



technical datasheet

Tofino™ 9211-ET

Ethernet based Industrial Security Appliance

- industrial network protection
- simple installation
- 10/100Mbps Ethernet
- automatic device discovery
- "transparent learning" option
- power supply redundancy
- assisted rule generation
- DIN-rail mounting



The Tofino™ Industrial Security System is a new and unique solution from MTL and Byres Security that addresses the important issue of protecting Industrial Networks from malicious or accidental disruptions.

Instead of the standard, highly complex, "IT-style" firewall that requires highly-trained staff to install it, the Tofino™ appliance only requires a field technician to attach power and two network cables to it and then walk away. For a small pre-configured system, that may be the extent of the work. Larger installations will normally make use of a central management platform (CMP) that enables the user to configure and monitor the overall system.

The system has the flexibility to protect a small plant with a single PLC, or a multi-national organization with thousands of critical devices scattered around the globe. By deploying Tofino™ appliances in front of

each control device (or group of devices), they provide SCADA and process control companies with a layered security solution for their systems.

The Tofino™ uses Loadable Security Modules (LSMs), which are tailored software modules. The Appliance and LSMs provide highly customizable protection directly in front of critical devices, in a similar fashion to the way personal firewalls provide local protection for desktop computers.

Configuration is simple. Drag and drop the icon of a device you want to communicate with onto a second device and the rules are automatically created. Or put the Tofino into TEST mode and then use the Assisted Rule Generation feature to suggest firewall rules based on existing traffic patterns. Even highly complex industrial protocols can be carefully managed with the "Special Rule" feature.

The Tofino™ appliance logs "events of interest". Chosen events, such as power anomalies, abnormal or unsolicited traffic and intrusions can be recorded and downloaded for later examination.

Redundant power supply inputs enable the user to reduce the risk of power failure to the module and power-fail inputs are provided to enable any supply failures to be signalled directly to the appliance for data logging.

Industrially Hardened. Tofino™ is designed for industrial environments having a 27 year MTBF, -40°C to +70°C operating temperature ratings and Class 1/Div 2 (Zone 2) hazardous area approvals.

EPS9211-ET Rev4 120310

**COOPER** Crouse-Hinds

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SPECIFICATIONS

Tofino™ Security Appliance

Model

9211-ET

Description

Tofino™ Two Port Security Appliance

Protected Devices

Unlimited (using 9520-FW-G-I firewall)

COMMUNICATIONS

Ethernet Ports

Two IEEE 8 02.3 BASE-T ports (auto sensing or manual)
10 or 100Mbps, full or half-duplex

Auto Tx/Rx sensing

USB-2 Ports (Load configuration/Save Diagnostics)

Two

POWER (+ redundant power + power fail)

Power Inputs

Two (dual redundant)

Operating Voltage

24V nominal (9V – 32V)

Current Consumption at 24 VDC

< 170mA typ.
< 350mA max.

Power Fail Inputs

Two

Connections

Screw cage-clamp 24...12AWG, 0.2...2.5mm²

SERVICE

Indicators

Power, Fault, Event, Mode
Link Activity and Speed

Mode Switch

Test/Operation Mode

Config Switch

Load configuration from USB storage or
Save log files to USB storage

ENVIRONMENTAL

Temperature Specifications

Operating –40°C to +70°C
Storage/Transport –40°C to +85°C

Relative Humidity

10% to 90% (non-condensing)

MECHANICAL

Protection Class

IP 20

Mounting

35mm DIN rail or panel mounting

Dimensions (W x H x D) mm

146 x 138 x 42

Weight

0.36 kg

Vibration and Shock

IEC 60068-2-6 1g @ 20-500Hz
IEC 60068-2-27 30g for 11ms shock
EN 61326 EMC Annex A Industrial Locations
EN 61010-1

Hazardous Area Approvals

Location of equipment

Safe area or see table in APPROVALS section

Tofino™ is a trademark of Byres Security Inc.

Tofino™ Loadable Firewall LSM

Model

9520-FW

Description

Tofino™ Stateful Firewall Module

Type

Layer 2 Stateful Firewall

Layers Filtered

Layer 2–7 (Based on Protocol Options)

Logging

Alarms via CMP

IP Spoofing Protection

Yes

SYN Flood Protection

Yes

Bi-Directional Filtering

Yes

Test/Learning Mode

Yes

SCADA Protocol Support

Extendable support for SCADA protocols such as MODBUS/TCP
via firewall sub-modules

Throughput with 20 FW Rules

95.5 MBPS at 1500 Byte Frames

Throughput with 500 FW Rules

90.0 MBPS at 1500 Byte Frames

Tofino™ Secure Asset Management LSM

Model

9520-SAM-G-1

Description

Tofino™ Secure Asset Management LSM

Type

Passive Network Device Discovery

Device Characterization

Identifies most IP-based industrial devices automatically

Logging

Automatic logging of all new devices discovered

Assisted Rule Generation

Proposes firewall rules based on alarms and traffic patterns

Impact on Process Operations

None – 100% passive scanning only

Tofino™ Central Management Platform (CMP)

Model

9510-MP

Description

Tofino™ Central Management Platform

SYSTEM REQUIREMENTS

O/S

Windows XP, Server 2003 or Vista

CPU

AMD Opteron, equivalent or better recommended

Memory

1 GB Minimum, 2GB recommended

Hard Drive

250 GB SATA

Video

VGA or better functionality

SYSLOG Support

Yes

SQL Database Support

Yes

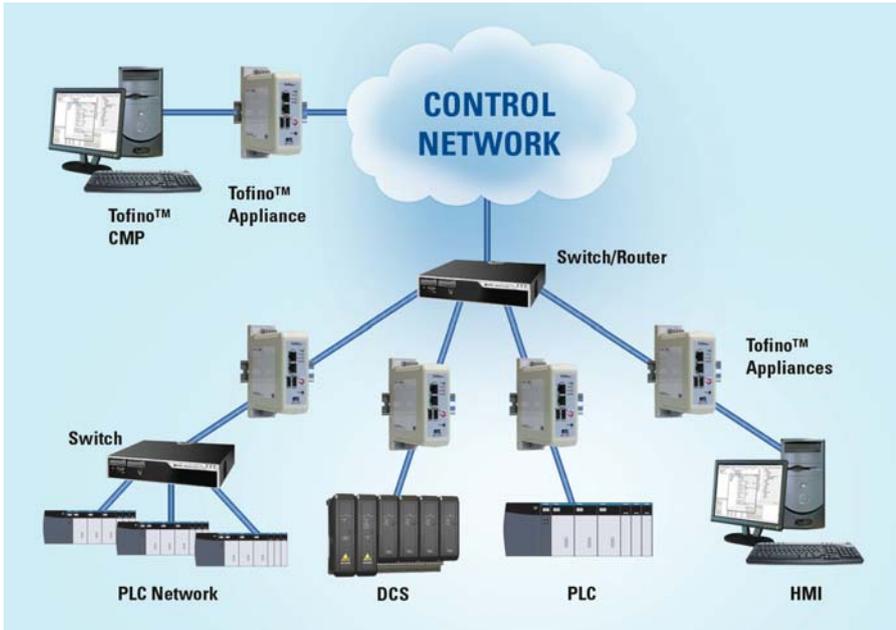
Report Generation of Events

SQL and Text file offload for custom report generation

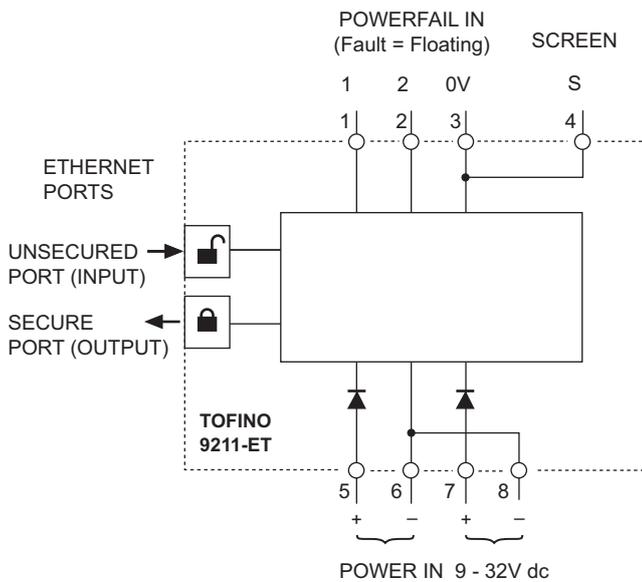
The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



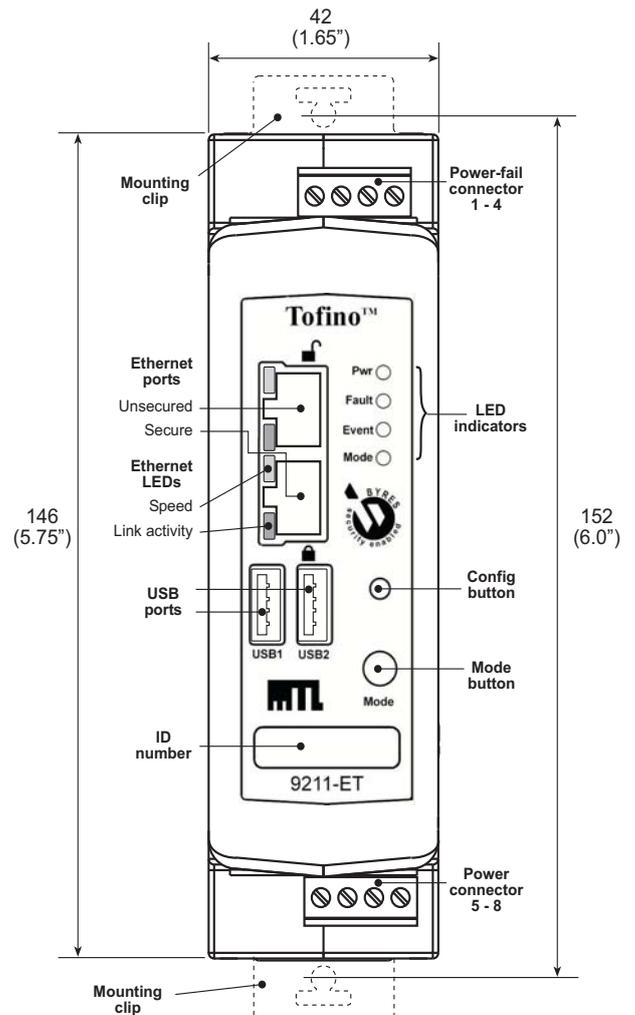
TYPICAL APPLICATION METHOD



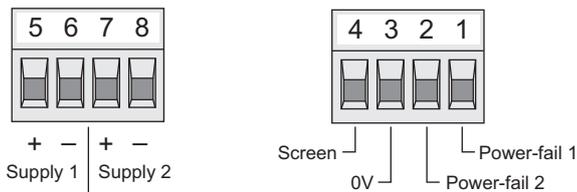
CONNECTION DIAGRAM



DIMENSIONS & PANEL DETAILS



POWER & POWER-FAIL CONNECTIONS



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EPS9211-ET Rev4 120310

APPROVALS

For the latest certification information visit: <http://www.mtl-inst.com/support/certificates/>

9211-ET - Tofino™ Industrial Security Appliance

Region	Europe	USA	Canada
Authority	ATEX	FM	FM
Standard	EN 60079-15:2005	Class 3600 1998 Class 3611 2004 Class 3610 2005	CAN/CSA E60079-0 2002 CAN/CSA E60079-15 2002 C22.2 No. 1010-1 2004
Approved for	⊕ II 3 G Ex nA nC IIC T4	Non-incendive for Class I, Div. 2 Grps A-D; Zone 2 AEx nC IIC T4 Ta=70°C	Non-sparking for Class I, Div. 2 Grps A-D; Zone 2 Ex nL IIC T4 Ta=70°C
Certificate Numbers	MTL07ATEX9211X	3029914	3029914C

Certification for Industrial Control Security

Certifying Entity

Mu Dynamics

Certification Level

MUSIC 2007-1 Foundation Level

Certificate Identifier

MUSIC-Foundation-Aug07-1



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