Tofino™ EtherNet/IP Enforcer LSM

Content Inspection for EtherNet/IP

EtherNet/IP Enforcer

EtherNet/IP Client

EtherNet/IP Server
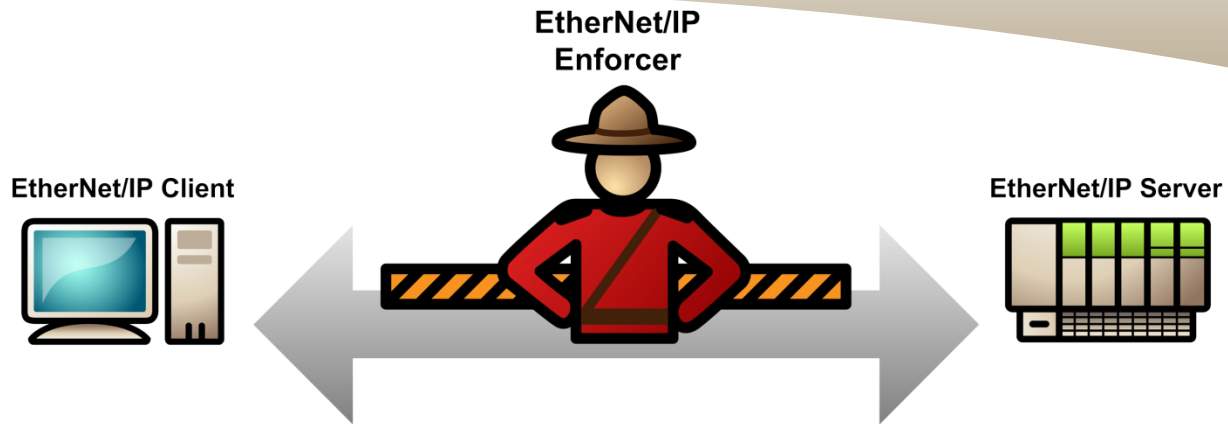
Advanced cyber threat and safety protection for your EtherNet/IP devices

EtherNet/IP and CIP are excellent protocols for managing Industrial Control Systems (ICS). Unfortunately, they were never designed with security in mind. If an individual is allowed to read data from a controller, then chances are they can also shut down or reprogram the controller.

The Tofino EtherNet/IP Enforcer Loadable Security Module (LSM) is a content inspector for EtherNet/IP communications, checking every message against a list of 'allowed' objects and services. You can choose from pre-defined lists of common actions, such as Read-Only, or you can build your own custom list of objects and services. Any service that is not on the 'allowed' list, or any attempt to access an object that is not approved, is blocked and reported.

The Tofino EtherNet/IP Enforcer LSM makes sure that the only messages your control devices receive are approved commands from approved computers. Accidents involving remote programming are prevented and corrupted messages are blocked, making your control system safer and more reliable.

Saves you money through:

- Improved system reliability and stability
- Simplifying compliance to safety and security standards
- Reduced down time and production losses
- Lower maintenance costs

Unique capabilities:

- Simple configuration using the Tofino Configurator's graphical user interface
- One-click setup for secure 'read-only' communications to controllers
- Protocol 'Sanity Check' blocks any traffic not conforming to the ODVA standards
- Supports multiple EtherNet/IP clients and servers
- Control specialists can optionally define lists of allowed CIP objects and services
- Automatically blocks and reports any traffic that does not match the rules
- Secures all EtherNet/IP CIP Class 3 Explicit messaging

Typical applications:

- Mission critical automation systems
- Protecting safety instrumentation systems
- Managing PLC programming stations
- Display-only HMI panels
- Secure remote access to PLC data

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Supports multiple connections	Multiple client and server EtherNet/IP devices are supported with a unique set of inspection rules and options for each client/server connection
Default filter policy	Deny by default: any CIP object or service that is not on the 'allowed' list is automatically blocked and reported
User-settable options	The following options may be set on a per-connection basis: ▪ Permitted message type (Read-Only Data, Read/Write Data, Any, Advanced) ▪ Permitted CIP object class ▪ Permitted CIP service for each class ▪ Custom or vendor-specific objects and services ▪ Sanity check enable/disable ▪ TCP Reset on blocked traffic ▪ EtherNet/IP debug reply on blocked traffic
Supported message types	All CIP class 3 explicit messages
Configuration method	Simple configuration using the Tofino Configurator
Throughput	1000 packets per second with full content inspection
Operating modes	All standard Tofino modes supported: ▪ *Test*: all traffic allowed; alerts generated as per user rules ▪ *Operational*: traffic filtered and alerts generated as per user rules
Security alerts	Reports security alerts to a syslog server and to non-volatile memory on a Tofino Security Appliance
Tested equipment	Tested for use with all Rockwell ControlLogix and Schneider PLCs
System requirements	▪ Tofino Security Appliance ▪ Tofino Firewall/Event Logger LSM ▪ Tofino Configurator
Ordering information	Part number: **942 016-120** Name: **Tofino™ EtherNet/IP Enforcer LSM** Additional information: http://www.tofinosecurity.com/sales/tofino-hirschmann

Tofino™ EtherNet/IP Enforcer LSM is a component of the Tofino Security Solution:

Tofino Security Appliance

Hardware platform that creates Plug-n-Protect™ zones of security on control and SCADA networks

Loadable Security Modules

Firmware modules that customize the security features of each Tofino SA:

▪ **Firewall:** Monitors and secures industrial network traffic
▪ **Modbus, OPC, and EtherNet/IP Enforcers:** Ensure compliance, manage connections, and restrict ICS/SCADA commands
▪ **NetConnect:** Provides secure remote configuration over any IP-based network
▪ **Event Logger:** Reliably logs security events and alarms

Tofino Configurator

Software that provides coordinated security management of all Tofino Security Appliances from one workstation or server

Your authorized Tofino supplier:

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