Prisma SD-WAN Instant-On Network (ION) Device Specifications

The Prisma® SD-WAN Instant-On Network (ION) models of hardware and software devices enable the integration of a diverse set of wide area network (WAN) connection types, improve application performance and visibility, enhance security and compliance, and reduce the overall cost and complexity of your WAN. Built with the intent to reduce remote infrastructure, Prisma SD-WAN enables the cloud-delivered branch.

Enterprises have traditionally deployed multiprotocol label switching (MPLS) networks, using hardware routers to connect branch offices to centralized data centers. With cloud adoption on the rise, end user applications like videoconferencing and office productivity solutions are increasingly delivered as cloud services. Legacy WAN architectures have debilitating limitations when organizations attempt to migrate to the cloud or utilize commodity internet connections in their branch offices.

For SD-WAN, you need a networking solution that:

- Steers traffic and defines networking and security policies from an application-centric perspective rather than a packet-based one.
- Minimizes manual operations and enables agile DevOps deployments via API integrations.
- Supports cloud-delivered branch architecture by enabling all branch infrastructure, such as networking and security, to be delivered from the cloud.

Benefits

Prisma SD-WAN ION devices offer:

- **Seamless integration with third-party services using CloudBlades:** Automate deployments of third-party entities, simplifying security, operations, collaboration, and multicloud connectivity.
- **Zero-touch provisioning and deployment:** Gain the advantage of automatic configuration and device claiming.
- **Instant visibility into application performance:** Understand how applications are performing and identify the root cause of app performance issues.
- **Cloud and SaaS application deployment confidence:** Meet the required performance and availability demands, including remote office WAN high availability, bandwidth, consistent latency, and dynamic path selection.

Features

Alongside these benefits, take advantage of:

- **Integrated 5G:** Prisma SD-WAN is expanding its lightweight appliance portfolio to include the ION 1200 with integrated 5G. With this new appliance, organizations can ensure optimal uptime with 5G leveraged as a backup WAN transport for business-critical applications. In addition, businesses with ATM/kiosks that require cellular as their primary WAN can simply deploy this appliance and guarantee uptime and productivity.
- **Advanced AIOps capabilities:** Prisma SD-WAN AIOps capabilities provide rich telemetry of network insights, allowing admins to perform granular trend analysis and create unique network conditions that can automate tedious manual tasks. AIOps in Prisma SD-WAN can immediately identify a common parent event among all event alarms. It will also be used for fault analytics capabilities and automated statistical analysis. In addition to event correlation and analysis, admins can gain greater control over events with automatic prioritization, allowing them to easily pinpoint issues and reduce time to resolution.
- **Autonomous Digital Experience Management (ADEM):** Palo Alto Networks Prisma SASE with ADEM capabilities now extends to both mobile users and branch users, allowing organizations to gain end-to-end visibility and segment-wise insights across the entire SASE service delivery path regardless of where their users are located. ADEM on Prisma SD-WAN can help ensure the best digital experience for branches by providing observability in the cloud and across multiple WAN paths.
- **CloudBlades:** The CloudBlades platform enables the seamless integration of branch services into the SASE fabric without needing to update your branch appliances or controllers, eliminating service disruptions and complexity. This API-based integration of the branch CPE provides a centralized platform for programming as well as an app-flow engine at the CPE, access to Prisma SD-WAN telemetry, and secure authenticated API access to Prisma SD-WAN CPE and systems. As a result, businesses can easily enable the cloud-delivered branch and simplify management and operations.

- **Zone-based firewall:** Prisma SD-WAN ION devices include an application-based, zone-based firewall (ZBFW) configured using the same top-down, application-centric policies used for performance and path selection, ensuring compliance across different network circuits and interfaces. Our ZBFW is a lightweight security solution used for securing the WAN perimeter and segmenting traffic within a branch site. Further, ION devices can be configured to use on-premises security devices or external, hosted security services to provide further security for remote offices.
- **Deep SD-WAN analysis license:** Prisma SD-WAN provides unparalleled, actionable insights into the health and performance of your WAN application and links to help with network planning, problem resolution, and analytics. With instant visibility into application performance, you can better understand your network health and usage to determine more effective policy decisions on your network.
  - **ADEM license**: Organizations can leverage real and synthetic traffic analysis for both user endpoints and IoT devices to easily pinpoint issues.
  - **Prisma SD-WAN DVR license**: With this optional license, you can retain and access up to 90 days of statistics, policy, configuration, alarms, and alerts. Network DVR is licensed per ION device.
  - **Prisma SD-WAN report license**: With this optional license, you have access to autogenerated and downloadable reports, giving network operators insight across various dimensions of their entire Prisma SD-WAN fabric. For example, utilization trends and hotspots to help customers determine if you need to do circuit upgrades or simply adjust your policies.
- **High availability (HA):** ION devices feature the industry's only HA deployment model that can survive a device failure and still preserve 100% of WAN capacity at a branch site.

Modes of Operation

All aspects of configuration, management, and monitoring of ION hardware and software devices are performed from the multitenant Prisma SD-WAN cloud management portal, eliminating the need to individually configure devices at each location. No additional servers or storage are required.

Managed through the central cloud controller, ION devices include two modes of operation. In analytics mode, the solution provides end-to-end visibility and analytics of your applications and networks, operating independently of the full suite of Prisma SD-WAN capabilities. ION devices are deployed in the network at the WAN edge and automatically begin examining application data on the network to identify the application and measure several key performance indicators of each session. Statistics from your network are stored securely in the Prisma SD-WAN cloud management portal, which can be used to configure ION devices, define applications and sites, and monitor end-to-end application performance and availability.

In control mode, Prisma SD-WAN builds on the visibility and analytics foundation set by analytics mode and allows the ION devices to begin intelligently taking action based on policy for performance, compliance, and security. Routing functions, including path selection, prioritization, and security, can be integrated into the ION device to reduce the amount of hardware and operational expenses associated with each remote office.

Software Subscriptions

Prisma SD-WAN is licensed as a branch by bandwidth or with unlimited bandwidth for data center deployments. A software subscription must be selected for each ION device deployed. Options for software subscriptions include 25Mbps, 50Mbps, 150Mbps, 250Mbps, 500Mbps, 1Gbps, 2.5Gbps, and data center.

Hardware Model Specifications

Prisma SD-WAN ION devices come in both hardware and software form factors to meet the needs of any location and deployment scenario. All ION devices are built with FIPS 140-2 as a security baseline. Encryption keys are specific to each customer and device, and they are rotated frequently, ensuring compliance mandates are met.

ION 1000

ION 1200

ION 1200 5G

ION 2000

ION 3000

ION 7000

ION 9000

Table 1: Hardware Models							
	ION 1000	**ION 1200**	**ION 1200 5G**	**ION 2000**	**ION 3000**	**ION 7000**	**ION 9000**
Use case	Small remote office	Enterprise small branch	Enterprise small branch, ATM/Kiosks	Small remote office	Remote office	Large remote office data center	Multi-gigabit remote office data center and large campus
Controller ports	N/A	N/A	N/A	10/100/1000 RJ45 (1)	10/100/1000 RJ45 (2)	10/100/1000 RJ45 (2)	10/100/1000 RJ45 (2)
WAN/LAN/ internet ports	10/100/1000 RJ45 (4)	10/100/1000 RJ45 (4)	10/100/1000 RJ45 (4)	10/100/1000 RJ45 (5)	10/100/1000 RJ45* (up to 12)	10 GE SFP+ (6) 10/100/1000 RJ45 (8)	10 GE SFP+ (8) 10/100/1000 RJ45 (8)
Bypass pairs	N/A	N/A	N/A	1 pair–ports 4/5	6 pairs–all ports†	2 pairs–ports 5/6 and 7/8	4 pairs–ports 1/2, 3/4, 5/6, and 7/8
Throughput‡	Up to 100Mbps	250Mbps	250Mbps	Up to 250Mbps	Up to 500Mbps	Up to 5Gbps	Up to 15Gbps
Power and mechanical	36 W power adapter (AC) 100–240 V, 50–60Hz Fanless	25 W power adapter (AC) 100–240 V, 50–60Hz Fanless	40W power adapter (AC) 100–240 V, 50–60Hz Fanless	60 W power adapter (AC) 100–240 V, 50–60Hz Fanless	1 PSU 150 W (AC) 100–240 V, 50-60 Hz Smart fan	1+1 redundant PSU 650 W (AC), 90–264 V, 47–63Hz Hot swappable fans (4)	1+1 Hot swappable redundant PSU 450 W (AC), 100–240 V, 50–60Hz Hot swappable fans (4)
Certifications	IEC 60950-1, cULus, FCC & CE Class A	IEC 62368-1, cTUVus, FCC, CE B, RoHS	IEC 62368-1, cTUVus,FCC, CE B, RoHS	IEC 60950-1, cULus, FCC & CE Class B, BIS, CCC, KCC	IEC 60950-1, cULus, FCC & CE Class A, BIS, CCC, KCC	IEC 60950-1, cULus, FCC & CE Class A, BIS, CCC, KCC	IEC 60950-1, cULus, FCC & CE Class A
Operating temperature	32° F to 104° F (0° C to 40° C)	32º F to 104º F 3000m altitude (0º C to 40º C)	32º F to 104º F 3000m altitude (0ºC to 40ºC)	32° F to 104° F (0° C to 40° C)	32° F to 104° F (0° C to 40° C)	32° F to 104° F (0° C to 40° C)	32° F to 104° F (0° C to 40° C)

* ION 3000 ports can be configured as discrete ports or as fail-to-wire pairs.

† All IONs have an AUX port, which you can connect at a baud rate of 115200 for out-of-band management.

‡ Encrypted throughput is measured with 1400 byte packets.

Table 1: Hardware Models (continued)

	ION 1000	ION 1200	ION 1200 5G	ION 2000	ION 3000	ION 7000	ION 9000
Storage temperature	-4° F to 158° F (−20° C to 70° C)	-4° F to 158° F (−20° C to 70° C)	-4° F to 158° F (−20° C to 70° C)	-4° F to 158° F (−20° C to 70° C)	-4° F to 158° F (−20° C to 70° C)	-4° F to 158° F (−20° C to 70° C)	-4° F to 158° F (−20° C to 70° C)
Operating humidity (non-condensing)	5% to 90%	10 to 90%	10 to 90%	5% to 90%	5% to 90%	5% to 90%	5% to 90%
Storage humidity (non-condensing)	5% to 95%	10 to 90%	10 to 90%	5% to 95%	5% to 95%	5% to 95%	5% to 95%
Dimensions (LxWxH in inches)	7.28" x 5.39" x 1.73"	6.42" x 9.53" x 1.73"	6.42" x 9.53" x 1.73"	5.73" x 6.97" x 1.73"	16.81" x 11.89" x 1.72"	21.45" x 17.16" x 1.72"	17.2" x 19.69" x 1.73"
Weight	2.2 lbs. (1 kg.)	3.69 lbs. (1.6 kg.)	3.75 lbs. (1.7kg.)	2.64 lbs. (1.2 kg.)	8.8 lbs. (4 kg.)	28.6 lbs. (13 kg.)	18.6 lbs. (8.45 kg.)

Table 2: Software Models for Remote Offices

ION 1200 Model	Suppored RF bands
ION 1200-C-NA	LTE: B2, B4,B5, B7, B12,B13, B14, B25,B26, B41,B42,B43, B48, B66,B71
ION 1200-C-ROW	LTE: B1, B3,B7, B8, B20,B2, B32, B38,B40, B41,B42,B43
ION 1200-C-5G-WW	LTE: B1, B2,B3, B5, B7,B8,B12, B13,B14, B17, B18,B19, B20, B25,B26,B28, B29,B30, B32, B34,B38, B39, B40,B41, B42,B46, B48, B66,B71 5G Sub-6NR: n1,n2, n3, n5,n28, n41, n66,n71, n77, n78,n79

Table 3: Software Models for Remote Offices

	ION 3102V	ION 3104V	ION 3108V
Platforms	ESXi, HyperV, KVM	ESXi, HyperV, KVM	ESXi, HyperV, KVM
Throughput	Up to 100Mbps	Up to 200Mbps	Up to 350Mbps
vCPU	2	4	8
RAM (GB)	8	8	8
Disk (GB)	40	40	40

Table 4: Software Models for Data Centers

	ION 7108V
Platforms	ESXi, HyperV, KVM, Azure, AWS, GCP
Throughput	Up to 3Gbps
vCPU	8
RAM (GB)	32
Disk (GB)	100