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SDU Cable Installation Manual

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Description

The OneDrop **Single Drop USB (SDU)** Ethernet to micro USB cable adaptor allows a NetLink module to be connected directly to the USB port on a OneDrop-compatible access control panel. This allows the NetLink to connect to a network through the access panel's ethernet connection, eliminating the need for a second ethernet drop.

Note - The SDU cable received may differ in appearance from the cable shown in this document.

Specifications

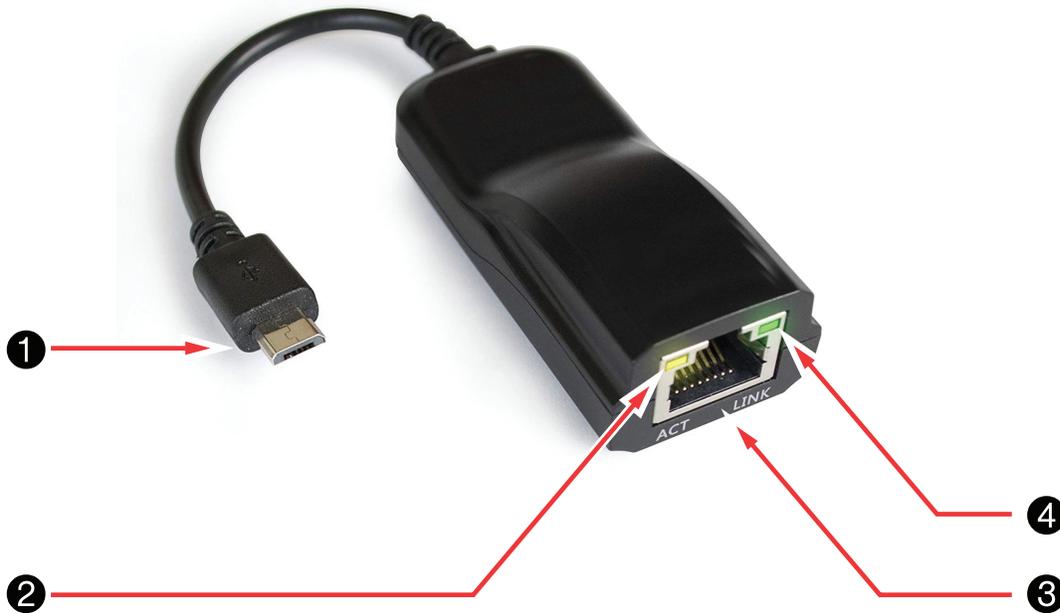
Connection 1	Ethernet	Connection to NetLink
Connection 2	Micro USB	Connection to Access Panel
Size	L x W x H	6.00" x 1.50" x 1.0" (152mm x 39mm x 26 mm)
Weight		0.15lb (0.07kg)

Connecting the SDU Cable

Refer to the image below for more information. To connect the SDU cable:

1. Locate the micro USB port on the access control panel and plug in the micro USB end of the SDU.
2. Connect a standard (not crossover) Ethernet cable between the Ethernet end of the SDU and the Ethernet port of the NetLink Module.
3. Configure the NetLink and Access Panel for OneDrop operation (See page 3).

Accessory Overview



1 Micro USB Connector

The Micro USB connector plugs into the Micro USB port on the access control panel.

2 Activity LED (Yellow)

This LED will flash when data is being transmitted or received.

3 Ethernet Connector

The Ethernet connector is connected to the NetLink's Ethernet port using a standard (not crossover) Ethernet cable.

4 Link LED (Green)

The Link LED will light when the Ethernet port is connected correctly.



Configuring OneDrop for Mercury LP Series Controllers

Starting with Mercury firmware revision 1.27.2 or higher, a NetLink device can be configured to share the ethernet connection and IP address with the Mercury controller via IP Tunneling using the OneDrop SDU cable. NetLink firmware revision must be 9.17 or higher..

Block Diagram

Figure 2 shows the physical connection between the NetLink board and the Mercury controller using the SDU cable. Note that an LP-Series controller with the Micro USB connector is required and the controller must be running firmware revision 1.27.2 or higher.

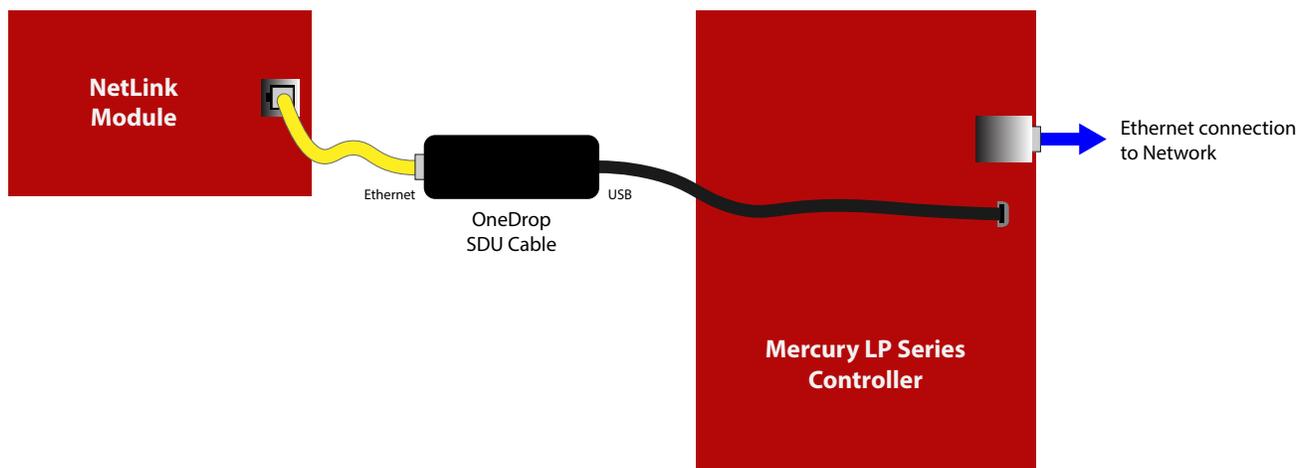


Figure 2 - Block Diagram

Configuring the OneDrop IP Tunnel Connection

In order for the LSP IP Tunnel connection to work correctly, the Mercury controller and NetLink need to be configured correctly as shown below. In the steps shown, the values in parenthesis are the values in the example screenshots shown.

STEP 1 - CONFIGURING THE MERCURY CONTROLLER

The first step in configuring the LSP IP Tunnel is to configure the Mercury Controller. Once logged into the controller, go to Network Settings.

1. Set the IP address for the controller to a static IP address in Interface 1 (NIC1). (192.168.2.251)
2. Set Interface 2 (NIC2) to an unused IP address in the same domain as the NetLink module. (10.129.119.21)
3. Check "Tunnel Support" checkbox and enter the IP address of the NetLink into the "Tunnel IP" field. (10.129.119.20)
4. Enter an unused port number into the "Port" field. (8443)
Note that the NetLink's https port number should be left to default (443), not the same as the Tunnel Port setting.
5. In DNS Settings, set the NIC1 Gateway address as the primary DNS Server. (192.168.2.1)

Network Settings

Host name of this device:

(only 0-9, a-z, A-Z, .(period), -(hyphen) are allowed)

Interface 1 (NIC1)

Use DHCP method to obtain IP address automatically

Use Static IP configuration:

IP Address:

Subnet Mask:

Default Gateway:

- Interface 2 (NIC2)

Disable Network Interface 2

Use DHCP method to obtain IP address automatically

Use Static IP configuration:

IP Address:

Subnet Mask:

Tunnel Support

Tunnel IP: Port:

DNS Settings

(only 0-9, a-z, A-Z, .(period), -(hyphen) are allowed)

DNS Server Primary cannot be left blank.

DNS Server Alternate can be left blank by typing "0.0.0.0"

Obtain DNS server address automatically

Use the following DNS server address:

DNS Suffix Primary:

DNS Suffix Alternate:

DNS Server Primary:

DNS Server Alternate:

* Select **APPLY SETTINGS** to apply changes. *

Note: The web configuration can only be accessed through NIC1.
 Putting both interfaces on the same subnet may cause unpredictable behavior on both this web config and through host comm.

Figure 3 - Mercury Controller Setup



STEP 2 - CONFIGURING THE NETLINK BOARD

The second step in setting up the LSP IP Tunnel connection is to configure the NetLink module to access the network through the tunnel as follows:

1. In the TCP/IP Settings section, set the IP address of the NetLink to the address entered into "Tunnel IP" in the Mercury Controller. (10.129.119.20)
2. Set the Gateway IP to the IP address entered into NIC2 IP address field in the Mercury Controller. (10.129.119.21)
3. Set DNS0 IP Address to the IP address of the Gateway for the Mercury Controller. (192.168.2.1)
4. Click Submit.
5. If using MSM Enterprise, in the MSM Settings section of the NetLink's configure page, check "Enable Tunnel" and enter the Mercury tunnel port number (8443)
6. Click Submit and reboot the NetLink board for the changes to take effect.

See the full NetLink manual for more information on IP settings.

Accessing the NetLink through the Tunnel Connection

Once properly configured as shown in the previous sections, the NetLink may be accessed through a web browser as normal by using the Mercury NIC1 IP address followed by the Tunnel port number. In the example shown, to access the NetLink's interface you would enter:

https://192.168.2.251:8443

To access the Mercury controller's interface you would use the same IP number without the port number:

https://192.168.2.251

The screenshot displays the configuration interface for the NetLink board. At the top, there is a header with the LSP logo (Remote Reporting) and the POWERCOM SYSTEM MANAGER logo. Navigation tabs include HOME, Reporting, Configure, and Tools. The user is logged in as 'msm' and can log out. The version is 9.19.14.

Client information is shown: Client ID is NXP, SITE ID is IP Tunnel Test Unit (highlighted in yellow), Date is Wed Apr 15 2020, and Time is 07:41:49.

TCP/IP Settings:

- Name: LSP
- IP Address: 10.129.119.20
- Net Mask: 255.255.255.0
- MAC Address: 00:02:AC:55:CF:93
- Gateway IP Address: 10.129.119.21
- DNS0 IP Address: 192.168.2.1
- DNS1 IP Address: (empty)
- HTTPS Port #: 443
- Enable DHCP:
- Restore to factory default Login: (button)

Time Settings:

- Select timezone: (GMT-06:00)Central Time(US&Canada) (dropdown menu)
- Submit (button)
- Insert Date: Year 2020, Mon 04, Day 15
- Insert Time: Hour 07, Min 41, Sec 35
- Submit (button)
- Sync Date/Time with computer (button)
- NTP Server: 0.us.pool.ntp.org, 1.us.pool.ntp.org
- Get GMT Time (button) (Connect to internet first before clicking "Get GMT Time")

IPV6 Settings:

- IPV6 Address: (empty)
- Prefix Lengths: (empty)
- Gateway IP Address: (empty)
- DNS0 IP Address: (empty)

MSM Settings:

- Mercury Tunnel Port: 8443
- Enable Tunnel:
- IP Address: 54.156.45.89
- Destination Port #: 9888

Figure 3 - NetLink Setup

IMPORTANT

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