Tofino™ Modbus TCP Enforcer LSM

Content Inspection for Modbus

Modbus Master   Tofino™ Modbus TCP Enforcer   Modbus Slave

Advanced cyber threat and safety protection for your Modbus devices

Did you know that any device with a network connection to a Modbus controller can potentially CHANGE any of the controller's I/O points or register values? Many controllers can even be reset, disabled, or loaded with new logic or firmware.

The Tofino Modbus TCP Enforcer is a content inspector for Modbus communications, checking every Modbus command and response against a list of 'allowed' commands defined by your control engineers. Any command that is not on the 'allowed' list, or any attempt to access a register or coil that is outside the allowed range, is blocked and reported.

The Tofino Modbus TCP Enforcer makes sure that the only Modbus commands 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:

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

Unique capabilities:

- First-ever application of content inspection technology to industrial protocols
- Control specialist defines list of allowed Modbus commands, registers and coils
- Automatically blocks and reports any traffic that does not match the rules

- Protocol 'Sanity Check' blocks any traffic not conforming to the Modbus standard
- Supports multiple master and slave devices
- Simple configuration and monitoring using the Tofino CMP
- Certified Modbus compliant by Modbus-IDA

Applications

- Oil & gas custody transfer
- Safety instrumentation systems
- Managing PLC programming stations
- Display-only HMI panels
- Partner access to telemetry data

TOFINO®

COOPER Crouse-Hinds

Features and Specifications

|	
Supports multiple connections	Multiple master and slave Modbus devices are supported, with a unique set of inspection rules and options for each master/slave connection
Default filter policy	Deny by default: any Modbus function code, or register or coil address, that is not on the 'allowed' list is automatically blocked and reported
Modbus function codes	Supports functions 1-8, 11-17, 20-24, 40, 42, 43, 48, 66, 67, 91, 100, 125, 126
User-settable options	The following options may be set on a per-connection basis: • Permitted Modbus function codes • Permitted register or coil address range • Permitted Modbus Unit IDs • Sanity check enable/disable • State tracking enable/disable • TCP Reset on blocked traffic (when utilizing TCP transport protocol) • Modbus exception reply on blocked traffic
Transport protocols	Both Modbus/TCP and Modbus/UDP supported
Configuration method	Simple configuration using the Tofino Central Management Platform (CMP)
Throughput	1000 packets per second with full content inspection
Operating modes	• All standard Tofino SA modes supported: • *Passive*: all traffic allowed, no alerting • *Test*: all traffic allowed; alerts generated as per user rules • *Operational*: traffic filtered and alerts generated as per user rules
Security alerts	Reports blocked traffic to the Tofino CMP via Tofino Exception Heartbeats
Certifications	Certified Modbus compliant by Modbus-IDA
System requirements	• Tofino Security Appliance • Tofino Firewall LSM • Tofino Central Management Platform (CMP)
Ordering information	Part number: **9520-MBT** Name: **Tofino™ Modbus TCP Enforcer LSM** Visit: www.mtl-inst.com/tofino for ordering info for all products.

The Tofino™ Modbus TCP Enforcer LSM is a component of the Tofino™ Industrial Security Solution

Tofino Security Appliance

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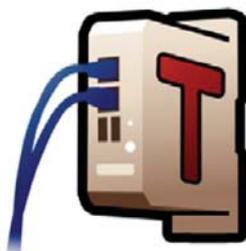
Loadable Security Modules

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

- **Firewall**: Directs and controls industrial network traffic
- **Modbus TCP Enforcer**: Content Inspection and connection managament for Modbus and OPC
- **Secure Asset Management**: Tracks and identifies network devices
- **VPN**: Secures remote communication
- **Event Logger**: Reliably logs security events and alarms

Tofino CMP

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