

# TXOne Release Note- Firmware



Product type	Industrial EdgeFire	Release Date	2021/12/24
<b>1. Release version</b> <ul style="list-style-type: none"><li>● <b>Firmware name:</b> ief.fw.t01_IEF_T01_1.2.11.acf</li><li>● <b>Version:</b> IEF_T01_1.2.11</li><li>● <b>Revision:</b> 9221b6fd0</li><li>● <b>SHA256 Checksum:</b> 18c3329dde6b8c37f3b6d0fac7494ec3ade616320cda45fd378d5e7ab13acf4f</li><li>● <b>Signature info:</b> TM_211110_10</li></ul>			
<b>2. Applied models</b> <ul style="list-style-type: none"><li>● <b>Platform: ARM64</b><ul style="list-style-type: none"><li>- IEF-1012-TM</li></ul></li></ul>			
<b>3. Release info</b> <ul style="list-style-type: none"><li>● TOS: ief_t01_1.2.11</li><li>● Platform: ief_t01_1.2.8</li><li>● Import: ief_t01_1.2.8</li><li>● TDTS: ics/2.6.23</li></ul> <b>A. Supported Features</b> <ul style="list-style-type: none"><li>● [New Feature] - Added Independent MGMT Setting (for WAN Port2)</li><li>● [New Feature] - Added High Availability Feature in [High Availability] Page.</li><li>● [New Feature] - Added Port Mirror Feature in [Port Mirror] Page.</li><li>● [New Feature] - New protocol support in [Protocol Filter Profiles] page:<ul style="list-style-type: none"><li>● 33 OT protocols supported in protocol level. (via IPS pattern update)<ul style="list-style-type: none"><li>▪ HART-IP</li><li>▪ OPC-UA</li><li>▪ OPC-Classic</li><li>▪ BACnet</li><li>▪ DNP3</li><li>▪ IEC-104</li><li>▪ GE-SDI</li><li>▪ GE-SRTP</li><li>▪ HL7</li><li>▪ DICOM</li><li>▪ ROS SimpleMessage</li><li>▪ Emerson ROC</li><li>▪ CODESYS</li><li>▪ Emerson DeltaV</li><li>▪ GE EGD</li><li>▪ GE iFIX</li><li>▪ TriStation</li><li>▪ ICCP TASE.2</li><li>▪ IEC 61850-R-GOOSE</li><li>▪ IEC 61850-R-SV</li><li>▪ IEC 62056</li><li>▪ IEEE C37.118</li><li>▪ KNX</li><li>▪ CN/IP</li></ul></li></ul></li></ul>			

- Niagara Fox
- LonWorks/LonTalk
- CoAP
- ADDP
- RTPS
- MDLC
- Ether-S-Bus
- EtherSIO
- Moxa Protocol
- 10 general protocols supported in protocol level. (via IPS pattern update)
  - MS-RPC
  - DNS
  - SNMP
  - TELNET
  - SMTP
  - SIP
  - MQTT
  - SSH
  - TFTP
  - VNC
- 1 general protocol supported in advanced level
  - SMB
- [New Feature] - MELSOFT protocol advanced filtering:
  - Added 10 new command codes
    - (0x0401) Device Batch Read
    - (0x0402) Device Random Read
    - (0x0403) Device Random Read
    - (0x0410) Device Memory Read
    - (0x0411) Device Random Read
    - (0x0412) Device Random Read
    - (0x1401) Device Batch Write
    - (0x1402) Device Random Write
    - (0x1410) Device Memory Write
    - (0x1411) Device Random Write
  - Added new 51 device codes for selection when one of the above 10 command code is chosen in MELSOFT protocol advanced filtering.
- [New Feature] - Added File Filter Profiles in [Object Profiles] Page
- [New Feature] - Added Policy Rule Auto Learning (ICS Foresight Strike)
- [New Feature] - Basic and Advanced Filter supported in [Policy Enforcement Rule] page.
- [New Feature] - Device Rule List and Master Rule List supported in [Policy Enforcement Rule] page.
- [New Feature] - Added search bar in [Policy Enforcement Rule] page.
- [New Feature] - Suspicious Objects supported in [Suspicious Objects] Page.
- [New Feature] - Device Profiles and Master Profiles supported in [IP objects], [Service objects], [Protocol Filter Profiles], [IPS Profiles] and [File Filter Profiles] pages.
- [New Feature] - Default IPS profile will be generated when the setting is factory default setting.
- [New Feature] - Support packet capture triggered by IPS in [Packet Capture] Page
- [New Feature] - Added File Filter Log and Suspicious Objects Log.

- [New Feature] - Support SNMP
- [New Feature] - Support CLI command for the below feature
  - System Information
  - Network > Network Interfaces
  - Network > Operation Mode
  - NAT > NAT Rules
  - Routing > Static Route
  - Object Profiles > IP Object Profiles
  - Object Profiles > Service Object Profiles
  - Security > Policy Enforcement
  - System Management
  - ODC Setting
  - SNMP
  - Time and Date
  - Device Reboot
  - Switch Firmware Partition
- [New Feature] - Zero Configuration supports the below actions from the front panel of EdgeIPS
  - On-demand configuration backup to USB drive
  - Load pattern from USB drive to EdgeFire
  - Load configuration from USB drive to EdgeFire
  - Load firmware from USB drive to EdgeFire

## B. Improvements

- [Enhancement] - Added Bandwidth Utilization and Packet Transmission Status in [System] page
- [Enhancement] - Added configurable ports in Port Mapping Feature.
  - Independent MGMT Port (for WAN Port2),
  - HA Port (for Port 7)
  - Mirror Port (for Port 8)
- [Enhancement] - Added LLDP settings in [Operation Mode] page.
- [Enhancement] - New protocols by signature update in [Protocol Filter Profile] page.
- [Enhancement] - Release note download in the pattern update page
- [Enhancement] - IPS Rule metadata download in pattern update page
- [Enhancement] - Support pattern encyclopedia and MITRE ATT&CK ID in pattern update page
- [Enhancement] - USB Zero Configuration Enhancement (Cfg Backup/Restore, FW Upgrade via USB disk drive)
- [Enhancement] - Support two models of USB disk drive.
  - Innodisk USB driver 2SE
  - Apacer USB 3.0 16GB
- [Enhancement] - Support remote access from ODC-VA to the device.
- [Enhancement] - Support enable/disable ping in [System Management] page
- [Enhancement] - User Experience Improvement in IPS Profile
  - User can select multiple items in IPS profile for configuration instead of be limited to select to the item in one page for editing.
- [Enhancement] - Added "Accept and Log" option in the action list of Policy Enforcement and Protocol Filter Action.

## C. Bug Fix

- [TXN-4120] - [Network Interface]After EdgeFire changes the interface IP with a new IP, the old IP is not cleared, the interface can still be connected with the old IP successfully
- [TXN-4122] - [VLAN] User can't access EdgeFire when the VLAN is enabled and the Bridge port is selected as management port under Bridge mode.
- [TXN-4142] - [CLI] EdgeFire disconnects after user modifying time zone setting.
- [TXN-2001] - In EdgeFire bridge mode, the blocked port status is not displayed WEBGUI when STP function is enabled.
- [TXN-4187] - [CLI] source IP/destination IP info doesn't display in policy enforcement rules
- [TXN-4190] - [CLI] wrong display for vlan in policy enforcement rule
- [TXN-4462] - [Port Settings] WAN1 Link speed locked at 10 Mbps Half Duplex
- [TXN-4466] - [CLI] the commands "save force", "done force" and "exit force" do not work.

## D. Known issues

- [TXN-1255/2070] - [Upgrade] The EdgeFire web console gets "something went wrong" or "An unexpected error occurred" even the user refreshes the browser.
- [TXN-2113] - [Account] Firmware upgrade will be failed w/o error messages if the network is unstable.
- [TXN-4443] - [HA]The HA management IP still can be used for WebGUI after restoring config of disabled HA
- [TXN-4405] - [HA] The secondary DUT will stay logged in with the original account after the configuration synchronization.

## E. SW limitation

- Not support Dual WAN features
- Asset visibility detection limitation:
  - According to proprietary protocol and specific setting in the specific OT environment. Possibility EdgeFire cannot detect since EdgeFire support well known the OT protocol, and only do best effort.
- Some rules of DoS cannot work
  - Due to kernel behavior, conntrack won't be attached to skbs of which the TCP flag is invalid. For LAN to WAN traffic, SNAT won't be taken for these packets w/o conntrack and EdgeFire cannot receive RST packets from victims. In current design, TCP port NULL/FIN/XMAS scan won't be detected w/o receiving RST packets.
- Not support VPN feature
- Direction field in logs
  - In gateway mode, this field may display '-' in logs if incoming interface of a packet equals to its outgoing interface, including 'WAN to WAN' and 'DMZ to DMZ'.
  - In bridge mode, this field always displays '-'.
- Policy Rule Auto-Learning doesn't work properly in HART-IP protocol
  - HART-IP protocol server uses new connection to connect to client. In this time EdgeFire can't recognize the original rule that should be created.

## F. Notes

- [TXN-1255] This is a browser cache issue. The browser caches the data of the previous version. To open a new browser can resolve this issue.

Comments :

*TXOne Networks*

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