1. Introduction

This document provides a detailed specification/requirement of the Network Configuration set/get commands and Connection functionality which are going to be supported with Ethernet module. Below commands are included of 3 kind usage.

- Network Configuration Commands: use to setup/inquire LAN card configuration through printer serial port or rowTCP port of Ethernet by user.
- LAN Control Commnads: use to restet or resotre factory default LAN card through printer serial port or rowTCP port of Ethernet by user.
- Network Internal commands: only application for LAN card and printer firmware. It is not for user operation

2. Network Configuration Commands

2.1 Command Structure

This section describes how and why to use the set/get commands.

Below are examples of get/set command structure illustration:

~S,set "**settings**" "**value**"

~S,set – Command.

"settings" – Attribute. Always in double quotes and must be specified in lower case.

"value" – Chosen value. Always in double quotes. Only applicable for setvar.

~S,get "**settings**"

~S,get – Command.

"settings" – Attribute. Always in double quotes and must be specified in lower case.

2.2 Network Configuration commands

2.2.1 ip address

Below command format allow you to get or set the printer's IP address.

get command instructs the printer to respond with its current external wired print server IP address.

Format: `~S,get "ip"`

set command instructs the printer to change its current printer IP address immediately.

Format: `~S,set "ip" "12.2.3.4"`

```
Example:
    ~S,set "ip" "10.203.33.87"
    ~S,get "ip"
    10.203.33.87
```

2.2.2 gateway

Below command formats instruct the printer to change the printer server's gateway address.

get command instructs the printer to respond with its printer server's gateway address.

Format: `~S,get "gateway"`

set command instructs the printer to change the printer server's gateway address.

Format: `~S,set "gateway" "10.3.4.5"`

```
Example:
     ~S,set "gateway" "10.3.4.5"
     ~S,get "gateway"
     10.3.4.5
```

2.2.3 nameserver

Below command formats allow user to get or set the printer's nameserver.

get command instructs the printer to respond with its current nameserver address.

Format: `~S,get "DNS"`

set command instructs the printer to change its current printer nameserver address.

Format: `~S,set "DNS" "10.203.37.72"`

```
Example:
     ~S,set "DNS" "10.203.37.72"
     ~S,get "DNS"
     10.203.37.72
```

2.2.4 netmask

Below command formats allow user to get or set the printer server's subnet mask address.

get command instructs the printer to respond with its printer server's subnet mask address.

Format: `~S,get "netmask"`

set command instructs the printer to change its printer server's subnet mask address.

Format: `~S,set "netmask" "255.255.255.0"`

```
Example:
     ~S,set "netmask" "255.255.255.0"
     ~S,get "netmask"
     255.255.255.0
```

2.2.5 protocol

Below command formats are used to configure the IP addressing method used by the printer.

get command returns the value of the currently selected IP protocol used by the printer.

Format: `~S,get "protocol"`

set command instructs the printer to configure the IP addressing method.

Format: `~S,set "protocol" "value"`

```
     Values:
     "dhcp" = uses the standard dhcp addressing method to obtain an IP address
```

```
                    and configuration for a server specified period of time
          "manual" = uses static values assigned by user.
Example:
     ~S,set "protocol" "dhcp"
     ~S,get "protocol"
     dhcp
```

3. LAN Control Commands

3.1 Network Restart commands

~S,NR: Printer sends to LAN/WLAN to reboot LAN/WLAN card firmware.

3.2 Network Default commands

~S,ND: Printer sends to LAN/WLAN to restore LAN/WLAN factory default.

4. Network Internal Commands

4.1 Network Inquire commands

~S,NI: Printer sends to LAN/WLAN to get current network configure status.

4.2 Webpage Disable commands

~S,NU: Printer sends to LAN/WLAN to disable webpage function.

4.3 Webpage Enable commands

~S,NE: Printer sends to LAN/WLAN to enable webpage function.

4.4 Network Activity commands

~S,NA: LAN/WLAN reply to printer to turn on the BUSY indicate LED before go to self reboot, power on and while firmware updating.

4.5 Network Status commands

~S,NS: LAN/WLAN reply the current network configure status to printer after getting ~S,NI command. If connect to wireless LAN then reply with followed SSID.

Case 1: Ethernet port is OFF LINE

~S,NS0<0x0d,0x0a>

Case 2: Ethernet port is ON LINE (LAN)

~S,NS1<0x0d,0x0a>
~S,Interface: LAN(/WLAN) <0x0d,0x0a>
~S,MAC address: xx-xx-xx-xx-xx<0x0d,0x0a>
~S,IP protocol: dhcp(/manual)<0x0d,0x0a>
~S,IP address: xxx.xxx.xxx.xxx<0x0d,0x0a>
~S,Netmask: xxx.xxx.xxx.xxx<0x0d,0x0a>
~S,Default gateway: xxx.xxx.xxx.xxx<0x0d,0x0a>
~S,DNS: xxx.xxx.xxx.xxx<0x0d,0x0a>

Case 3: Ethernet port is ON LINE (WLAN)

~S,NS2<0x0d,0x0a>

~S,Interface: LAN(/WLAN) <0x0d,0x0a>

~S,MAC address: xx-xx-xx-xx-xx<0x0d,0x0a>

~S,IP protocol: dhcp(/manual)<0x0d,0x0a>

~S,IP address: xxx.xxx.xxx.xxx<0x0d,0x0a>

~S,Netmask: xxx.xxx.xxx.xxx<0x0d,0x0a>

~S,Default gateway: xxx.xxx.xxx.xxx<0x0d,0x0a>

~S,DNS: xxx.xxx.xxx.xxx<0x0d,0x0a>

~S,SSID: (ASCII, 30 chars Max.)<0x0d,0x0a>

~S,Network type: Infrastructure (/Ad hoc) <0x0d,0x0a>

~S,Security: Disable(/WPA-PSK/TKIP) *<0x0d,0x0a>*