TOP LEVEL PERFORMANCE

- Advanced Software Structure & Hardware Platform with Dual NP Processor
- Backplane Bandwidth Up To 28 Gbps
- Forwarding Rate Up To 4.5 Mpps

INCREASED EFFICIENCY

- USB Flash Memory To Store Configurations & Log Files

HIGH AVAILABILITY

- Through Hot Plugging of Key Components: Power Supply, Fan and Modules

FEATURES MODEL DRO50-20

- Dual NP Processors
- 3*Fixed GE Ports, 3*Fixed SFP Ports
- 2*USB Ports, 1*Console Port, 1*AUX Port
- 2*NMX Extension Slots for Multiservice Modules
- 1*Double Width DNMX Slot for Multiservice Modules
- 1*High-speed AIM Internal Slot, 1 Universal AIM Slot

FEATURES MODEL DRO50-40

- Dual NP Processors
- 3*Fixed GE Ports, 3*Fixed SFP Ports
- 2*USB Ports, 1*Console Port, 1*AUX Port
- 4*NMX Extension Slots for Multiservice Modules
- 2*Double Width DNMX Slot for Multiservice Modules
- 1*High-speed AIM Internal Slot, 1 Universal AIM Slot

FEATURES MODEL DRO50-80

- Dual NP Processors
- 3*Fixed GE Ports, 3*Fixed SFP Ports
- 2*USB Ports, 1*Console Port, 1*AUX Port
- 8*NMX Extension Slots for Multiservice Modules
- 2*Double Width DNMX Slot for Multiservice Modules
- 1*High-speed AIM Internal Slot, 1 Universal AIM Slot

Reliable Multi-Services Router

Overview

The DRO50 series are high-performance multi-service routers independently developed by D-Link for industry and enterprise networks. They fall into three models according to the number of service slots: DRO50-20, DRO50-40 and DRO50-80.

With NP hardware technology, the DRO50 routers provide extraordinary performance: 28 Gbps backplane bandwidth and up to 4.5 Mpps forwarding rate.

The DRO50 series feature high performance, multi-service, high security, hot plugging and hot backup. They provide good expandability and configurability, support multiple types of interfaces and service features and integrate various technologies including IPv6, BGP, VPN, QoS, traffic engineering and multicast.

In terms of networking application, the DRO50 series routers can serve as high-performance convergence equipment to provide comprehensive service processing capabilities and flexible total network solutions, thus effectively raising network value and saving network construction costs.

Advanced Hardware Architecture

The product adopts dual-kernel NP structure, which implements parallel processing and enhances the performance. The main control board provides three built-in GE interfaces which directly connect to the NP for linear rate forwarding without seizing any backplane bandwidth. The DRO50 series adopts the design of high backplane bandwidth up to 28 Gbps and provides a total of five PCI buses. The main board bandwidth will not become the bottleneck of data forwarding.

The series of routers supports priority setting of voice packets and provides small and medium-sized enterprises with the needed multi-functional service platforms of high cost performance.

It supports congestion management, queuing policies such as PQ, CQ, FIFO, WFQ, CBWFQ, LLQ, RTPQ, congestion avoidance policies such as WRED and RED and GTS traffic shaping policies.

The wide slot design is adopted for Slots 5-6 and 7-8 on the DRO50 router. The panel in the slot can be taken out so as to form a double-width DNMX slot to hold the 24-port or 48-port Ethernet module.

With the USB FLASH memory (U disk), users can store configuration and log files, and reduce a lot of repetitive work as well as system maintenance workload.

Better Stability

The complete separation of management and control engine from forwarding engine gives users better stability and performance and more reliable service features that are easier to implement.

Modular Software Design

The machine will not crash when an error occurs to a software module. The decreased software complexity, the availability of online software upgrades, the isolation of faults in the software module, multiple backup mechanisms, VRRP and VRRP+ help to enhance the user experience.

All the DRO series routers adopt the same DNOS software system, which brings great convenience to maintenance.

Rich Software Features*

The DRO50 series of routers support MPLS. MPLS combines the L2 switching and L3 routing technologies. MPLS VPN is increasingly popular for enterprise interconnection and provision of various new services, becoming an important means for IP network operators to provide value-added services.

Increased Efficiency

The DRO50 series of routers provide USB Flash memory to store configurations and log files and help thus to reduce repetitive work and the workload for system maintenance.

*Available in future firmware versions

All information in this section is relevant to all members of the D-Link DRO20 series router family, unless otherwise stated.

TECHNICAL SPECIFICATIONS

PERFORMANCE

- Maximum packet forwarding rate 4.5 Mpps
- Backplane bandwidth 28 Gbps
- Flash 32M (default), maximum 96M
- SDRAM 1G (default)

INTERCONNECT PROTOCOLS

- Encapsulation protocols
  - Ethernet
  - 802.1Q
  - HDLC
  - PPP
  - MP
  - X.25
  - Frame Relay
  - LAPB
  - SLIP
  - ATM
  - SDH
- Routing protocols
  - Static
  - RIPv1/v2
  - OSPF
  - BGP
  - ISIS
  - PBR
  - IPv6
- IP applications
  - Ping
  - Trace
  - NTP
  - Telnet
  - SSH
  - DNS client/DNS static
  - UDP helper
  - DHCP server/DHCP relay
  - SMTP

QoS

- Congestion management
  - FIFO
  - PQ
  - CQ
  - WFQ
  - CBWFQ
  - LLQ
  - RTPQ
- Congestion avoidance
  - RED
  - WRED
  Traffic supervision
  - CAR
  Traffic shaping
  - GTS
  Link efficiency
  - CTCP
  - CRTP

MULTICAST & SECURITY

- IGMPv1/v2/v3
- PIM-SM
- PIM-DM
- Firewall
  - Packet filtering
  - State inspection
  - Attack defense
  - Content filtering
  - Traffic control
- Data encryption standard
  - 3DES
  - AES
- Authentication
  - Local authentication
  - Radius authentication
  - TACACS+ authentication
- ACL

Routing protocol authentication
  - OSPF MD5 authentication
  - RIPv2 MD5 authentication
  - BGP4 MD5 authentication

MAINTENANCE AND AVAILABILITY

- Network management
  - SNMP v1/v2/v3
  - Standard MIB
  - RMON MIB
  - Private MIB
  - Traffic management
  - SYSLOG
- User management
  - Console login
  - AUX login
  - Telnet (VTY)
  - SSH login
  - Modular software design
- Availability
  - VRRP protocol
  - Backup
  - DLDP
  - Key parts hot plugging (power, fan, service module)
  - Key parts redundancy (five PCI bus, multiple power, double boot imagine, double configuration files)

VPN

- IPSec
- GRE
- PPTP/L2TP

ORDER INFORMATION

BASIC COMPONENTS	DESCRIPTION
DRO50-20	DRO50-20 Router Host, 1*RCM Slot, 2*NMX Slots, 2*Power Supply Slots, Built-in FAN, AC Version
DRO50-40	DRO50-40 Router Host, 1*RCM Slot, 4*NMX Slots, 3*Power Supply Slots, without Fan, AC Version
DRO50-80	DRO50-80 Router Host, 1*RCM Slot, 8*NMX Slots, 3*Power Supply Slots, without Fan, AC Version
DRO50-RCM20-1G-3GE	DRO50-20 Main Control Module, 3*10/100/1000 BASE-TX Ports and 3*SFP Ports, 2*USB Ports, 1*Console Port 1*Aux Port, 1G DDRAM, 32M FLASH, DNOS
DRO50-RCM40-1G-3GE	DRO50-40 Main Control Module, 3*10/100/1000 BASE-TX Ports and 3*SFP Ports, 2*USB Ports, 1*Console Port 1*AUX Port, 1G DDRAM, 32M FLASH, DNOS
DRO50-RCM80-1G-3GE	DRO50-80 Main Control Module, 3*10/100/1000 BASE-TX Ports and 3*SFP Ports, 2*USB Ports, 1*Console Port 1*AUX Port, 1G DDRAM, 32M FLASH, DNOS
PA240R	Power Supply Module for DRO-50xx
DROxx40-FAN	Fan Module for DRO-5040
DROxx80-FAN	Fan Module for DRO-5080
DRO-FLASH-64	64M FLASH Card
CAB-AC-DRO-50xx	Accessories, AC Cable for DRO-50xx Series Router
GCB-DRO-50xx	Accessories, Tool Kit for DRO-50xx Series Router
INTERFACE MODULE	
NMX-4E1/CE1H	4-Port E1/CE1 NMX Module
NMX-8E1/CE1H	8-Port E1/CE1 NMX Module
NMX-1CPOSH	1-Port 155M CPOS NMX Module, without SFP Modules
AIM-VPN	Hardware Encryption Module
INTERFACE ACCESSORIES	
CAB-E1 balanced/DB9M-RJ45F/120 ohm/3m	E1 banlanced Cable/RJ45 Female-120Ω-3meter, DB9M Cable Connect RJ45 female
CAB-E1 unbalanced/DB9M-2*BNC/75 ohm/3m	E1 Cable-3m, DB9 Male Connect BNC*2 (75ohm)
CAB-E1 balanced/DB9M-RJ45M/120 ohm/3m	E1 Cable-3m, DB9 Male Connect RJ45 (120ohm)
CAB-E1 unbalanced/DB25M-8*BNC/75 ohm/3m	E1 Cable-3m, DB25 Male Connect BNC*8 (75ohm)
CAB-E1 balanced/DB25M-4*RJ45M/120 ohm/3m	E1 Cable-3m, DB25 Male Connect RJ45 *4 (120ohm)
Mini-GBIC-SX	1000BASE-SX SFP Transceiver MM (850nm, 550m, LC)
Mini-GBIC-LX	1000BASE-LX SFP Transceiver SM (1310nm, 10km, LC)
Mini-GBIC-LH	1000BASE-LH SFP Transceiver SM (1310nm, 40km, LC)
Mini-GBIC-ZX50	1000BASE-ZX SFP Transceiver SM (1550nm, 50km, LC)
Mini-GBIC-ZX80	1000BASE-ZX SFP Transceiver, SM (1550nm, 80km, LC)
SDH155-SFP-SX-MM850	155M POS/CPOS/ATM SFP Transceiver, MM (850nm, 1km, LC)
SDH155-SFP-SX-MM1310	155M POS/CPOS/ATM SFP Transceiver, MM (1310nm, 2km, LC)
SDH155-SFP-LH15-SM1310	155M POS/CPOS/ATM SFP Transceiver, MM (1310nm, 15km, LC)
SDH155-SFP-LH40-SM1310	155M POS/CPOS/ATM SFP Transceiver, MM (1310nm, 40km, LC)
SDH155-SFP-LH80-SM1550	155M POS/CPOS/ATM SFP Transceiver, MM (1550nm, 80km, LC)

* Please get in contact with your D-Link Representative for the complete order infomation