

### Key Features

#### High Performance

- Up to 960 gigabits per second (Gbps)
- Up to 720 million packets per second
- As low as 600 nanosecond latency

#### Arastra Extensible Operating System

- Supports virtualized environments
- Customizable to customer needs

#### High Software Reliability

- Fine-grained software modularity
- Health monitoring and self-healing
- In-service-software upgrades (ISSU)

#### High Hardware Availability

- Redundant hot-swappable power
- Redundant hot-swappable fans
- Redundant management ports

#### Flexible Airflow/Mounting Options

- Front-to-rear airflow
- Reversible airflow option
- Hot or cold aisle port facing options

#### High 10-Gigabit Port Density

- 48 10GbE ports in 1U
- 2016 10GbE ports per 42U rack

#### Full Range of SFP+ PHY Options

- 10GBASE-X optical PHYs
- 10GBASE-CR copper cables
- 1000BASE-X optical PHYs
- 1000BASE-T copper PHY

### Overview

The Arastra 7100 Series is a family of low latency high performance L2/3/4 10 Gigabit Ethernet datacenter switches. Offered with 24 and 48 ports in a compact 1U chassis with redundant power and cooling, the Arastra 7100 Series features front-to-rear airflow when mounted in either direction for flexible rack-top server aggregation deployments. All ports accommodate the full range of 10GbE SFP+ or GbE SFP optical or copper physical layer options, allowing for maximum flexibility and investment protection as server connections migrate from Gigabit to 10 Gigabit Ethernet.



Arastra 7148SX: 48-port 10GbE 960 Gbps, 720 Mpps, L2/3/4, 1U Switch (SFP)



Arastra 7148S: 48-port 10 GbE 800 Gbps, 600 Mpps, L2/3/4, 1U Switch (SFP)



Arastra 7124S: 24-port 10 GbE 480 Gbps, 360 Mpps, L2/3/4, 1U Switch (SFP)

### Arastra EOS

The Arastra 7100 Series runs EOS, a datacenter-class operating system with a fine-grained modular protected memory architecture that ensures the highest levels of reliability and availability. Each process is monitored and restarted automatically in response to failure, while in-service software upgrades (ISSU) allow individual software components to be updated without disrupting system operation. Arastra EOS can be extended to support virtualized environments and is customizable to meet specific customer functionality requirements.

## Layer 2 Feature Set

- 16K L2 Forwarding Entries
- 802.1w Rapid Spanning Tree
- 802.3ad Link Aggregation/LACP
  - 16 ports/channel
  - 256 groups per system
- 802.1Q VLANs/Trunking
  - 4094 VLANs
- Port Mirroring\*
- Jumbo Frames (9216 Bytes)
- 802.3x PAUSE
- MAC Security\*
- IGMP Snooping v 2\*

## Layer 3 Feature Set

- 16K IPv4 Routes\*
- 4K IPv6 Routes\*
- Static Routes\*
- OSPF\*
- BGP\*
- L2/3/4 Access Lists (up to 16K)\*
- Atomic ACL Updates\*

## Network Management

- Dual 10/100/1000 Mgmt Ports
- RS-232 Serial Console Port
- USB Port
- SNMP v2, v3
- SSHv2
- Syslog
- TACACS+\*
- Network Time Protocol (NTP)
- File download via SCP, HTTP, HTTPS, FTP & TFTP Client
- Familiar Industry Standard CLI

## IEEE Compliance

- 802.1D Bridging and Spanning Tree
- 802.1p QOS/COS\*
- 802.1Q VLAN Tagging
- 802.1w Rapid Spanning Tree
- 802.1AB Link Layer Discovery\*
- 802.3ad Link Aggregation with LACP
- 802.3x Flow Control
- 802.3ab 1000BASE-T
- 802.3z Gigabit Ethernet
- 802.3ae 10 Gigabit Ethernet

\* Supported in a 2H'08 software release

## Model Comparison

|                           | 7124S         | 7148S         | 7148SX        |
|---------------------------|---------------|---------------|---------------|
| Port Count                | 24            | 48            | 48            |
| Throughput                | 480 Gbps      | 800 Gbps      | 960 Gbps      |
| Packets/Second            | 360 Mpps      | 600 Mpps      | 720 Mpps      |
| Latency                   | 600 nsec      | 900 nsec      | 1200 nsec     |
| CPU                       | X86 Dual-Core | X86 Dual-Core | X86 Dual-Core |
| Flash Memory              | 1GB           | 1GB           | 1GB           |
| Main Memory               | 1GB           | 1GB           | 1GB           |
| Ethernet Mgmt Ports       | 2             | 2             | 2             |
| Serial Ports              | 1             | 1             | 1             |
| USB Port                  | 1             | 1             | 1             |
| Interface Type            | SFP/SFP+      | SFP/SFP+      | SFP/SFP+      |
| 1+1 PSU Redundancy        | Yes           | Yes           | Yes           |
| Hot Swappable PSUs        | Yes           | Yes           | Yes           |
| Hot Swappable Fans        | Yes           | Yes           | Yes           |
| Reversible Airflow Option | Yes           | Yes           | Yes           |

## Supported SFP Optics and Copper Media

| Interface Type | Media             | Max Distance |
|----------------|-------------------|--------------|
| 10GBASE-CR     | Twinax Copper     | 5m           |
| 10GBASE-SRL    | 50 micron MMF     | 100m         |
| 10GBASE-SR     | 50 micron MMF     | 300m         |
| 10GBASE-LRM*   | 62.5 micron MMF   | 220m         |
| 10GBASE-LR     | 9 micron SMF      | 10km         |
| 1000BASE-SX    | 50 micron MMF     | 550m         |
| 1000BASE-LX    | 9 micron SMF      | 10km         |
| 1000BASE-T     | Category 5 Copper | 100m         |

## Environmental Characteristics

- Operating Temperature 0 to 40C
- Storage Temperature -40 to 70C
- Relative Humidity 5 to 95%
- Operating Altitude 0-10,000 ft

## Power Specifications

- Max Output Power: 650W
- Input Voltage Range: 100-240VAC
- Input Current (max): 4-8A
- Input Frequency: 50-60 Hz
- Input Connector: IEC 320-C13

## Physical Characteristics

- Size HxWxD: 1.74 x 17.4 x 20.25" (44 x 440 x 515mm)
- Weight : 7124S: 26 lbs (11.8kg)  
7148S: 29 lbs (13.2kg)

## Standards Compliance

- EMI: FCC Part 15 Class A  
ICES-003 Class A
- Safety: IEC/UL/CSA/EN 60950  
CE, UL, TUV Mark
- Other: ROHS-5 compliant

## Ordering Information

| Product Number | Product Description  |
|----------------|--|
| DCS-7124S-F    | Arastra 7124S, 24-port L2/3/4 switch (5 front-to-rear* airflow fans) & 2 650W AC Power Supplies  |
| DCS-7124S-R    | Arastra 7124S, 24-port L2/3/4 switch (5 rear-to-front* airflow fans) & 2 650W AC Power Supplies  |
| DCS-7148S-F    | Arastra 7148S, 48-port L2/3/4 switch (5 front-to-rear* airflow fans) & 2 650W AC Power Supplies  |
| DCS-7148S-R    | Arastra 7148S, 48-port L2/3/4 switch (5 rear-to-front* airflow fans) & 2 650W AC Power Supplies  |
| DCS-7148SX-F   | Arastra 7148SX, 48-port L2/3/4 switch (5 front-to-rear* airflow fans) & 2 650W AC Power Supplies |
| DCS-7148SX-R   | Arastra 7148SX, 48-port L2/3/4 switch (5 rear-to-front* airflow fans) & 2 650W AC Power Supplies |
| LIC-7100-L3    | Arastra EOS Layer 3 Software License for Arastra 7100 series switches (OSPF, BGP)                |
| CAB-SFP-SFP-1M | 10GBASE-CR SFP+ Cable 1 Meter  |
| CAB-SFP-SFP-2M | 10GBASE-CR SFP+ Cable 2 Meter  |
| CAB-SFP-SFP-3M | 10GBASE-CR SFP+ Cable 3 Meter  |
| CAB-SFP-SFP-5M | 10GBASE-CR SFP+ Cable 5 Meter  |
| SFP-10G-SR     | 10GBASE-SR SFP+ Optics Module  |
| SFP-10G-SRL    | 10GBASE-SRL SFP+ Optics Module   |
| SFP-10G-LRM    | 10GBASE-LRM SFP+ Optics Module   |
| SFP-10G-LR     | 10GBASE-LR SFP+ Optics Module  |
| SFP-1G-SX      | 1000BASE-SX SFP Optics Module  |
| SFP-1G-LX      | 1000BASE-LX SFP Optics Module  |
| SFP-1G-T       | 1000BASE-T SFP Copper Module   |

\* Front-to-rear implies airflow from the port side to the fan side. Rear-to-front implies airflow from the fan side to the port side.  
 Note: The Arastra 7100 Series switches ship standard with two meter C13-C14 power cables. Other power cables must be ordered separately.

## Warranty

The Arastra 7100 Series switches include a 1 year limited hardware warranty, which covers parts repair or replacement with a 10-business day turn-around after unit is received.

## Service and Support

Additional support services including advanced hardware replacement are available.

### Headquarters

275 Middlefield Road  
 Menlo Park, CA 94025  
 USA  
 650 462-5000

### Support

support@arastra.com  
 650 462-5002  
 866 476-0000

### Sales

sales@arastra.com  
 650 462-5001  
 866 497-0000

For more information, visit [www.arastra.com](http://www.arastra.com)

© Copyright 2008 Arastra, Inc. The information contained herein is subject to change without notice. Arastra and the Arastra logo are trademarks of Arastra Inc in the United States and other countries. Other product or service names may be trademarks or service marks of others.

**ARAISTRA**