

MTL Tofino™ GOOSE Enforcer LSM

A plug-in Deep Packet Inspection (DPI) Module that provides real-time validity checking and content inspection for GOOSE traffic.



The MTL Tofino™ Generic Object-Oriented System Events (GOOSE) Enforcer module provides real-time validity checking and content inspection for GOOSE traffic, ensuring your control devices receive only approved commands from authorized sources.

Benefits:

As industrial networks and devices become more connected to external networks, the potential to expose GOOSE messages and IEC 61850 traffic – a global standard for communication networks and systems within substations – to outside intruders increases exponentially.

The MTL Tofino™ GOOSE Enforcer LSM enables DPI capabilities for GOOSE traffic. The enforcer applies multiple security standards and defensive layers to GOOSE messages, including authentication of data transfers through digital protocol validation, prevention of eavesdropping and spoofing and intrusion detection.

These defensive protocols protect networks against harmful attacks, such as ARP, MAC flooding, spanning-tree, multicast brute force and other VLAN-related attacks. The strict latency requirements (sending real-time data transmissions between devices within 4 ms) and DPI capabilities prevent any malicious, malformed or out-of-sequence packet to pass through protected networks.

Applications:

With many new capabilities, the MTL Tofino™ GOOSE Enforcer LSM is best suited for sectors that require enhanced DPI to prevent malware and Man-in-the-Middle attacks, as well as ones that support large network communication, SCADA Master Station protection and NERC CIP compliance. With improved time-saving features, seamless integration onto existing networks and enhanced security, the solution is ideal for networks that rely on long-distance communication between sending and receiving devices, such as substations and control centers.

Markets:

The MTL Tofino™ GOOSE Enforcer LSM is designed to protect equipment and systems that use GOOSE messaging, and in particular substation automation and other utility applications. The MTL Tofino™ GOOSE Enforcer LSM can be used in conjunction with other MTL Tofino™ Enforcers to provide comprehensive protection for a wide range of industrial protocols and devices and to span other applications including the transportation, manufacturing, machine building, food and beverage, and water/wastewater markets.

Saves you money through:

- Simplifying compliance to safety and security standards with superior protection against attacks and misconfigurations.
- Reduced down time and production losses by managing large deployments of data from a central location.

Unique capabilities:

- Delivers unique DPI technology for all protocols
- Enables control specialist to define a list of allowed GOOSE PDU parameters such as sequence numbers and stream numbers
- Automatically blocks and reports any traffic that does not match established rules
- Performs protocol 'sanity check' to block any GOOSE traffic not conforming to the standard
- Supports multiple master and slave devices
- Leverages new syslog view for holistic network security and simplified maintenance
- The MTL Tofino™ GOOSE Enforcer LSM offers advanced security features and simplified integration capabilities to bring efficiency and reliability to large-scale deployments, especially in energy and utility markets.

FEATURES & SPECIFICATIONS

Supports multiple connections	Multiple master and slave GOOSE devices are supported with a unique set of inspection rules and options for each master/slave connection.
Default filter policy	Deny by default: any GOOSE Frame with destination MAC address not in the broadcast or multicast range is automatically blocked and reported. Also all GOOSE Frames with source MAC address that is not on the 'allowed' list are automatically blocked and reported.
User-settable options	The following options may be set on a per-connection basis: <ul style="list-style-type: none"> • Enable sanity check on PDU data length and field value. • Enable system to check if the packet source is remote otherwise the Enforcer treats the packet to be local for deep packet inspection. • Enable a sequence check on incoming PDU packets with the same application id.
Configuration method	Simple configuration using the MTL Tofino™ Configurator (TC).
Throughput	2000 packets per second with full content inspection
Operating modes	All standard Tofino modes supported: <ul style="list-style-type: none"> • 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 MTL Tofino™ Security Appliance.
System requirements	<ul style="list-style-type: none"> • MTL Tofino™ (9202-ETS) Industrial Security Appliance. These new enforcers cannot be run in older systems. They will work for existing MTL Tofino™ (9202-ETS) in the field • MTL Tofino™ Firewall/Event Logger LSM • MTL Tofino™ Configurator VERSION 3.2
Ordering information	Part number: 9522-GOOSE Name: MTL Tofino™ GOOSE Enforcer LSM Visit: www.mtl-inst.com/product/9202-ets_mtl_tofino_network_security_solution/

The **MTL Tofino™ GOOSE Enforcer LSM** is a component of the **MTL Tofino™ Industrial Security Solution**

MTL Tofino™ Industrial 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 MTL Tofino™ SA:

- **Firewall:** Monitors and controls industrial network traffic.
- **Modbus, OPC, EtherNet/IP, DNP3, IEC 104 and GOOSE 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.

MTL Tofino™ Configurator (3.2)

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



Eaton Electric Limited,
Great Marlings, Butterfield, Luton
Beds, LU2 8DL, UK.
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283
E-mail: mtlenquiry@eaton.com
www.mtl-inst.com

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EUROPE (EMEA):
+44 (0)1582 723633
mtlenquiry@eaton.com

THE AMERICAS:
+1 800 835 7075
mtl-us-info@eaton.com

ASIA-PACIFIC:
+65 6 645 9888
sales.mtlsing@eaton.com

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