

Industrial Managed Layer 2 Switch

# ON-5708E

The Optech Network Solutions ON-5708E is a compact 8-port managed industrial Ethernet switch designed for industrial networks requiring 6 × Fast Ethernet copper ports and 2 × fiber SFP ports.

The Optech Network Solutions ON-5708E is an 8-port managed industrial Ethernet switch featuring 6 Fast Ethernet RJ-45 ports and 2 fiber SFP ports. It is designed for reliable copper and fiber connectivity in industrial networks.

It supports advanced Layer 2 features, including VLAN, QinQ, QoS, link aggregation, multicast management, network security, and industrial redundancy protocols such as X-Ring Pro, RSTP, STP, MSTP, and ERPS.

Its compact IP30 metal enclosure, DIN-rail and wall-mount installation, redundant 12–48 VDC power inputs, and wide operating temperature range of -40°C to +75°C make it suitable for industrial automation, factory networks, utilities, and industrial IoT applications.

## Benefits

- Quality of Service
- Advanced Network Security
- Multicast Traffic Management
- Redundant DC Power
- Wide Temperature Operation
- DIN-Rail Mounting Support

## Features

- 8-Port Ethernet Connectivity
- Fast Ethernet RJ-45 Ports
- Dual Fiber SFP Ports
- Advanced Layer 2 Management
- Industrial Network Redundancy
- VLAN and QinQ Support

## Applications

- Industrial automation networks
- Factory Ethernet
- Utility and infrastructure networks
- Industrial control systems

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- Fiber-connected industrial equipment
- Transportation communication systems
- Industrial IoT networks

## Technical Specification

| | |
|---|---|
| Product Type | Managed Industrial Layer 2 Switch |
| Model | ON-5708E |
| Total Ports | 8 Ethernet Ports |
| Ethernet Ports | 6 × 10/100BASE-T/TX RJ-45 |
| Fiber Ports | 2 × 100/1000BASE SFP |
| Copper Port Features | Auto-Negotiation, Duplex, Auto MDI/MDI-X |
| Console Port | RS-232 via RJ-45 |
| Power Connector | 6-Pin Terminal Block |
| Relay Output | 1 Relay Output |
| Power Input | 12–48 VDC, Dual Redundant |
| Power Consumption | 6 W at 24 VDC |
| Switching Capacity | 5.2 Gbps |
| Transmission Rate | 3.87 Mpps |
| MAC Address Table | 8K MAC Addresses |
| Packet Buffer | 4.1 Mbit |
| Maximum IGMP Groups | 256 Groups |
| Maximum VLAN Groups | 256 VLAN Groups |
| VLAN ID Range | 1–4094 |
| VLAN Features | IEEE 802.1Q, IEEE 802.1ad QinQ |
| Port Mirroring | 1-to-1, N-to-1, 4 Sessions |
| RSPAN | Remote Switched Port Analysis |
| GARP Support | GVRP, GMRP |
| Multicast Features | IGMP v1/v2/v3, MLD Snooping |
| IGMP Immediate Leave | Supported |
| Storm Control | Broadcast, Multicast, Unknown Unicast |
| LLDP Support | IEEE 802.1ab, LLDP-MED |
| Industrial Protocol | Modbus/TCP |

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| | |
|---|---|
| Redundancy Protocols | X-Ring Pro, STP, RSTP, MSTP |
| Additional Redundancy | ERPS (G.8032) |
| X-Ring Pro Recovery | Less Than 20 ms |
| QoS Scheduling | WRR, Strict, Hybrid Priority |
| Priority Queues | Up to 4 Queues |
| Class of Service | IEEE 802.1p, IP ToS, DSCP |
| Rate Limiting | Ingress and Egress |
| Link Aggregation | IEEE 802.3ad Dynamic/Static Trunking |
| Port Security | Static/Dynamic MAC, Learning Limits |
| MAC Violation Notification | Supported |
| Authentication | 802.1X Port/MAC, MAB |
| Authentication Methods | MD5, PEAP, TLS, TTLS |
| Authentication Servers | RADIUS, TACACS+ |
| IP Security | DHCP Snooping, ARP Spoofing Prevention |
| Access Control Lists | IP-ACL, MAC-ACL, 64 Entries |
| Management Protocols | SNMP v1/v2c/v3, Web, Telnet, RMON |
| MIB Support | MIB-II, Private, Ethernet-Like, RMON |
| Secure Management | SSH 2.0, SSL |
| Software Upgrade | TFTP, HTTP, Dual Image |
| Time Synchronization | SNTP Client |
| DHCP Features | Client, Server, Relay, Options 66/67/82 |
| Deployment Function | IXM-Based Fast Deployment |
| NMS Support | Remote Network Monitoring, Management |
| Enclosure | Metal Housing |
| Protection Class | IP30 |
| Installation Method | DIN-Rail, Wall-Mount |
| Dimensions (W × H × D) | 25 × 152 × 105 mm |
| Weight | 520 g |
| Operating Temperature | -40°C to +75°C |
| Storage Temperature | -40°C to +85°C |
| Relative Humidity | 5–95%, Non-Condensing |
| Overcurrent Protection | Supported |

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| | |
|---|---|
| Reverse Polarity Protection | Supported |
| System LED Indicators | P1, P2, R.M., ALM |
| RJ-45 Port LEDs | Link, Speed, Activity |
| SFP Port LEDs | Link, Activity |
| Power Redundancy | Dual DC Power Inputs |
| SFP Copper Module | Compatible Module's Maximum Transmission Rate |
| Certifications and Standards | EN 62368-1, CE, CISPR 32 |
| Electromagnetic Compliance | FCC Part 15B Class A |
| Immunity Standards | IEC 61000-4 Series |
| Environmental Compliance | EN 61000-6-2/-6-4 |
| Environmental Testing | IEC 60068-2 Series |
| Industrial Security Standard | IEC 62443-4-2 |

| **Copper Ethernet** | **Fiber Connectivity** |
|---|---|
| The ON-5708E provides: | |
| | 2 × 100/1000BASE SFP ports |
| 6 × 10/100BASE-T/TX RJ-45 | SFP-based fiber expansion |
| Auto-negotiation | Supports flexible fiber interface selection through compatible SFP modules |
| Full/Half duplex operation | 100BASE SFP compatibility is source-specified for selected module types |
| Auto MDI/MDI-X | For copper SFP modules, the source specifies operation at the module's highest supported transmission rate |

| **Layer 2 Networking** | **QoS** | **Network Redundancy** |
|---|---|---|
| Switch provides a comprehensive Layer 2 feature set: | Traffic prioritization and bandwidth control: | Multiple redundancy mechanisms: |
| | | |
| IEEE 802.1Q tag-based VLAN | WRR — Weighted Round Robin | X-Ring Pro |
| IEEE 802.1ad QinQ VLAN stacking | Strict Priority | IEEE 802.1D STP |
| GVRP | Hybrid Priority | IEEE 802.1w RSTP |
| GMRP | Up to 4 priority queues | IEEE 802.1s MSTP |
| Port mirroring | IEEE 802.1p CoS | ERPS (G.8032) |
| RSPAN | IP ToS | |
| IGMP Snooping v1/v2/v3 | DSCP-based CoS | |
| MLD Snooping | Ingress rate limiting | |
| IGMP Immediate Leave | Egress rate limiting | |
| Broadcast, multicast and unknown-unicast storm control | | |
| LLDP and LLDP-MED | | |
| Modbus/TCP | | |
| IEEE 802.3ad link aggregation | | |

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| Network Security | Network Management | Standards & Compliance |
|---|---|---|
| Security functions include: | The ON-5708E supports: | The ON-5708E supports: |
| | | |
| 802.1X port-based authentication | SNMP v1/v2c/v3 | IEEE 802.3 |
| 802.1X MAC-based authentication | Web management | IEEE 802.3u |
| MD5, TLS, TTLS and PEAP authentication | Telnet | IEEE 802.3x |
| MAC Authentication Bypass (MAB) | RMON | IEEE 802.3z |
| RADIUS | Standard MIB-II | IEEE 802.3ab |
| TACACS+ | Private MIB | IEEE 802.1D |
| Static/Dynamic MAC security | Ethernet-Like MIB | IEEE 802.1w |
| MAC learning limits | RMON MIB Groups 1, 2, 3 and 9 | IEEE 802.1Q |
| MAC violation notification | SSH 2.0 | IEEE 802.1p |
| DHCP Snooping | SSL | IEEE 802.1X |
| ARP spoofing prevention | TFTP/HTTP software upgrade | IEEE 802.3ad |
| IP-ACL | Dual-image software | EN 62368-1 |
| MAC-ACL | SNTP client | CE |
| | DHCP client/server/relay | CISPR 32 |
| | DHCP Options 66/67/82 | FCC Part 15B Class A |
| | NMS-based remote monitoring and management | IEC 61000-4 series |
| | | EN 61000-6-2 / EN 61000-6-4 |
| | | IEC 60068-2 series |
| | | IEC 62443-4-2 |

| Physical & Environmental Design | Power |
|---|---|
| The switch uses a compact metal IP30 enclosure measuring: | |
| | Dual redundant 12–48 VDC power input |
| 25 × 152 × 105 mm | System consumption: 6 W @ 24 VDC |
| | 1 × relay output |
| It supports: | Overcurrent protection |
| | Reverse polarity protection |
| DIN-rail mounting | |
| Wall mounting | |
| Dual redundant DC power inputs | |
| 1 × relay fault output | |
| | |
| The specified operating temperature is -40℃ to +75℃, with storage temperature of -40℃ to +85℃. | |

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