



Dax DX-7204



Go Placidly

Introduction

DX-7204 router is a Modular router with a high performance engine that meets the requirement of interoperability and deliver concurrent services at 1Mpps packet forwarding rates.

These enterprise-level modular multifunctional security routers with high port-density, high-reliability and high-performance, can serve as a security access platform for multiple services, such as data, video and voice. DX-7204 routers provide four MIM (Multifunction Interface Module) slots, and can support the simultaneous access of multiple E1 interfaces.

DX-7204 has complete modular design; control card, hot pluggable power supplies and line cards are detachable from DX-7204 chassis. This enables DX-7204 router to provide great scalability and flexibility. Moreover the platform allows control cards with varying number of fast Ethernet interfaces to be attached. The software engine which runs on DX-7204 provides users with backup solutions based on VBRP & VRRP, rich QoS, Network security features including MPLS, VoIP, SNA/DLSw and IP multicast protocol, and at the same time providing high performance/price ratio.

DX-7204 router can provide a comprehensive network solution across vertical segments and medium-to-large-sized enterprises. Each module of DX-7204 router thoroughly complies with corresponding network standards. This ensures the router can interconnect with other manufactures' products at different levels and customer's investment is protected.

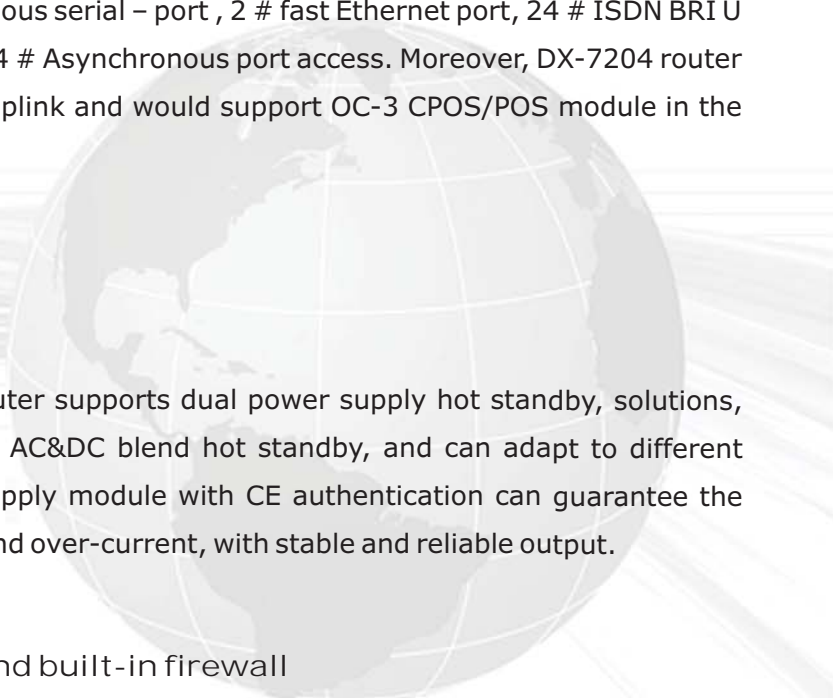


High performance

DX-7204 series routers integrate tightly the high-performance communication processor and software to deliver 1Mpps throughput, thereby offering the best price-performance in its category.

High-density access ports

DX-7204 control card has two 10/100/1000Mbps Giga Ethernet ports shared with two 1000Mbps SFP optical modules, so that DX-7204 series router can support higher port density. Presently, DX-7204 can support up to 16 # 2 M Synchronous / Asynchronous serial – port , 2 # fast Ethernet port, 24 # ISDN BRI U access, 32 # E1 and CE1/ISDN PRI access and 64 # Asynchronous port access. Moreover, DX-7204 router can provide OC-3 ATM module for high-speed uplink and would support OC-3 CPOS/POS module in the future.




Telecom Grade features

To ensure stable operation, DX-7204 series router supports dual power supply hot standby, solutions, such as, AC hot standby, DC hot standby and AC&DC blend hot standby, and can adapt to different environment requirements. DX-7204 power supply module with CE authentication can guarantee the protection of surge, over-voltage, low-voltage and over-current, with stable and reliable output.

The combination of VPN construction and built-in firewall

With the development of Internet applications, security architecture has become one of the key network requirement. DX-7204 router supports PPTP, L2TP, IPSEC and MPLS, all of which can be adopted to construct different types of VPNs from layer-2 to layer-3. Without hiring expensive private lines, an enterprise can, through Internet, adopt Intranet VPN, instead of private lines or other connection modes, to connect with its network nodes. The construction and configuration of VPN is very simple, and the integration design makes the subscribers migrate to the secure VPN mode easily.

Additionally, DX-7204 IOS has integrated firewall which supports high-level security features, such as ACL packet filtering, NAT, authentication audit, route verification, Callback and DoS defense. Users can





Supporting MPLS

With the rapid development of Internet size applications are most concerned about how to expand services and enhance network QoS. The next generation of Internet broadband technology—MPLS, which is regarded highly, can integrate high-speed exchange and intelligent routing and provide comprehensive network solutions for present and future users. DX-7204 router supports BGP (Border Gateway Protocol) and MPLS protocol suite, and can be deployed on PE (Provider Edge) or P(Provider) nodes in the MPLS network. An user can, by means of simple deployment and configuration, realize the end-to-end VPN interconnection. At the same time DX-7204 router supports various kinds of IP QoS applications so that the subscribers can realize traffic engineering effectively. Additionally, MPLS provided by DX-7204 can interconnect with MPLS provided by other manufacturers' equipments so that the original network investment of the subscribers can be protected.

Supporting Rich QoS to ensure the service quality of key data

QoS is the basic requirement of future IP network. To meet different demands of the users, DX-7204 router can provide IntServ (Integrated Services) and DiffServ (Differentiated Services), support RSVP (Resource Reservation Protocol), CAR (committed access rate) and queuing strategies (such as PQ, FIFO, CQ, FQ, CBWFQ and LLQ etc.) So that the quality, reliability and efficiency can be ensured for data voice and video services.

Feature Highlights

- High performance/price ratio
- High-density modular design
- Hardware encryption with stateful authentication
- Construction of VPN network around DX-7204 platform as hub.
- Multiple levels of resiliency and redundancy
- High degree of compatibility
- Complete QoS suite
- Supporting DLSw protocol
- Hierarchical/distributed network management
- Online Insertion and removal of Wan Interfaces helps reduce service interruption



Hardware Specifications:

Processor	BCM1125H, 600M
Flash	Default: 16MB, expandable to 80MB
Memory	Default 256MB DDR SDRAM to 1GB DDR SDRAM
Throughput	1Mpps
Bus bandwidth	3 Gbps
Routing table capacity	200,000
Access table capacity	500,000
64 byte delay	35 μ s
MTTF (Mean Time To Failure)	100000 hrs
Dimension	100mmx444mmx360mm
Weight	12.5KG(Full load)
Power requirements	
Power supply	AC: 85-265V, 50~60Hz, 1.2A DC: 38V-76V, 1.8A
Power	200W
Environmental Parameters	
Short-term operational temperature	0~40°C
Long-term operational temperature	15~30°C
Short-term Relative humidity	10~90%, Non-condensing
Long-term Relative humidity	40~65%, Non-condensing

Technical Specifications:

QoS	<ul style="list-style-type: none"> Selective Packet Discard Random Early detection Committed Access Rate (CAR) First Input & First Output (FIFO) Weighted-Fair Queue (WFQ) Priority Queue (PQ) Custom Queue (CQ) RSVP MPLS VPN MPLS label edge route function
Security	<ul style="list-style-type: none"> Standard and Extended ACLs Authorization & accounting (PAP/CHAP, TACACS, RADIUS) Network Address Translation (NAT) IP packet filtering L2TP GRE tunneling MD5Authentication SSH v 1 and 2

Enhanced Security	Encryption (40bit & 56bit pay load) IPSec DES/3DES/AES IP SEC 3DES encryption performance upto 150 Mbps
WAN Optimization	Bandwidth on Demand Dial Back Up Dial On Demand Call Back Data Compression Queuing Traffic Prioritization Inactivity Timeouts Spoofing Filtering DDR TCP Header compression TCP payload compression Frame Relay Per PVC compression Load balancing Filtering Snapshot Routing
Standards	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IP - RFC 791, 1812 PPP - RFC 1334, 1570, 1661, 1662, 1663, 1962, 1967, 1968, 1969, 1970, 1978, 1990, 1994, 2125, 2433 MLPPP - RFC 1990 XOT - RFC 1613 TCP - RFC 793, 2001, 1323 UDP - RFC 768 ICMP - RFC 792 IGMPv2 - RFC 2236 IGMPv3 - RFC 3376 ARP - RFC 826 RARP(inverse ARP) Proxy ARP RIP v1/v2 - RFC 1058, 2453 OSPF - RFC 2328, 1583, 1587, 1793, 2370 BGP4 - RFC 1771 RTP - RFC 1889, 1890, 2833 RTCP - RFC 1899 CHAP - RFC 1994 Radius - RFC 2138, 2139, 2865, 2866 NAT - RFC 1631 SLIP - RFC 1490 L2TP - RFC 2661 GRE - RFC 2890 MPLS - RFC 2547, 3031, 3032, 3036 SNMP v1 - RFC 1157 SNMP v2 - RFC 1441, 1213, 1155, 1157, 1910, 1450, 2263 : SNMP v3 - RFC 2273, 2274 DHCP Server - RFC 2131



Standards	<p>Frame Relay MIB – RFC 1315</p> <p>RRRP – RFC 2338</p> <p>VBRP – RFC 2281</p> <p>SNTP – RFC 1769</p> <p>Telnet – RFC 856, 857</p> <p>IPSec/IKE – RFC 2401~ 2412, 2104, 2451, 2857, 3602</p> <p>PKI – RFC 2459, 2510, 2511</p> <p>PPPoE - RFC 2516</p>
Protocols	<p>Frame Relay</p> <p>SDLC, HDLC, LLC2, QLLC</p> <p>LAPB</p> <p>X.25 , ISDN</p> <p>DNS, DLSN</p> <p>VDCP (VLAN Dynamic configuration protocol)</p> <p>PFA (Packet forwarding accelerator compatible with CEF)</p> <p>DCMP (Digital certificate Management Protocol compatible with SCEP)</p> <p>DLSW (Data link switching compatible with DLSW +)</p>
Routing Protocols	<p>Static Route, dynamic route</p> <p>RIP V1 /V2 , OSPF V2, On Demand OSPF</p> <p>cBGP4, DDR</p> <p>IRMP** (Internal Routing Message Protocol)</p> <p>SNSP** (Stab Networks Search Protocol)</p> <p>NDSP** (Neighbor Device Search Protocol)</p>
Redundancy Protocol	<p>VBRP** (Virtual Back up Routing Protocol compatible with HSRP)</p> <p>RRRP (Virtual Router Redundancy Protocol)</p>
Multicast Routing Protocols	<p>IGMP v1/v2</p> <p>PIM-SM , PIM-DM</p> <p>DVMRP</p>
VoIP protocols	<p>H.323; H.225; H.245; RTP; RTCP</p>
IP address configuration	<p>IP sub interface configuration</p> <p>Sub Networking</p> <p>CIDR (Classless Inter-Domain Routing)</p> <p>IP un-numbered, Easy IP</p> <p>Port based VLAN</p> <p>Tagged VLAN</p> <p>Transparent Bridging</p> <p>VLSM (Variable Length Subnet Mask)</p>
Traffic Regulation	<p>Standard access control list to filter IP packets according to the source addresses in their IP packet headers</p> <p>Extended access control lists to filter IP packets according to fields in IP, UDP, TCP, ICMP and IGMP headers</p>
Trouble Shooting and Maintenance	<p>TFTP firmware upgrade</p> <p>Debugging</p> <p>Tracing of route packets</p> <p>Display of every interface state and detailed statistics</p>
Management	<p>Simple Network Management Protocol (SNMP)</p> <p>Telnet</p> <p>Local management through router's console port.</p> <p>DHCP server</p> <p>RMON</p>

Ordering Information

Item	Description
Dax DX-7204	Modular Router with 2 # 10/100/1000T ports shared with 2 # 1000X GBIC ports, 4NM slots ,one console port, 1Mpps performance, 16MB Flash upgradeable to 80MB, 256MB DDR SDRAM upgradeable to 1 GB DDR SDRAM, 1# Hardware Encryption internal socket, 1 AC power supply loaded, additional free slot for RPS
Power	
AD250-IT004	AC power supply module for chassis with 4 slots. Each chassis can support two power modules for backup mutually
DD250-5T0042	DC power supply module for chassis with 4 slots Each chassis can support two power modules for backup mutually
Memory	
DDR333-128D	Memory: 128MB, access speed: 333 Mhz
DDR266-256D	Memory: 256MB, access speed: 266 Mhz
DDR266-512D	Memory: 512MB, access speed: 266 Mhz
Flash	
FLASH8M -D168-64	8MB FLASH
FLASH16M-D168-64	16MB FLASH
FLASH32M-D168-64	32MB FLASH
FLASH64M-D168-64	64MB FLASH
NM Modules	
RM3A-4SAH	Hot swappable 4-port Synchronous/Asynchronous serial-port module
CAB-DB50M-S-2DB44F -2Nos + CAB-DB44M-X-M34F - 4 Nos	V.35 DCE Cable for RM3A-4SAH
RM3A-4E1H	Hot swappable Four-port non-channelized E1(G.703) module
CAB-DB40M-4RJ45F - 1 No.	Cable for RM3A-4CE1H / RM3A-4E1H
RM3A-8E1H	Hot swappable Eight-port non-channelized E1(G.703) module
CAB-DB40M-S-16BNCM - 1No	Cable for RM3A-8E1H
BALUN	75Ω to 120Ω impedane matching balun cable with 2BNC connector and RJ45 connector.
RM3A-4CE1H	Hot swappable Four-port channelized E1/ ISDN PRI module
CAB-DB40M-4RJ45F - 1 No.	Cable for RM3A-4CE1H/RM3A-4E1H
RM3A-8CE1H	Hot swappable Eight-port channelized E1/ ISDN PRI module
CAB-DB40M-S-16BNCM - 1 No	Cable for RM3A-8CE1H / RM3A-8E1H
BALUN	75Ω to 120Ω impedane matching balun cable with 2BNC connector and RJ45 connector.

RM3A-2FEH	Hot Swappable 2-Port 10/100M fast Ethernet Module
CABETH-RJ45M-X-RJ45M - 2 Nos	Cable for RM3A-2FEH
RM3B-1ATM-OC3H	Hot swappable One-port 155M ATM module (155M SFP optical module is required)
RM3B-1POS-OC3H	Hot swappable One-port 155M POS module (155M SFP optical module is required)
RM3B-1CPOS-OC3H	Hot swappable One-port 155M CPOS module (155M SFP optical module is required)
RM3A-4M336H	Hot Swappable Four-port frequency-band MODEM module
RM3A-16AH	Hot Swappable 16-Port Asynchronous Module
CAB-DB62MA-8DB25MT - 2 Nos	Cable for RM3A-16AH
RM3A-8AH	Hot Swappable 8-Port Asynchronous Module
CAB-DB62MA-8DB25MT - 1 No	Cable for RM3A-8AH
IPsec	
IPSEC	Hardware & Software for IPSEC DES / 3DES / AES
Optical module	
SFP-S2-L03P3	155M single mode optical module (transmission distance: 20km, LC interface, PECL interface level, wavelength: 1310nm), adopts RM3B-1ATM-OC3H, RM3B-1POS-OC3H, RM3B-1CPOS-OC3H.
FIBER -LCMS-S-LCMS - 2 Nos	LC to LC Single-mode Dual-head Fiber Jumper
SFP-M2-L03P8	155M Multimode optical module (transmission distance - 2km, LC interface, PECL interface level, wavelength - 850nm), adopts to RM3B-1ATM-OC3H, RM3B-1POS-OC3H, RM3B-1CPOS-OC3H
FIBER -LCMMU-S-LCMMU - 2 Nos	LC to LC Multi-mode Dual-head Fiber Jumper
SFP-M2-L24P8	Hot Swappable 1000M multi-mode optical module (2Km transmission distance, LC interface, PECL interface LEV, 850nm wavelength) be adaptive with ATM, CPOS, POS module
FIBER -LCMMU-S-LCMMU - 2 Nos	LC to LC Multi-mode Dual-head Fiber Jumper
SFP-S2-L24P3	Hot Swappable 1000M single-mode optical module (20km transmission distance, LCinterface, PECLinterface LEV, 1310nm wavelength) be adaptive with ATM, CPOS, POS module
FIBER -LCMS-S-LCMS - 2 Nos	LC to LC Single-mode Dual-head Fiber Jumper

Dax DX-7204 is brought to you by Dax (An Apcom Company) one of India's most renowned, technically qualified Data/Voice Networking Vendor. Dax offers an India-centric, diverse product range which conforms to the highest world-standards and meets the "edge to core" networking needs of all Verticals.

Dax is one of India's most respected OEM 'networking-infrastructure' vendors. Over the past 24 years, Dax has made country wide inroads through its national ADSPs (Authorized Dax Solution Partners) and Star Partners.

Dax is synonymous with high business ethics, consistent quality, optimized performance and support - commitment to Indian Customers which supersedes MNC standards. Our primary focus is to bring in world-class products to India to provide India-centric solutions that enable Indian organizations save their networking capital expenditure. Our years of commitment to quality and service, ensures our position amongst the Top-4 Networking Brands in India.

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