

# NetFlow sFlow Network Traffic Monitoring - Official Technical Overview & Hardware Datasheet

## PRODUCT OVERVIEW & IDENTIFICATION

The NetFlow sFlow Network Traffic Monitoring solution represents a carrier-grade, hardware-accelerated telemetry engine designed for exhaustive visibility into IPv4, IPv6, MPLS, and non-IP flows. This dedicated appliance combines high-performance ASIC-based sampling with zero CPU overhead, enabling line-rate flow generation, aggregation, and export on 1GE, 10GE, 25GE, 40GE, and 100GE interfaces.



## SYSTEM ARCHITECTURE & HARDWARE DESIGN

The architecture deploys a distributed forwarding plane with integrated

sampling hardware. A central chassis backplane connects modular line cards to a redundant route processor managing the NetFlow v5/v9 and sFlow v5 export protocols. Hardware timestamping ensures sub-microsecond accuracy for jitter-sensitive applications. Key capabilities include deterministic flow filtering, rate-limiting export queues, and template support for flexible field selection.

## HARDWARE FEATURES

- Dedicated Flow Table: 2 million concurrent flow entries
- Sampling Methods: Deterministic (1:N), Random (1:N), Time-Based
- Export Protocols: NetFlow v5, NetFlow v9, IPFIX, sFlow v5
- Acceleration: FPGA-based flow hashing and aggregation
- Management: CLI (SSHv2), RESTCONF, SNMPv3, gNMI telemetry

Parameter	Specification
Form Factor	1RU Rack-Mountable Chassis
Switching Capacity	Up to 800 Gbps (non-blocking)
Flow Export Rate	1.5 million flows/sec
Power Supply	1+1 Redundant AC (100-240V) or DC (-48V)

## COMPLIANCE & STANDARDS

- RFC 3954 (Cisco NetFlow v9)
- RFC 7011 (IPFIX Protocol)
- sFlow v5 (Standard sFlow.org specifications)
- ASIC Line-rate sampling at 100Gbps per slot
- IEEE 1588v2 PTP (Precision Time Protocol) for network-wide synchronization

## ORDERING OPTIONS & PORT MATRIX

Base SKU: TS-FM-1000 (Chassis w/ 2x AC PSU, fan tray). Optional modules: 8x10GE SFP+, 4x25GE SFP28, 2x40GE QSFP+, 2x100GE QSFP28. Upgrade licensing for 4M flow entries and NetFlow v9 template customization. Field-replaceable 800W DC power entry module available.

