port-group ACL	√	√
			VLAN-group ACL	√	√
			IPv6 ACL	√	√
			ACL UDF	√	√
			Time Range	√	√
		ARP inspection	ARP inspection	√	√
		IP source guard	IP source guard	√	√
		Port Security	Limitation on MAC address learning on interface	√	√
		VLAN Security	Limitation on MAC address learning on VLAN	√	√
		Control Plane Policy(COPP)	Black list/wihte list	√	√
			Rate limit	√	√
		CPU Traffic Limit	CPU Traffic Limit	√	√
		Prevent DDOS attack	Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/ LAND/SYN Flood)	√	√
		Login filter	Telnet/SSH ACL filtering	√	√
			Telnet/SSH IPv6 ACL filtering	√	√
		Link-Flapping detection	Link-Flapping detection	√	√

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Network management	DHCP	DHCP	DHCP Server	√	√
			DHCP Relay	√	√
			DHCP snooping	√	√
			DHCP Client	√	√
			DHCP option 82	√	√
			DHCP option 252	√	√
		RMON	RMON	√	√
		sFlow	sFlow v4/v5	√	√
		IP SLA	Support IPv4	√	√
			Support IPv6	√	√
			Support Track	√	√
		IPFIX	IPFIX	√	√
		Latency/Buffer monitor	Latency monitor	√	√
			Buffer monitor	√	√
		EFD	Elephant flow detection	√	√
		NTP	NTP(Network Time Protocol)	√	√
		PTP （IEEE1588 ）	Transparent clock （TC）	X	√
			Ordinary clock （OC）	X	√(On going)
			Boundary clock （BC）	X	√(On going)
		Errdisable	Errdisable detection and recovery	√	√
		DNS	Static DNS Client	√	√
		LLDP	LLDP	√	√
Configuration and maintenance	Terminal Services	CLI	Configurations through CLI (Command Line Interface)	√	√
		Help information	Banner configuration	√	√
			Help information in English	√	√

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		Terminal Services	Vty Terminal service	√	√
			Console Terminal service	√	√
	Configuration Management	Management interface	In-band management interface and configuration	√	√
			Out-band management interface and configuration	√	√
		User privilege management	privileged user priority and privileged commands	√	√
		SNMP	Network management based	√	√
			Public and private MIB	√	√
			Public and private Trap	√	√
		WEB	Configuration and management based on WEB UI	√	√
		RPC-API	Configuration and management based on RPC-API	√	√
		Smart config	Smart Config(Automatically configuration when system start)	√	√
		OVSDB	Configuration and management based on OVSDB	√	√
		RPC-API	change the system specifications by choose different STM Profiles	√	√
		License control	Feature configuration based on License	√	√
		Netconf	Netconf	√	√

		Restore factory default	Restore factory default configuration	√	√
	File System	File system	File system(support directory and file management)	√	√
		Upload and download	Upload and download files through FTP or TFTP	√	
			Upload and download files in SCP mode	√	√
			File transfer in Xmodem mode	√	√
	Diagnosis and Maintenance	Debug	per-module Debug features	√	√
			ICMP Debug	√	√
		BHM	Software process monitor: BHM(Beat Heart Monitor)	√	√
			Hardware Watch Dog	√	√
		VCT	VCT(Virtual Cable Test)	√	√
		System diagnostics	Detailed Diagnostic-information collection	√	√
		Reboot	Manual reboot	√	√
			Schedule Reboot	√	√
			Reboot Information logging	√	√
		Network diagnostics	Ping	√	√
			IPv6 Ping	√	√
			Traceroute	√	√
		Log & alarm	CPU usage display and alarm	√	√
			Memory usage display and alarm	√	√
			Supports CPU/ memory	√	√

			historical display		
			Device temperature, PSU, FAN, status display and alarm	√	√
			User operation logs	√	√
			Management of logs, alarms, and debugging information	√	√
			Support interface bandwidth usage alarms	√	√
			Support Log servers with IPv4 addresses	√	√
			Support Log servers with IPv6 addresses	√	√
		Mirror	Port mirror	√	√
			Flow mirror	√	√
			Remote mirror	√	√
			Multi-destination mirror(m:n)	√	√
			Use CPU as mirror source	√	√
			Use CPU as mirror destination and analyze packet	√	√
			ERSPAN	√	√
		CPU statistics	To CPU/ From CPU packets statistics	√	√
		L2 Ping	layer2 network connectivity detection - L2Ping (MAC Ping/Trace)	√	√
		UDLD	UDLD(Unidirectional Link Detection)	√	√
		Unidirectional	Unidirectional forwarding of	√	√

			the fiber		
		Loop back	port loop back	√	√
			hardware loop back(internal/external)	√	√
		System time	Time configuration	√	√
			Timezone	√	√
	Software upgrade	System Software upgrade	Local upgrade	√	√
			Upgrade from TFTP	√	√
		Uboot upgrade	Upgrade the Uboot online	√	√