

The Alcatel 7652 and 7622 PowerRail Distribution Routers (PDRs), formerly the PowerRail 5200 and 2200, are designed to meet the demands of high performance, high availability networks within MANs, ISPs, CLECs and other service providers. They feature extensive routing capabilities and flexible connectivity options. Their powerful parallel access shared memory architecture and policy-based management simplify network design and administration, reducing the cost of ownership. Superior forwarding rates, scalability, and mission critical resiliency features make the Alcatel 7652 and 7622 PDRs ideal solutions for scaling the performance of your network.



Wire-speed
routing for IP
and IPX traffic

Alcatel 7652 PDR

The Alcatel 7652 PDR provides 52 Gb/s of non-blocking bandwidth. A fully loaded fourteen-slot chassis supports high performance switching at Layers 2, 3, 4 and 7, allowing port densities up to 240 auto-sensing 10Base-T/100Base-TX, 240 100Base-FX, 73 Gigabit Ethernet ports, or 24 FDDI ports, as well as 24 Packet-over-SONET (POS)/SDH (OC-3 or OC-12) ports.

Alcatel 7622 PDR

The Alcatel 7622 PDR provides 22 Gb/s of non-blocking bandwidth. A fully loaded seven-slot chassis supports high performance switching at Layers 2, 3, 4 and 7, allowing port densities to 100 auto-sensing 10Base-T/100Base-TX, 100 100Base-FX, 30 Gigabit Ethernet ports, or 10 FDDI ports, as well as 10 POS/SDH (OC-3 or OC-12) ports.

High performance routing

The Alcatel 7652 PDR provides wire-speed, packet-by-packet routing throughput of more than 37.2 Mpps (14.8 Mpps for the 7622 PDR) for IP and IPX traffic via standards-based routing protocols. The routers' cacheless routing engines support more than 256 K MAC or IP routes per port. For the Alcatel 7652 PDR, this equates to 6.4 million subnet routes per chassis (2.56 million for the 7622 PDR) – more than enough to accommodate the largest networks.

Parallel access shared memory

PowerRail routers use Alcatel's reliable ASIC-based parallel access shared memory architecture, which allows them to deliver wire-speed multicast traffic without affecting overall performance. The parallel access shared memory architecture is superior to traditional shared memory architectures in that its non-blocking design provides every port with simultaneous full access to a central shared memory. Memory is allocated to each port according to demand, providing a highly efficient use of router resources.

Mission-critical reliability

The modular design offers future-proofing, simple field-serviceability, and product flexibility. All key components exist independently, are optionally redundant, and are hot swappable.

Application-enabled networking

The Alcatel 7652 PDR incorporates unique "best-of-breed" characteristics that provide quality of service functionality for your network through MPLS/RSVP, DiffServ and programmable bandwidth queuing. Using the ability to perform wire-speed analysis of Layers 2, 3, 4, and application attributes, the Alcatel 7652 PDR can route traffic according to a broad set of management policies that enable application-based filtering, access control list (ACL) features, wire-speed accounting, bandwidth on demand, policing and rate shaping.

Continuous investment protection

The PowerRail product line leverages your current hardware investment and provides smooth expansion and migration well into the future. The size, modularity and variety of interfaces available for the PowerRail routers assure that they will scale as your network grows. Alcatel even provides gigabit interface card (GBIC) transceiver cards for the Alcatel 7652 and 7622 PDRs. Furthermore, the interface modules for the Alcatel 7652 PDR fit into the smaller Alcatel 7622 PDR, enabling flexible network design as networking requirements change.

Superior forwarding rates, scalability, and mission-critical resiliency features make the PowerRail product line the ideal solution for improving the performance of any network.

Technical Summary

System Resiliency

- ▼ Redundant, hot-swappable power supplies, management cards; memory cards (Alcatel 7652 PDR only), and fans
- ▼ Redundant Gigabit Ethernet links
- ▼ Hot-swappable interface modules
- ▼ Multiple operating system images
- ▼ Load sharing resilient inter-switch links (trunk groups)

System Capacity

Alcatel 7652 PDR

- ▼ Backplane capacity – 52 Gb/s
- ▼ Switching throughput – 37.2 Mpps
- ▼ Packet-by-packet routing throughput – 37.2 Mpps

Alcatel 7622 PDR

- ▼ Backplane capacity – 22 Gb/s
- ▼ Switching throughput – 14.88 Mpps
- ▼ Packet-by-packet routing throughput – 14.88 Mpps

Management (abridged)

- ▼ RFC 1157 SNMP
- ▼ RFC 1213 MIB-II
- ▼ RFC 1493 Bridge MIB
- ▼ RFC 1643 Ethernet MIB
- ▼ RFC 1757 RMON (4 groups)
- ▼ RFC 1724 RIPv2 MIB
- ▼ RFC 1850 OSPF MIB
- ▼ RFC 1657 BGP-4 MIB, RSVP MIB
- ▼ RFC 2037 Entity MIB
- ▼ RFC 2096 IP Forwarding Table MIBs
- ▼ RFC 1112 IGMPv2
- ▼ RFC 1075 DVMRP
- ▼ RFC 2117 PIM
- ▼ Multicast Routing MIBs
- ▼ Alcatel Enterprise MIB

Physical Characteristics

Alcatel 7652 PDR

- ▼ Height: 79.8 cm (31.4 in.)
- ▼ Width: 44.5 cm (17.5 in.)
- ▼ Depth: 61.5 cm (24.2 in.)
- ▼ Weight: 102 kg (225 lb.), fully loaded
- ▼ Total slots: 14 front

Alcatel 7622 PDR

- ▼ Height: 57.7 cm (22.7 in.)
- ▼ Width: 44.5 cm (17.5 in.)
- ▼ Depth: 52.7 cm (20.75 in.)
- ▼ Weight: 41 kg (90 lb.), fully loaded
- ▼ Total slots: 7 front

Operating Environment

- ▼ 0° C to 45° C
- ▼ 85% maximum relative humidity, non-condensing
- ▼ Maximum altitude: 0 to 3,000 m (0 to 10,000 ft.)

Agency Approvals

- ▼ FCC Part 15, Class A, CE Mark, VCCI Class A, EN50082-1, EN55052, UL, cUL, TUV

Power

- ▼ Input voltage: 90-264 V AC; 50-60 Hz
- ▼ Optional 48 V DC

Standards (abridged)

- ▼ IEEE 802.3u 100Base-T
- ▼ IEEE 802.3z 1000Base-X
- ▼ IEEE 802.3x Full-Duplex with flow control
- ▼ IEEE 802.1D Spanning Tree Protocol
- ▼ IEEE 802.1p Priority and Dynamic Multicast Filtering
- ▼ IEEE 802.1Q VLAN Tagging
- ▼ RFC 1058, 1723, 2082 RIP and RIPv2
- ▼ RFC 1583, 2178 OSPF, BGP4
- ▼ RFC 1112 IGMP and IGMPv2
- ▼ RFC 1256 Router Discovery Protocol
- ▼ RFC 1812 Router requirements
- ▼ RFC 1122 Host requirements
- ▼ RFC 1771 Border Gateway Protocol (BGP-4)
- ▼ RFC 783 TFTP
- ▼ DHCP/BootP relay
- ▼ RFC 1619/1662 PPP-over-SONET
- ▼ RFC 2474, 2475 DiffServ
- ▼ RFC 1075 – distance vector multicast routing protocol (DVMRP)
- ▼ RFC 2117 – Protocol Independent Multicast-Sparse Mode Protocol (PIM-SM),
- ▼ Internet drafts MPLS, RSVP
- ▼ IPX/RIP, IPX/SAP & AppleTalk Phase 2
- ▼ NTP client and server

For more information www.cid.alcatel.com

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