

Product Highlights

Performance

- 7130-32LB: 32x100M/1GbE/10GbE
- 7130-48L/LB: 48x100M/1GbE/10GbE
- 7130-96L/LB: 96x100M/1GbE/10GbE
- Non blocking
- Nanosecond level L1 forwarding
- Xilinx Virtex® UltraScale+™ FPGA
- Deterministic

Advanced L1 functionality

- Signal regeneration
- Media conversion
- Port mirroring
- Telemetry
- Dynamic patching/link management
- Layer 1+ statistics on every link

Core Features

- SFP+ ports capable of 100M-11.3Gbps
- Full signal recovery & regeneration
- Bit for bit forwarding for any protocol
- Layer 1+ packet statistics
- Integrated FPGA for applications

Ultra Low Latency

- Deterministic ultra low latency
- 5 ns - 7130-48L/LB, 7130-32LB
- 6 ns - 7130-96L/LB
- Less than 100 ps jitter
- Same latency for 1:N port mirroring
- Completely non-blocking

Redundancy & Data Center Optimized

- Dual redundant, hot swappable PSU
- Dual redundant, hot swappable fans
- AC & DC power options
- Rear to front or front to rear cooling

Monitoring

- Packet statistics on every port
- Embedded influxdb database
- Eye diagram for monitoring/troubleshooting
- tcpdump for diagnostics on every port
- LLDP for discovering network topology
- Full SFP+ interface diagnostics including light levels, temperature & voltage

Management platform

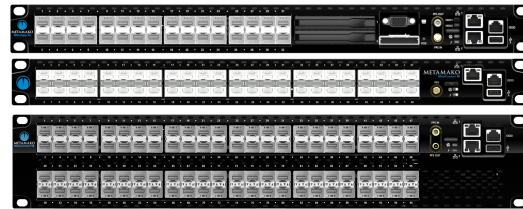
- Linux based
- Industry standard CLI
- JSON RPC API for remote management

Overview

The Arista 7130L Series FPGA-enabled devices leverage FPGA technology to enable the development and deployment of cutting-edge network applications. Available in 32, 48 or 96 SFP+ port options, the 7130L Series combine multiple devices in one; performing layer 1+ switching in only 5 nanoseconds, enabling unrestricted access to an onboard FPGA and containing an x86_64 server.

The 7130L Series are optimized for Arista's FPGA based network applications and can equally be leveraged to run 3rd party partner applications. FPGA application developers can utilize the platform to deploy and deliver their performance critical apps. On top of the market-leading FPGA functionality, the devices combine a range of Layer 1+ network functionality on to the same devices:

- Signal regeneration
- Port mirroring
- Dynamic patching/link management
- Ad-hoc tapping without rewiring
- Layer 1+ statistics on every link
- Media conversion
- Telemetry and more



Arista 7130L Series

Feature	Benefits
Simplified stack	Fan-out with 5 ns of latency, equivalent to a single metre of fiber or copper interconnect, and insignificant jitter.
Media conversion	Reduces costs by converting between different media types running at the same rate
Layer 1+ functionality	Save rack space and reduce complexity by leveraging dynamic patching, tapping, one-to-many replication, telemetry and comprehensive port statistics on a single device.
Feature rich	Avoid the need to build features in-house by leveraging Arista's access control, syslog, SNMP, packet stats, tcpdump, JSON RPC API, time series data, streaming telemetry and more - included as standard within the 7130 Series.
Easy app deployment	Streamline operational processes through Arista's built-in application infrastructure which allows developers to wrap applications into simple packages for deployment.
Enterprise ready	Deploy FPGA applications with ease - the FPGA platform integrates with a 64-bit x86 management processor and the MOS Operating system to provide user extensible solutions.

Arista 7130 Applications

Arista offers several powerful network applications to simplify and transform network infrastructure. These applications are designed for use cases including ultra-low latency exchange trading, network visibility and providing vendor or broker based shared services. Arista's 7130L supports these applications.

The 7130 applications provided by Arista enable a complete lifecycle of packet replication, multiplexing, filtering, time stamping, aggregation, and capture. In addition to these application functions Arista also provides FPGA IP cores to enable low latency communications and multiplexing functionality in your own custom applications.

Application Comparison for Arista 7130L Series

Application	Overview	Key Features	Use it for...
MetaWatch	Advanced network monitoring	<ul style="list-style-type: none">• Tapping• Large scale, lossless tap aggregation• Multi-port data capture• Sub-nanosecond precise time stamping• Deep buffering (32 GB)	<ul style="list-style-type: none">• In-depth network monitoring and visibility• Improved network reliability & troubleshooting problems• Market data & packet capture• Accurate latency measurement & monitoring• Regulatory compliance (MiFID II - RTS 25)
MetaMux	Low-latency multiplexing	<ul style="list-style-type: none">• Data aggregation in 39 nanoseconds• Deterministic jitter• Packet statistics• BGP & PIM support	<ul style="list-style-type: none">• Ultra-low latency network connectivity for trading• Market data fan-out and data aggregation for order entry at nanosecond levels
MultiAccess	Connection sharing with enhanced security	<ul style="list-style-type: none">• Low-latency multiplexing and security from 55 nanoseconds• ACL-based configurable filtering• Easy to deploy data privacy for connection sharing	<ul style="list-style-type: none">• Secure network connection sharing• Providing sponsored access to multiple clients• Multi tenant exchange access• Low latency interconnect sharing
Exchange	In-line packet time-stamping enabling exchange fairness	<ul style="list-style-type: none">• Timestamp at the edge of trading venue networks• Enabled by reliable accuracy• Time/latency in the venue implementation becomes less relevant	<ul style="list-style-type: none">• Increase exchange fairness• Reduce trading venue latency sensitivity

Enabling Custom Applications

While FPGA applications can be challenging to develop, the Arista 7130L makes them easy to deploy. Arista provides a built-in application framework allowing developers to wrap applications into simple packages for deployment, streamlining operational processes. Arista development toolkits enable complete and unfettered access to the facilities provided by the in-system FPGAs. The MOSAPI provides monitoring, CLI, API, FPGA image management, and other facilities to allow application developers to concentrate on the core application functionality. These are the same APIs and developer kits used by the Arista engineering team to develop and deploy our applications.

Model Comparison	7130-48L	7130-48LA	7130-96L	7130-96LA
Ports	48 x SFP+ 2 x RJ45	48 x SFP+ 2 x RJ45	96 x SFP+ 2 x RJ45	96 x SFP+ 2 x RJ45
FPGA	Xilinx Virtex® UltraScale+™ FPGA			
FPGA Model	VU7P Speed Grade 2			
DRAM	32GB DDR	32GB DDR	32GB DDR	32GB DDR
SSD Drive Bays	No	No	No	No
External PCIE	No	No	No	No
Internal 10G Ports	2	2	2	2
Throughput	100M-11.3Gbps	100M-11.3Gbps	100M-11.3Gbps	100M-11.3Gbps
Layer 1 Latency	5 ns	5 ns	6 ns	6 ns
MetaMux Latency	43 ns	43 ns	43 ns	43 ns
MultiAccess Latency	55 ns	55 ns	55 ns	55 ns
MetaWatch	Yes	Yes	Yes	Yes
Exchange App	Yes	Yes	Yes	Yes
Clock	OCXO	Atomic	OCXO	Atomic
CPU	Quad-Core x86	Quad-Core x86	Quad-Core x86	Quad-Core x86
System Memory	8 GB RAM	8 GB RAM	8 GB RAM	8 GB RAM
On-board SSD	64GB	64GB	64GB	64GB
USB Ports	1	1	1	1
100/1000 Mgmt Ports	2	2	2	2
PPS Input Ports (5V TTL, 50Ω)	1	1	1	1
PPS Output Ports (5V TTL)	1	1	1	1
RS-232 Serial Ports	1 (RJ-45)	1 (RJ-45)	1 (RJ-45)	1 (RJ-45)
Hot-swap Power Supplies	2	2	2	2
Hot-swappable Fans	2 x 2	2 x 2	3	3
Reversible Airflow Option	Yes	Yes	Yes	Yes
Rack Units	1U	1U	2U	2U
Size (WxHxD)	17.6 x 1.7 x 14.9" (44.8 x 4.3 x 37.9 cm)	17.6 x 1.7 x 14.9" (44.8 x 4.3 x 37.9 cm)	17.6 x 3.3 x 14.9" (44.8 x 8.7 x 37.9 cm)	17.6 x 3.3 x 14.9" (44.8 x 8.7 x 37.9 cm)
Max Power Draw	190W	190W	388W	388W
Weight	9kg/20lbs	9kg/20lbs	12kg/26lbs	12kg/26lbs
Fan Tray	FAN-7130-1U-F FAN-7130-1U-R	FAN-7130-1U-F FAN-7130-1U-R	FAN-7130-2U-F FAN-7130-2U-R	FAN-7130-2U-F FAN-7130-2U-R
Power Supplies	460W AC 460W DC	460W AC 460W DC	460W AC 460W DC	460W AC 460W DC

Model Comparison	7130-32LB	7130-48LB	7130-48LBA	7130-96LB
Ports	32 x SFP+ 2 x RJ45	48 x SFP+ 2 x RJ45	48 x SFP+ 2 x RJ45	96 x SFP+ 2 x RJ45
FPGA	Xilinx Virtex® UltraScale+™ FPGA			
FPGA Model	VU9P Speed Grade 3			
DRAM	32GB DDR	32GB DDR	32GB DDR	32GB DDR
SSD Drive Bays	Yes	No	No	No
External PCIE	Yes	No	No	No
Internal 10G Ports	2	2	2	2
Throughput	100M-11.3Gbps	100M-11.3Gbps	100M-11.3Gbps	100M-11.3Gbps
Layer 1 Latency	5 ns	5 ns	5 ns	6 ns
MetaMux Latency	39 ns	39 ns	39 ns	39 ns
MultiAccess Latency	55 ns	55 ns	55 ns	55 ns
MetaWatch	No	No	No	No
Exchange App	No	No	No	No
Clock	OCXO	OCXO	Atomic	OCXO
CPU	Quad-Core x86	Quad-Core x86	Quad-Core x86	Quad-Core x86
System Memory	8 GB RAM	8 GB RAM	8 GB RAM	8 GB RAM
On-board SSD	64GB	64GB	64GB	64GB
USB Ports	1	1	1	1
100/1000 Mgmt Ports	2	2	2	2
PPS Input Ports (5V TTL, 50Ω)	1	1	1	1
PPS Output Ports (5V TTL)	1	1	1	1
RS-232 Serial Ports	1 (RJ-45)	1 (RJ-45)	1 (RJ-45)	1 (RJ-45)
Hot-swap Power Supplies	2	2	2	2
Hot-swappable Fans	2 x 2	2 x 2	2 x 2	3
Reversible Airflow Option	Yes	Yes	Yes	Yes
Rack Units	1U	1U	1U	2U
Size (WxHxD)	17.6 x 1.7 x 14.9" (44.8 x 4.3 x 37.9 cm)	17.6 x 1.7 x 14.9" (44.8 x 4.3 x 37.9 cm)	17.6 x 1.7 x 14.9" (44.8 x 4.3 x 37.9 cm)	17.6 x 3.3 x 14.9" (44.8 x 8.7 x 37.9 cm)
Max Power Draw	190W	190W	190W	388W
Weight	9kg/20lbs	9kg/20lbs	9kg/20lbs	12kg/26lbs
Fan Tray	FAN-7130-1U-F FAN-7130-1U-R	FAN-7130-1U-F FAN-7130-1U-R	FAN-7130-1U-F FAN-7130-1U-R	FAN-7130-2U-F FAN-7130-2U-R
Power Supplies	460W AC 460W DC	460W AC 460W DC	460W AC 460W DC	460W AC 460W DC

Supported Optics and Cables

Interface Type	SFP+ ports
1000BASE-T	RJ45
10GBASE-CR	SFP+ to SFP+: 0.5m-5m
10GBASE-SRL	100m
10GBASE-SR	300m
10GBASE-LRL	1km
10GBASE-LR	10km
10GBASE-ER	40km
10GBASE-DWDM	80km
40GBASE-CR4	QSFP+ / SFP+

Environmental Characteristics

Operating Temperature	0 to 40°C (32 to 104°F)
Relative Humidity	10% to 85% non-condensing
Maximum Altitude	2,000m (6,500ft)

Power Supply Specifications

Power Supply	PWR-460-AC	PWR-460-DC
Input Voltage	100-240AC	40-72V DC
Typical Input Current	2.2-5.3A	12.8-7.1A 11.3A at -48V
Input Frequency	50/60Hz	DC
Input Connector	IEC 320-C13	AWG #16-#12

Standards Compliance

EMC	Emissions: FCC part 15, Subpart B, ICES-003 Class A, EN55022:2010, EN55032:2012; CISPR32:2012, AS/NZS CISPR32: 2015, EN61000-3-2:2014, EN 61000-3-3:2013 Immunity: EN55024:2010;CISPR 24:2010+A1:2015 EN55035: 2017 EN300 386 V2.1.1 (2016-07)
Safety	UL60950-1 2nd Ed, CAN/CSA-C22.2, EN60950-1 2nd, IEC 60950-1
Certifications	FCC 15B/ ICES-003 North America NRTL European Union CE DoC Taiwan BSMI CNS 13438, CNS 14336-1, CNS 15663 Australia-New Zealand RCM S. Korea KC Japan VCCI 32 Russia EAC Custom Union Mexico Certificate of Equivalence

Product Number	Product Description
DCS-7130-48L#	Arista 7130 Series 48L with UltraScale VU7P-2 FPGA. Requires PSU/Fan kit sold separately.
DCS-7130-48LA#	Arista 7130 Series 48L with UltraScale VU7P-2 FPGA and Atomic Clock. Requires PSU/Fan kit sold separately.
DCS-7130-96L#	Arista 7130 Series 96L with UltraScale VU7P-2 FPGA. Requires PSU/Fan kit sold separately.
DCS-7130-96LA#	Arista 7130 Series 96L with UltraScale VU7P-2 FPGA and Atomic Clock. Requires PSU/Fan kit sold separately.
DCS-7130-32LB#	Arista 7130 Series 32L with UltraScale VU9P-3 FPGA. Requires PSU/Fan kit sold separately.
DCS-7130-48LB#	Arista 7130 Series 48L with UltraScale VU9P-3 FPGA. Requires PSU/Fan kit sold separately.
DCS-7130-48LBA#	Arista 7130 Series 48L with UltraScale VU9P-3 FPGA and Atomic Clock. Requires PSU/Fan kit sold separately.
DCS-7130-96LB#	Arista 7130 Series 96L with UltraScale VU9P-3 FPGA. Requires PSU/Fan kit sold separately.

Optional Components and Spares

Product Number	Product Description
KIT-7130-AC-FAN-R	Arista 7130 Series 1RU AC PS and Fan Kit Rear to Front (Spare)
KIT-7130-AC-FAN-F	Arista 7130 Series 1RU AC PS and Fan Kit Front to Rear (Spare)
KIT-7130-DC-FAN-R	Arista 7130 Series 1RU DC PS and Fan Kit Rear to Front (Spare)
KIT-7130-2-AC-FAN-R	Arista 7130 Series 2RU AC PS and Fan Kit Rear to Front (Spare)
KIT-7130-2-AC-FAN-F	Arista 7130 Series 2RU AC PS and Fan Kit Front to Rear (Spare)
KIT-7130-2-DC-FAN-R	Arista 7130 Series 2RU DC PS and Fan Kit Rear to Front (Spare)
FAN-7130-1U-F	Spare fan module for Arista 7130 Series 1U (front-to-rear airflow)
FAN-7130-1U-R	Spare fan module for Arista 7130 Series 1U (rear-to-front airflow)
FAN-7130-2U-F	Spare fan module for Arista 7130 Series 2U (front-to-rear airflow)
FAN-7130-2U-R	Spare fan module for Arista 7130 Series 2U (rear-to-front airflow)
PWR-460AC-F	Spare 460 Watt AC PSU for Arista 7124SX, 7050, 7130, 7150 & 7048-A Switches (front-to-rear airflow)
PWR-460AC-R	Spare 460 Watt AC PSU for Arista 7124SX, 7050, 7130, 7150 & 7048-A Switches (rear-to-front airflow)
PWR-460DC-F	Spare 460 Watt DC PSU for Arista 7124SX, 7050, 7130, 7150 & 7048-A Switches (front-to-rear airflow)
PWR-460DC-R	Spare 460 Watt DC PSU for Arista 7124SX, 7050, 7130, 7150 & 7048-A Switches (rear-to-front airflow)



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