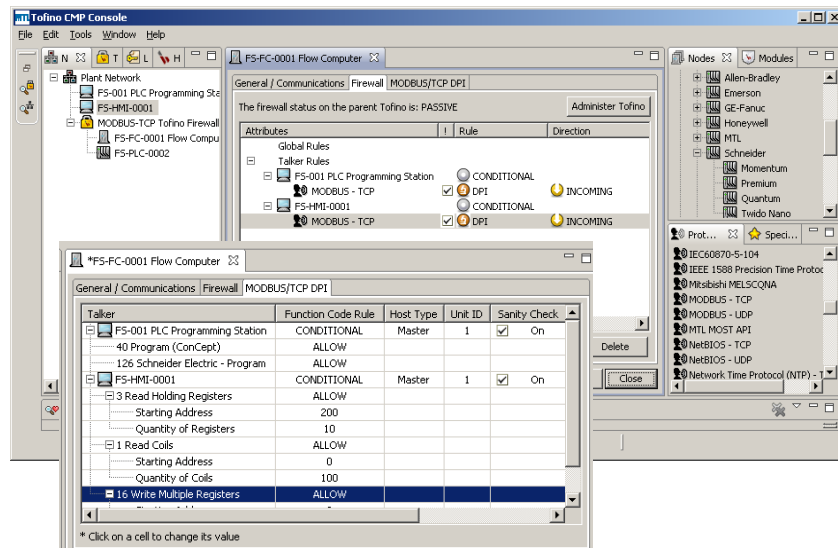




Tofino™ 9520-MBT



Enhanced Security for Modbus TCP/IP-Capable Devices

The Tofino™ Modbus TCP Enforcer is a Loadable Security Module (LSM) for the Tofino™ Security Appliance that provides protection for Modbus TCP-enabled devices by performing Deep Packet Inspection (DPI) analysis and filtering of Modbus traffic.

Tofino™ Modbus TCP Enforcer adds to the already powerful Modbus features in the standard Tofino™ Firewall LSM - in addition to controlling which devices may communicate with any given Modbus slave or master, the Modbus TCP Enforcer lets the control engineer create rules that define which specific Modbus function codes and registers may be accessed by any device. Any attempted communications that does not fall within the allowed limits will be blocked and immediately reported to the Tofino™ Central Management Platform as a security alert.

By permitting access to only the exact function codes and register or coil addresses required by each device, the Tofino™ Modbus TCP Enforcer offers fine-grained control over the communications on your process control or SCADA network, enhancing the security and stability of the entire system.

Advanced Modbus TCP Enforcement Capabilities

- ✓ 'Sanity checking' of all key components of Modbus TCP traffic, including MBAP header contents, packet size, payload size, register/coil address range and overall conformance to the Modbus protocol specification
- ✓ Simultaneously supports multiple masters and slaves
- ✓ List of 'permitted' function codes can be defined for each Modbus connection
- ✓ Permitted range of register/coil addresses can be set for each function code
- ✓ All public and many proprietary function codes supported
- ✓ Supports Modbus over both TCP and UDP
- ✓ Selectable error response: drop packet, generate Modbus exception reply, or reset connection (TCP protocol only)
- ✓ All disallowed accesses are immediately reported and logged by the Tofino™ Central Management Platform for analysis by operations personnel
- ✓ Easy-to-use graphical rule editor for quick configuration and deployment



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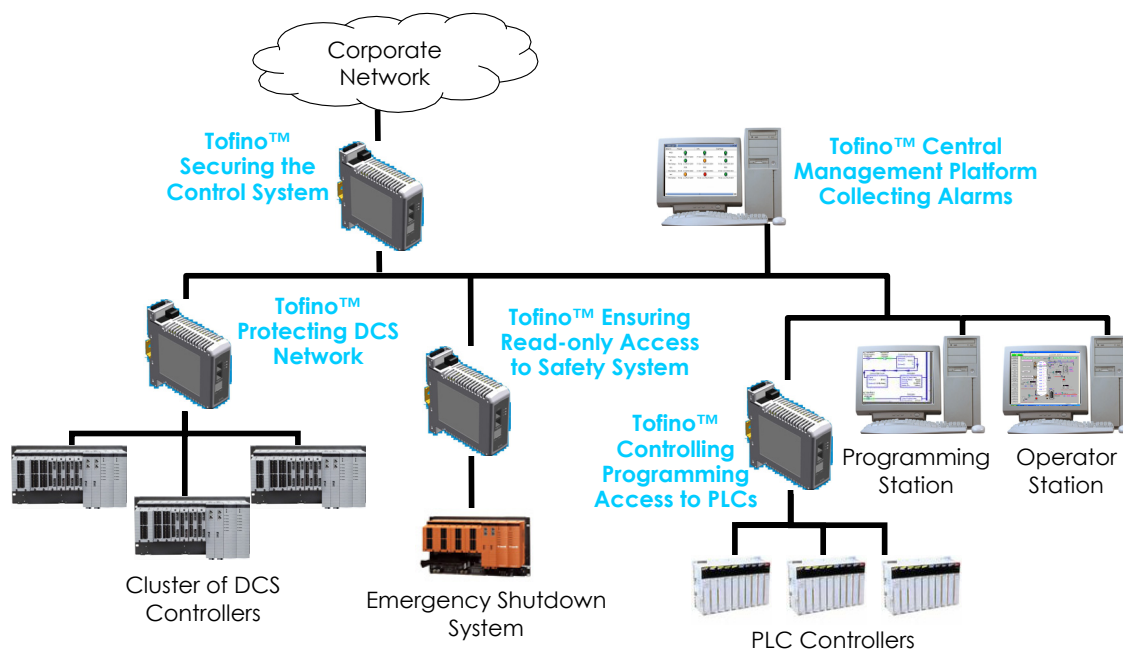


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Modbus TCP Enforcer (Modbus TCP Deep Packet Inspection Loadable Security Module)

Applications

- ✦ Enforce read-only access to Safety Instrumented Systems for enhanced isolation and safety
- ✦ Tailor appropriate Modbus access permissions to PLCs for different stations, such as read-only for monitoring panels, read/write for HMIs, and full programming and diagnostics access for PLC engineering workstations
- ✦ Restrict Modbus access permissions to specific memory locations in a controller, tuned for specific master and slave pairs
- ✦ Provide enhanced security and protection for any Modbus TCP device, including filtering of invalid traffic that could cause denial of service or system failures
- ✦ Lock down programming or firmware update capabilities to a single approved programming workstation
- ✦ Enforce read-only access to specific registers for customers or 3rd parties to custody transfer or loading systems
- ✦ Enforce read-only access from data historian servers to key controllers
- ✦ Prevent injection of Modbus commands in a network by unauthorized computers, such as contractor laptops



Product Information

- ✦ Modbus TCP Enforcer LSM part number: 9520-MBT-G-I
- ✦ Modbus TCP Enforcer LSM is a firmware Loadable Security Module (LSM) that must be installed and activated on a Tofino™ Security Appliance, part number 9211-ET.
- ✦ Modbus TCP Enforcer LSM requires the Tofino™ Firewall LSM (part number 9520-FW-G-I) to also be installed and activated on the Tofino™ Security Appliance.

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



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