



# GarrettCom<sup>®</sup>

*Industrial Networking at Its Best<sup>SM</sup>*

## Magnum Network Software – DX

### Software Release Notes

Software Revision 3.1.2 RC3

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# Release 3.1.2 RC3 Release Notes

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*The following notes describe the many new features and quality enhancements that have been made in MNS-DX version 3.1.2 RC3 (since version 3.1.1 RC3). Please reference the appropriate MNS-DX Software Manual for further details and specifics on new features at <http://www.garrettcom.com/techsupport/index.htm#software> under the Software Technical Manuals option.*

## 1.0 INTRODUCTION

The following notes contain details related to the MNS-DX v3.1.2 RC3 software release. MNS-DX v3.1.2 RC3 includes several enhancements over MNS-DX v3.1.1 RC3 as listed in Sections 2.0 New Features and 3.0 Quality Enhancements.

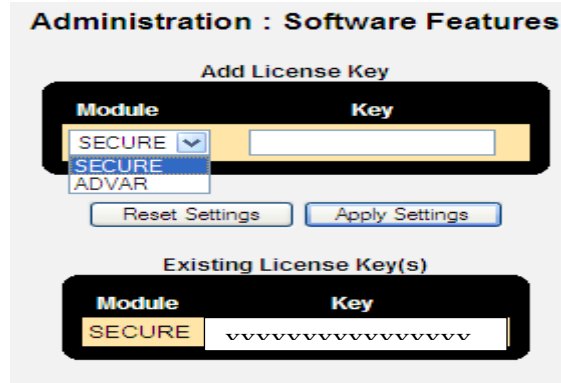
**IMPORTANT NOTICE:** Please note that LICENSE KEYS are now REQUIRED for certain product features and functionality to be carried forward with software upgrades. The proper license keys MUST be installed before upgrading the DX unit to 3.1.0 (RC5) or newer software. If the proper license keys are not installed before you upgrade, you will lose the unit configuration and the product features and functionality that falls under licensing.

To check your license keys, first you MUST be running MNS-DX v3.0 software. You can use the "license show" command from the CLI as shown below:

```
MagnumDX# license show
```

```
Feature Key
=====
SECURE XXXXXXXXXXXXXXXXXXXX
```

Or you can use the Web GUI interface page "Administration: Software Features" to view the License Keys that are set (under Existing License Key(s) heading) in the DX unit or add the MNS-DX-SECURE or MNS-DX-ADVVAR License Keys as required:



\*\*\* If you do not see the keys listed, then they are NOT installed \*\*\*

The license keys sets are summarized below:

**MNS-DX** is the base software license key that comes standard with all DX units and includes capabilities such as:

- Ethernet ports can be configured as switched ports or routed ports or combinations
- Serial ports can be software configurable as RS232 or RS485 ports
- RSTP supports RSTP-2004 (802.1w) & STP (802.1d), provides resilient Ethernet networks
- Routing features support RIP and RIP-II for routed ports
- VRRP – Virtual Router Redundancy Protocol provides router redundancy for Ethernet LAN devices
- DHCP Server and Client – provides DHCP services or queries for IP addresses
- Remote Access for secure administration is via SSH and optionally via telnet
- VLANs (802.1q) supports tagged based VLANs as access VLANs or trunk ports
- SNMP supports v1, v2 and v3 – for managing the device using Network Management Systems
- Event log locally stored provides a log of the most recent events
- SNTP provides time synchronization with NTP/SNTP servers
- Modbus interoperability over Ethernet or serial ports (RS232 or RS485)
- QoS prioritization to traffic using QoS and DiffServ tags across a network, and across a WAN port
- Trouble shooting is made easy with a built in protocol analyzer

**MNS-DX-SECURE** is an optional license key that can be purchased to add extra security features to the base MNS-DX such as IPSec, VPN, firewall, encryption and authentication needed for industrial cyber security. These extra Security features are unlocked via a licensed software key. MNS-DX-SECURE license key includes:

- IPSec VPN support with proven interoperability and conformance to industry standards
- Firewall provides stateful firewall rules for traffic flows or for IP streams or ports
- RADIUS provides management authentication via a RADIUS Server
- Configurable Login Banner message presented before user login to deter unauthorized users

- Secure Serial SSL connectivity to encrypt data
- Syslog operation enables logs to be collected by syslog servers for analysis
- SSH Port Forwarding allows secure access to less secure devices on the network
- Ethernet port security
- GRE (Generic Router Encapsulation)

**MNS-DX-ADVAR** is an optional license key that can be purchased to add the advanced routing options of OSPF and BGP to the base MNS-DX. These Advanced Routing features are unlocked via a licensed software key.

**Important Note:** It is critical that customers install the appropriate license keys once they have upgraded to v3.0.1 and before upgrading to a later software release, or the unit will lose all configuration and product features and functionality related to the above listed license keys.

Please contact your GarrettCom representative to obtain details on receiving the required License Keys. The proper License Keys can be installed via the CLI or Web interfaces.

Once you have your license keys, you can install them using the "license add" CLI command or through the "Administration : Software Features" web page.

**\*\*\* You MUST reboot your DX after installing the license key(s) for the key(s) to take effect \*\*\***

## 2.0 NEW FEATURES

### 2.1 VRRP Uplink Status Support

Starting in MNS-DX v3.1.2, the user may configure an 'uplink' interface for a VRRP virtual router. While the uplink interface is operationally down, the virtual router will operate as though its priority is 1. This allows the protocol to switch masters when an uplink interface becomes unavailable, eliminating situations where the device is the VRRP master but it is unable to reach part of the network.

### 2.2 Alarm support for 10ETS

MSN-DX v3.1.2 supports the alarms on the 10ETS. Typically the 10ETS has a hardware and software alarm. However, 10ETS devices that support PoE only have a single software alarm.

The hardware alarm is Normally Closed (NC). It will be asserted (open) when there is no power to the device or if a dual power supply device only has a single power supply available.

The software alarm defaults to NC, but the 'normal state' can be changed to Normally Open (NO) if desired.

### 2.3 Power-over-Ethernet Support on 10ETS

Starting in MNS-DX v3.1.2, the 10ETS can be configured with a four port Power-over-Ethernet (PoE) module in Slot C.

By default, all ports that are capable of PoE will have power enabled. The user can configure whether power is enabled or disabled on each port as well as how the port handles an over-current fault condition.

By default, if a PoE device draws more than the expected amount of current the port handles this fault condition by disabling power on the port and then periodically trying to re-enable power. The user can configure each port to keep power disabled once a fault condition occurs. If the port is configured in this way, PoE for the port must be manually disabled and re-enabled in order to enable power again.

The following status information is available for each PoE port:

- Status - the port status relative to PoE operation
  - Enabled – PoE is enabled, but no device is connected.
  - Disabled – PoE is manually disabled.
  - Active – power is being supplied to a PD.
  - Over-current – An over-current condition occurred on this port and it is not set to auto restart.
  - Disconnect – The PD stopped drawing power.
- Class – The detected class of the PD, indicates the power the device will draw.
- Faults – The number of over-current conditions detected on this port.

PoE ports can also generate the following events:

- “PoE Class# (#W) device on E#” – a POE device of a given class has been detected on a port and is drawing power. The wattage associated with the class is shown for convenience.
- “PoE Over-current E#” – an over-current fault has occurred on the port.
- "PoE Disconnect E#" - the PoE device has been removed from E#

## 3.0 QUALITY ENHANCEMENTS (Previous issues resolved and minor enhancements)

3.1 RJ45 serial ports that are enabled for IRIG distribution don't indicate link up (#2821)

3.2 MLPPP-LFI over Frame Relay has issues when link is oversubscribed (#2826)