## Flowmon Probe

Flowmon Probes are high performance appliance that monitors network traffic and generates IP flow statistics. The flow statistics are then exported to storage for further analysis by a Flowmon Collector or other NetFlow/IPFIX compatible application. The probe provides the NetFlow/IPFIX data necessary for network monitoring, security, troubleshooting, IP accounting and billing, capacity planning, user and application monitoring or traffic engineering.

## Flowmon Probe Models

Flowmon Probes are available in form of physical (hardware) 1U and 2U rack units and as a virtual appliance for deployment into VMware and Hyper-V virtual environment.



## Hardware Appliances

Flowmon Probes in form of hardware appliances are high performance stand-alone devices for monitoring all types of networks from 10 Mbps to 100 Gbps. Flowmon Probe comes in **standard** or **hardware-accelerated version** (Pro) with different number and types of monitoring ports.

All Flowmon Probe provide **built-in flow collector** and Flowmon Monitoring Center (FMC) – tool for flow collection, viewing and analyzing. Built-in collector is restricted to receive flow data only from the probe itself. It is necessary to use stand-alone Flowmon Collector for collecting data from other/multiple sources.

All Flowmon Probes are equipped with one copper 10/100/1000 Ethernet **administration (management) port**. All models (except IFP-1000-CU) are equipped with one copper 10/100/1000 Ethernet **export interface**.

## Virtual Appliances

Flowmon Probe Virtual Appliances (VA) are network monitoring appliances designed for deployment into **virtual environment** (VMware and Hyper-V). Flowmon Probe Virtual Appliances provide similar functionality as Flowmon Probes in form of physical devices. Flowmon Probe VA models differ in number and speed of monitoring ports. In contrast to Flowmon Probe in form of physical appliances, Flowmon Probe Virtual Appliances don't include built-in collector, so it is necessary to use dedicated collector for NetFlow/IPFIX data storage and analysis.

All Flowmon Probe VA models are equipped with one **administration (management) port** and one **export interface** (except model IFP-1000-VA which is not equipped with dedicated export interface).

## Flowmon IPFIX Extensions

Flowmon Probes (hardware and virtual) support **Flowmon IPFIX Extensions** which extends IPFIX information elements with monitoring of network performance statistics (Round-Trip Time, Server Response Time, delays, jitter, etc.) and application protocols, e.g.: HTTP, DNS, DHCP, SMB and VoIP statistics. For more information about Flowmon IPFIX Extension see *Flow Standards Specification* document available at https://support.flowmon.com.

## Supported L2 protocols

Besides MAC addresses monitoring, Flowmon Probes also support various L2 protocols like VLAN, MPLS, GRE and OVT protocols.

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## Hardware Appliances

| P/N* | Model | Performance per port | Monitoring Port | Flow Cache** | RAID | Disk Type | CPU*** | RAM | Remote Control | Form Factor | Dimension (H x W x D) cm | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IFP-1000-CU | Flowmon Probe 1000 | 1,48 Mp/s | 1 x 10/100/1000 MbE | 0,5 M | - | 1 x SATA | 8 | 16 GB | Express | 1U | 4,3 x 43,4 x 49,7 | 8,78 |
| IFP-2000-CU | Flowmon Probe 2000 | 1,48 Mp/s | 2 x 10/100/1000 MbE | 0,5 M | - | 1 x SATA | 8 | 16 GB | Express | 1U | 4,3 x 43,4 x 49,7 | 8,78 |
| IFP-4000-CU | Flowmon Probe 4000 | 1,48 Mp/s | 4 x 10/100/1000 MbE | 0,5 M | - | 1 x SATA | 8 | 16 GB | Express | 1U | 4,3 x 43,4 x 49,7 | 8,78 |
| IFP-4000-SFP | Flowmon Probe 4000 SFP | 1,48 Mp/s | 4 x 1Gb Ethernet | 0,5 M | - | 1 x SATA | 8 | 16 GB | Express | 1U | 4,3 x 43,4 x 49,7 | 8,78 |
| IFP-6000-SFP | Flowmon Probe 6000 SFP | 1,48 Mp/s | 6 x 1Gb Ethernet | 0,5 M | - | 1 x SATA | 8 | 16 GB | Express | 1U | 4,3 x 43,4 x 49,7 | 8,78 |
| IFP-10000-SFP+ | Flowmon Probe 10000 SFP+ | 1,5 Mp/s | 1 x 10Gb Ethernet | 4 M | - | 1 x SATA | 8 | 32 GB | Express | 1U | 4,3 x 43,4 x 49,7 | 8,78 |
| IFP-20000-SFP+ | Flowmon Probe 20000 SFP+ | 1,5 Mp/s | 2 x 10Gb Ethernet | 4 M | - | 1 x SATA | 8 | 32 GB | Express | 1U | 4,3 x 43,4 x 49,7 | 8,78 |
| IFP-40000-SFP+ | Flowmon Probe 40000 SFP+ | 5 Mp/s | 4 x 10Gb Ethernet | 4 M | RAID1 | 2 x SATA | 32 | 32 GB | Enterprise | 1U | 4,3 x 43,4 x 64,2 | 19,9 |
| IFP-10000PRO-SFP+ | Flowmon Probe 10000 Pro SFP+ | 14,8 Mp/s | 1 x 10Gb Ethernet | 4 M | RAID1 | 2 x SATA | 32 | 64 GB | Enterprise | 1U | 4,3 x 43,4 x 64,2 | 19,9 |
| IFP-20000PRO-SFP+ | Flowmon Probe 20000 Pro SFP+ | 14,8 Mp/s | 2 x 10Gb Ethernet | 4 M | RAID1 | 2 x SATA | 32 | 64 GB | Enterprise | 1U | 4,3 x 43,4 x 64,2 | 19,9 |
| IFP-40000PRO-SFP+ | Flowmon Probe 40000 Pro SFP+ | 14,8 Mp/s | 4 x 10Gb Ethernet | 4 M | RAID1 | 2 x SATA | 32 | 64 GB | Enterprise | 1U | 4,3 x 43,4 x 64,2 | 19,9 |
| IFP-80000PRO-QSFP+ | Flowmon Probe 80000 Pro QSFP+ | 20 Mp/s<br>5 Mp/s | 2 x 40Gb Ethernet<br>8 x 10Gb Ethernet | 4 M | RAID1 | 2 x SATA | 32 | 64 GB | Enterprise | 1U | 4,3 x 43,4 x 73,2 | 19,8 |
| IFP-100000PRO-CFP4 | Flowmon Probe 100000 Pro CFP4 | 148,8 Mp/s | 1 x 100Gb Ethernet | 4 M | RAID1 | 2 x SATA | 40 | 64 GB | Enterprise | 2U | 8,7 x 43,4 x 75,6 | 31,5 |
| IFP-200000PRO-CFP4 | Flowmon Probe 200000 Pro CFP4 | TBA | 2 x 100Gb Ethernet | 4 M | RAID1 | 2 x SATA | 40 | 64 GB | Enterprise | 2U | 8,7 x 43,4 x 75,6 | 31,5 |

* CU indicates copper monitoring interface. Other interfaces are designed for use of transceiver according to monitored network.

** Number of flow entries in flow cache for each monitoring port.

*** Number of cores with Hyper Threading.

**Express** version of **remote control** includes command-line access and web GUI for remote surveillance of device condition. **Enterprise** version of remote control in addition includes dedicated network interface and virtual console.

Flowmon Probe **IFP-80000-PRO-QSFP+** doesn't support monitoring of application (L7) protocols and full packet capture by Flowmon Traffic Recorder in 2 x 40Gb or 8 x 10Gb Ethernet operating mode. Support of these functionalities is available in 1 x 40Gb or 4 x 10Gb Ethernet operating mode.

Flowmon Probe **IFP-2000000-PRO-CFP4** doesn't support monitoring of application (L7) protocols.

All models of hardware Flowmon Probes are equipped with built-in collector capable of processing **50 000 fps** (flows per second) and come with **500 GB storage capacity**.

**Driving Network Visibility**

## Operating Conditions

| P/N | Model | PSU | | Continuous Operation | | Expanded Operation** | | Power Consumption | | Heat Dissipation |
|-----|-------|-----|-----|---------------------|-----|---------------------|-----|------------------|-----|------------------|
| | | Power | Hot Swap | Temperature | Relative Humidity* | Temperature | Relative Humidity* | CPU Idle | CPU Max | |
| IFP-1000-CU | Flowmon Probe 1000 | 250 W | No | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 29°C | 30 W | 95 W | 1039 BTU/h |
| IFP-2000-CU | Flowmon Probe 2000 | 250 W | No | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 29°C | 30 W | 95 W | 1039 BTU/h |
| IFP-4000-CU | Flowmon Probe 4000 | 250 W | No | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 29°C | 30 W | 95 W | 1039 BTU/h |
| IFP-4000-SFP | Flowmon Probe 4000 SFP | 250 W | No | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 29°C | 30 W | 95 W | 1039 BTU/h |
| IFP-6000-SFP | Flowmon Probe 6000 SFP | 250 W | No | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 29°C | 30 W | 95 W | 1039 BTU/h |
| IFP-10000-SFP+ | Flowmon Probe 10000 SFP+ | 250 W | No | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 29°C | 30 W | 95 W | 1039 BTU/h |
| IFP-20000-SFP+ | Flowmon Probe 20000 SFP+ | 250 W | No | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 29°C | 30 W | 95 W | 1039 BTU/h |
| IFP-40000-SFP+ | Flowmon Probe 40000 SFP+ | 2x 550 W | Yes | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 26°C | 145 W | 338 W | 2107 BTU/h |
| IFP-10000PRO-SFP+ | Flowmon Probe 10000 Pro SFP+ | 2x 550 W | Yes | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 26°C | 145 W | 338 W | 2107 BTU/h |
| IFP-20000PRO-SFP+ | Flowmon Probe 20000 Pro SFP+ | 2x 550 W | Yes | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 26°C | 145 W | 338 W | 2107 BTU/h |
| IFP-40000PRO-SFP+ | Flowmon Probe 40000 Pro SFP+ | 2x 550 W | Yes | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 26°C | 145 W | 338 W | 2107 BTU/h |
| IFP-80000PRO-QSFP+ | Flowmon Probe 80000 Pro QSFP+ | 2x 750 W | Yes | 10°C÷35°C | 10%÷80% at 29°C | 5°C÷40°C | 5%÷85% at 26°C | TBA | TBA | 2891 BTU/h |
| IFP-100000PRO-CFP4 | Flowmon Probe 100000 Pro CFP4 | 2x 750 W | Yes | 10°C÷35°C | 10%÷80% at 29°C | -5°C÷40°C | 5%÷90% at 26°C | TBA | TBA | 2891 BTU/h |
| IFP-200000PRO-CFP4 | Flowmon Probe 200000 Pro CFP4 | 2x 750 W | Yes | 10°C÷35°C | 10%÷80% at 29°C | -5°C÷40°C | 5%÷90% at 26°C | TBA | TBA | 2891 BTU/h |

\* Specified temperature is max dew point temperature.

\*\* When operating in expanded temperature range, system performance may be impacted. Flowmon Probes can work in this condition for up to 10% of annual operating hours and in case of Flowmon Probe IFP-200000PRO-CFP4 for up to 1% of annual operating hours.

## Virtual Appliances

| P/N | Model | Performance per port | Monitoring Interfaces | Flow Cache* | VMware ESXi | Microsoft Hyper-V | Recommended Configuration |
|-----|-------|---------------------|----------------------|-------------|-------------|-------------------|---------------------------|
| IFP-1000-VA | Flowmon Probe 1000 VA | up to 0,3 Mp/s | 1 x 1Gb Ethernet | 0,5 M | 4.1 and higher | 2012 | 2 CPU cores, 4 GB RAM, min. 11 GB HDD |
| IFP-2000-VA | Flowmon Probe 2000 VA | up to 0,3 Mp/s | 2 x 1Gb Ethernet | 0,5 M | 4.1 and higher | 2012 | 2 CPU cores, 4 GB RAM, min. 11 GB HDD |
| IFP-4000-VA | Flowmon Probe 4000 VA | up to 0,3 Mp/s | 4 x 1Gb Ethernet | 0,5 M | 4.1 and higher | 2012 | 2 CPU cores, 4 GB RAM, min. 11 GB HDD |
| IFP-6000-VA | Flowmon Probe 6000 VA | up to 0,3 Mp/s | 6 x 1Gb Ethernet | 0,5 M | 4.1 and higher | 2012 | 2 CPU cores, 4 GB RAM, min. 11 GB HDD |
| IFP-10000-VA | Flowmon Probe 10000 VA | up to 0,7 Mp/s | 1 x 10Gb Ethernet | 4 M | 4.1 and higher | 2012 | 4 CPU cores, 8 GB RAM, min. 11 GB HDD |
| IFP-20000-VA | Flowmon Probe 20000 VA | up to 0,7 Mp/s | 2 x 10Gb Ethernet | 4 M | 4.1 and higher | 2012 | 4 CPU cores, 8 GB RAM, min. 11 GB HDD |

Performance of virtual Flowmon Probes depends on allocated resources, overall system load and environment of deployment.

\* Number of flow entries in flow cache for each monitoring port.