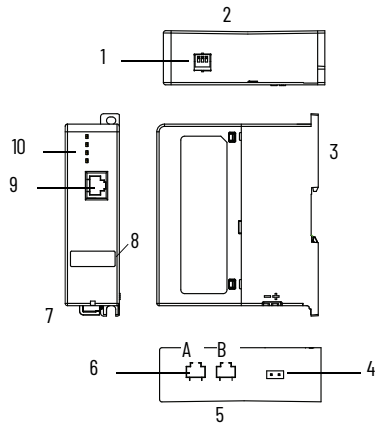


## 1783-ETAP Module Components

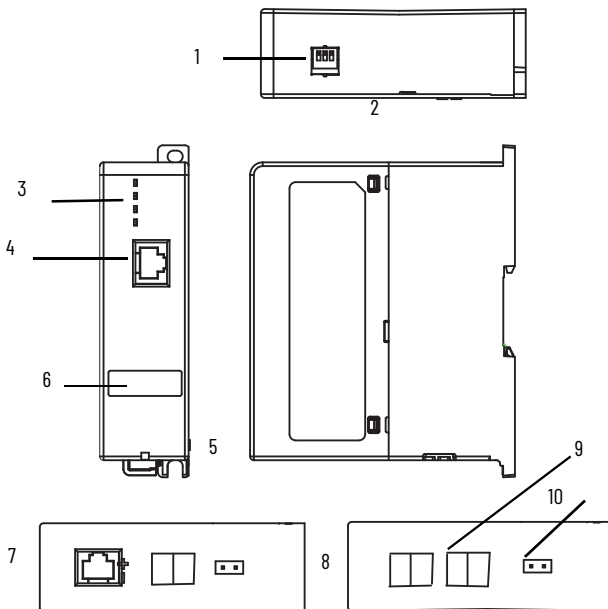


| Item | Description  | Item | Description                                                              |
|------|--------------|------|--------------------------------------------------------------------------|
| 1    | DIP switches | 6    | Ports for connection to linear or ring network<br>A: Port 1<br>B: Port 2 |
| 2    | Top view     | 7    | Front view                                                               |
| 3    | Side view    | 8    | MAC ID label                                                             |
| 4    | DC connector | 9    | Device port on front panel                                               |
| 5    | Bottom view  | 10   | Status indicators                                                        |

By default, the individual ports on the tap auto-negotiate link speeds (10 Mbps or 100 Mbps) and duplex setting (full or half).

**IMPORTANT** Configure the Ethernet port on the device that you connect to a tap so that it matches the tap's speed and duplex settings. Failure to make the speed and duplex settings of directly connected devices match may result in higher error rates, or loss of network connectivity.

## 1783-ETAPIF, 1783-ETAP2F Module Components



| Item | Description                | Item | Description                                                   |
|------|----------------------------|------|---------------------------------------------------------------|
| 1    | DIP switches               | 6    | MAC ID label                                                  |
| 2    | Top view                   | 7    | Bottom view, 1783-ETAPIF                                      |
| 3    | Status indicators          | 8    | Bottom view, 1783-ETAP2F                                      |
| 4    | Device port on front panel | 9    | Ports for connection to linear or ring network <sup>(1)</sup> |
| 5    | Side view                  | 10   | DC connector                                                  |

(1) The 1783-ETAP2F tap has two fiber-optic ports. The 1783-ETAPIF tap has one fiber-optic port.

By default, the 10Base-T and 100BASE-TX ports on the tap autonegotiate link speeds (10 Mbps or 100 Mbps) and duplex setting (full or half). The 100Base-FX fiber interfaces provide 100 Mbps, full-duplex operation.

**IMPORTANT** Configure the Ethernet port on the device that you connect to a tap so that it matches the tap's speed and duplex settings. Failure to make the speed and duplex settings of directly connected devices match may result in higher error rates or loss of network connectivity.

# Software Requirements

You must have these versions of software.

| Software                   | Version           |
|----------------------------|-------------------|
| RSLinX® Classic            | 2.56.00 or later  |
| Studio 5000 Logix Designer | 21.00.00 or later |

## Install the Tap



**WARNING:** For hazardous location applications, use the supplied Phoenix MSTB 2.5/2-ST-5.08 power terminal block.

Follow these procedures to install the tap.

1. Mount the tap in one of these configurations:
  - Panel mount
  - DIN rail mount
2. Wire the tap.
3. Connect the Ethernet ports.
4. Download the tap Add-on Profile (AOP) if you are using the Studio 5000 Logix Designer application, version 17.01.
5. Download the EDS file for the tap.
6. Configure Internet Protocol settings.
7. Set the DIP switches.

This publication describes these steps in detail.

## Mount the Tap

The 1783-ETAP, 1783-ETAPIF, and 1783-ETAP2F modules are suitable for both **vertical and horizontal mounting** orientations.

Install the tap on a DIN rail or panel-mount the tap.

**IMPORTANT** For 1783-ETAP modules:  
When mounting the tap, allow a minimum clearance between the product and adjacent equipment of 2.54 cm (1 in.) on all sides.

**IMPORTANT** For 1783-ETAPIF, 1783-ETAP2F modules:

- When mounting the tap, be sure to provide 7.62 cm (3 in.) of space on the bottom of the tap and 2.54 cm (1 in.) of space on the remaining sides of the tap.
- Allow at least 5.08 cm (2 in.) for the fiber cable bend radius. Contact the cable manufacturer for more information on recommended cable bend radii.



**WARNING: EXPLOSION HAZARD**  
An electric arc can occur if you connect or disconnect the following:

- Communication cable with power that is applied to this module or any device on the network
- Wiring while the field-side power is on

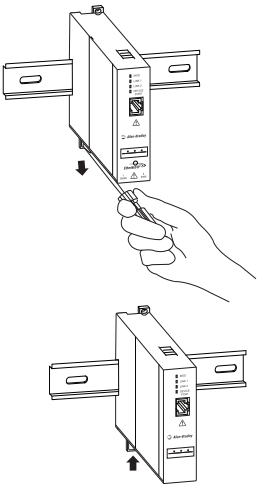
This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.  
For hazardous location applications, use the supplied Phoenix MSTB 2.5/2-ST-5.08 power terminal block.

## DIN Rail Mounting

To install the tap on a DIN rail, proceed as follows.

1. Mount your DIN rail.
2. Use a screwdriver to open the latch at the bottom of the tap.
3. Hook the latch over the DIN rail while holding the latch open with your screwdriver.
4. Remove the screwdriver and push the latch to close.

The top figure shows using a screwdriver to open the latch so that you can remove the tap from the DIN rail. The bottom figure shows the latch at the bottom of the tap in the open position.



## Panel Mounting

To panel mount a tap, proceed as follows.

1. Use the tap as a template and mark pilot holes on your panel.
2. Drill the pilot holes for M4 or #8 screws.

## Wire the Tap

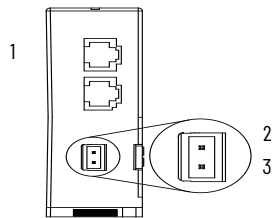


**ATTENTION:** To comply with the CE Low Voltage Directive (LVD), this equipment must be powered from a source compliant with safety extra low voltage (SELV) or protected extra low voltage (PELV).  
To comply with UL restrictions, this equipment must be powered from a source compliant with Class 2.

Provide DC power to the tap by using the DC connector at the bottom of the tap.

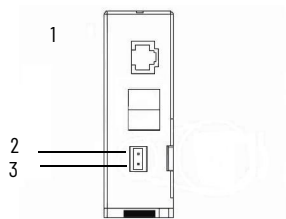


**ATTENTION:** Do not wire more than two conductors on any single terminal.



### 1783-ETAP Terminals

| Item | Description               |
|------|---------------------------|
| 1    | Tap bottom                |
| 2    | DC- (0V DC) terminal      |
| 3    | DC+ (24V DC nom) terminal |



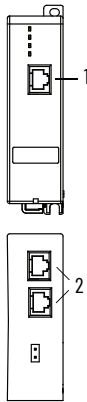
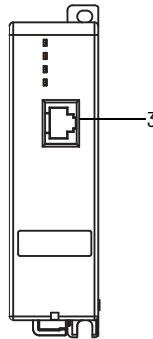
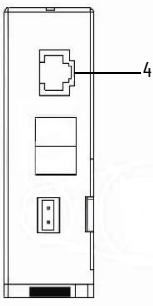
### 1783-ETAP1F, 1783-ETAP2F Terminals

| Item | Description               |
|------|---------------------------|
| 1    | Tap bottom                |
| 2    | DC- (0V DC) terminal      |
| 3    | DC+ (24V DC nom) terminal |

# Connect the RJ45 Ports

Follow these steps to connect the copper Ethernet ports on the tap.

1. Locate the copper Ethernet RJ45 ports on the front and bottom of the tap, as shown in the figure.

| 1783-ETAP                                                                         | 1783-ETAP1F                                                                       | 1783-ETAP2F                                                                       | Item | Description                                                                              |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------|
|  |  |  | 1    | Device port on 1783-ETAP module front panel                                              |
|                                                                                   |                                                                                   |                                                                                   | 2    | Ports on 1783-ETAP module bottom for connection to the linear or ring network            |
|                                                                                   |                                                                                   |                                                                                   | 3    | Device port on 1783-ETAP1F module front panel                                            |
|                                                                                   |                                                                                   |                                                                                   | 4    | RJ45 port on 1783-ETAP2F module bottom for connection to a linear, star, or ring network |

2. Connect one end of an Ethernet cable to the front panel port used as a device port.
3. Connect the other end of the Ethernet cable to the appropriate device in your network.
4. Connect one end of a second Ethernet cable to a port at the bottom of the tap and connect the other end of the Ethernet cable to the linear or ring network.
5. Repeat with the other port at the bottom of the tap if the port is used by your network.

**IMPORTANT** When configuring a DLR network, refer to [Device Level Ring \(DLR\) Network Considerations on page 4](#) to avoid adversely impacting your network.

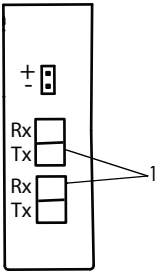
# Connect the 1783-ETAP1F and 1783-ETAP2F Fiber Ethernet Ports

Follow these steps to connect the fiber Ethernet ports on 1783-ETAP1F and 1783-ETAP2F modules.



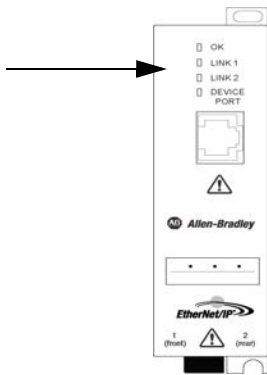
**ATTENTION:** Do not look at the optical port. The optical port can expose the eye beyond the maximum permissible exposure recommendations and presents a hazard.

| Item | Description                                                  |
|------|--------------------------------------------------------------|
| 1    | Fiber ports on tap bottom for connection to the ring network |



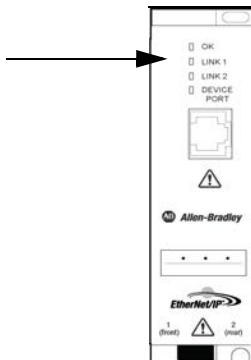
1. Locate the fiber Ethernet ports on the bottom of the tap, as shown in the figure (1783-ETAP2F tap shown).
2. Connect the duplex LC connector end of the fiber-optic cable, in the proper orientation, to the fiber-optic Ethernet port on the bottom of the tap.
3. Connect the other end of the fiber-optic cable to the linear or ring network.
4. Repeat [step 2](#) and [step 3](#) with the remaining fiber-optic Ethernet port at the bottom of the tap, if used by your network.

## 1783-ETAP Status Indicators



| Indicator    | Status          | Description                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OK           | Off             | Tap is not powered.                                                                                                                                                                                                                                                                                                                                                                 |
|              | Flashing green  | Tap is not configured.                                                                                                                                                                                                                                                                                                                                                              |
|              | Steady green    | Tap is powered, configured, and operating correctly.                                                                                                                                                                                                                                                                                                                                |
|              | Flashing red    | Recoverable fault, such as duplicate IP address or update in progress, is detected.                                                                                                                                                                                                                                                                                                 |
|              | Steady red      | Unrecoverable fault detected.                                                                                                                                                                                                                                                                                                                                                       |
| LINK1, LINK2 | Off             | One of these conditions exists: <ul style="list-style-type: none"> <li>No link.</li> <li>Port administratively disabled.</li> <li>Port that is disabled because of rapid ring fault condition, and this tap is the active ring supervisor (LINK 2).</li> <li>Ring network has encountered a rare, partial network fault, and this tap is the active supervisor (LINK 2).</li> </ul> |
|              | Green           | One of these conditions exists: <ul style="list-style-type: none"> <li>A 100 Mbps (full or half-duplex) link exists.</li> <li>The ring network is operating normally and this tap is the active supervisor (LINK 2).</li> </ul>                                                                                                                                                     |
|              | Flashing green  | A 100 Mbps link exists and there is activity.                                                                                                                                                                                                                                                                                                                                       |
|              | Steady yellow   | One of these conditions exists: <ul style="list-style-type: none"> <li>A 10 Mbps (full or half-duplex) link exists.</li> <li>Ring network is operating normally, and this tap is the active supervisor (LINK 2).</li> </ul>                                                                                                                                                         |
|              | Flashing yellow | A 10 Mbps link exists and there is activity.                                                                                                                                                                                                                                                                                                                                        |

## 1783-ETAP1F, 1783-ETAP2F Status Indicators



| Indicator      | Status          | Description                                                                                                                                                                                                                                                                                                                                            |
|----------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OK             | Off             | Tap is not powered.                                                                                                                                                                                                                                                                                                                                    |
|                | Flashing green  | Tap is not configured.                                                                                                                                                                                                                                                                                                                                 |
|                | Steady green    | Tap is powered, configured, and operating correctly.                                                                                                                                                                                                                                                                                                   |
|                | Flashing red    | Recoverable fault, such as duplicate IP address detected, or an update in progress, is detected.                                                                                                                                                                                                                                                       |
|                | Steady red      | Unrecoverable fault detected.                                                                                                                                                                                                                                                                                                                          |
| LINK 1, LINK 2 | Off             | One of these conditions exists: <ul style="list-style-type: none"> <li>No link.</li> <li>Port administratively disabled.</li> <li>Ring network has encountered a rare, partial network fault, or rapid ring fault condition, and this tap is the active supervisor (LINK 2).</li> </ul>                                                                |
|                | Steady green    | One of these conditions exists: <ul style="list-style-type: none"> <li>RJ45 port: a 100 Mbps (full or half-duplex) link exists, and there is no activity.</li> <li>Fiber port: a 100 Mbps (full-duplex) link exists, and there is no activity.</li> <li>Ring network is operating normally, and this tap is the active supervisor (LINK 2).</li> </ul> |
|                | Flashing green  | A 100 Mbps link exists and there is activity.                                                                                                                                                                                                                                                                                                          |
|                | Steady yellow   | RJ45 port only. One of these conditions exists: <ul style="list-style-type: none"> <li>A 10 Mbps (full or half-duplex) link exists.</li> <li>Ring network is operating normally, and this tap is the active supervisor (LINK 2).</li> </ul>                                                                                                            |
|                | Flashing yellow | RJ45 port only. A 10 Mbps link exists and there is activity.                                                                                                                                                                                                                                                                                           |

## Specifications

| Attribute                                                                                                                                                             | 1783-ETAP, 1783-ETAPK                                                                                                                                                                                                                                               | 1783-ETAP1F, 1783-ETAP1FK                    | 1783-ETAP2F, 1783-ETAP2FK |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------|
| Power consumption, max                                                                                                                                                | 3 W                                                                                                                                                                                                                                                                 | 4.8 W                                        | 6.24 W                    |
| Current consumption, max                                                                                                                                              | 125 mA @ 24V DC                                                                                                                                                                                                                                                     | 200 mA @ 24V DC                              | 260 mA @ 24V DC           |
| DC power supply voltage rating                                                                                                                                        | <ul style="list-style-type: none"> <li>24V DC (20.4...27.6V DC)</li> <li>台灣使用的rating為24V DC</li> </ul>                                                                                                                                                              |                                              |                           |
| Ethernet connections                                                                                                                                                  | <ul style="list-style-type: none"> <li>RJ45 connector according to IEC 60603-7, 2 or 4 pair</li> <li>Category 5e minimum cable according to TIA 568-B.1</li> <li>Category 5 cable according to ISO/IEC 24702</li> </ul>                                             |                                              |                           |
| DC power connections                                                                                                                                                  | <ul style="list-style-type: none"> <li>One 0.33...3.3 mm<sup>2</sup> (22...12 AWG)</li> <li>Two 0.33...1.3 mm<sup>2</sup> (22...16 AWG) solid</li> <li>Stranded copper wire rated at 75 °C (167 °F) or greater</li> <li>1.2 mm (3/64 in.) insulation max</li> </ul> |                                              |                           |
| Torque                                                                                                                                                                | 0.6...0.8 N•m (5...7 lb•in) on power connector                                                                                                                                                                                                                      |                                              |                           |
| Temperature, operating<br>IEC 60068-2-1 (Test Ad, Operating Cold)<br>IEC 60068-2-2 (Test Bd, Operating Dry Heat)<br>IEC 60068-2-14 (Test Nb, Operating Thermal Shock) | -25 °C ≤ Ta ≤ +70 °C (-13 °F ≤ Ta ≤ +158 °F)                                                                                                                                                                                                                        | -25 °C ≤ Ta ≤ +60 °C (-13 °F ≤ Ta ≤ +140 °F) |                           |
| Temperature, surrounding air, Ta, max                                                                                                                                 | 70 °C (158 °F)                                                                                                                                                                                                                                                      | 60 °C (140 °F)                               |                           |



**WARNING:** This product is a class A equipment:

- This product must not be used in residential areas.
- This product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the other devices.

<警告使用者>此為甲類資訊技術設備，於居住環境中使用時，可能會造成射頻擾動，在此種情況下，使用者會被要求採取某些適當的對策。

## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

| Resource                                                                         | Description                                                                                                                                      |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Stratix Ethernet Switches Specifications, publication <a href="#">1783-TD001</a> | Contains technical specifications, environmental specifications, certifications, and other information pertaining to Stratix® Ethernet switches. |

You can view or download publications at <https://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

Rockwell Automation maintains current product environmental information on its website at <https://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.