

Installation Instructions

Original Instructions



Allen-Bradley

by ROCKWELL AUTOMATION

Stratix 4100 Ethernet Taps

Catalog Numbers 1783-ETAP3T, 1783-ETAP1T2SFP

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ATTENTION: Read this document and the documents listed in the Additional Resources section about installation, configuration and operation of this equipment before you install, configure, operate or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

注意：在安装、配置、操作和维护本产品前，请阅读本文档以及“其他资源”部分列出的有关设备安装、配置和操作的相应文档。除了所有适用规范、法律和标准的相关要求之外，用户还必须熟悉安装和接线说明。

安装、调整、投运、使用、组装、拆卸和维护等各项操作必须由经过适当训练的专业人员按照适用的操作规范实施。

如果未按照制造商指定的方式使用该设备，则可能会损害设备提供的保护。

ATENCIÓN: Antes de instalar, configurar, poner en funcionamiento o realizar el mantenimiento de este producto, lea este documento y los documentos listados en la sección Recursos adicionales acerca de la instalación, configuración y operación de este equipo. Los usuarios deben familiarizarse con las instrucciones de instalación y cableado y con los requisitos de todos los códigos, leyes y estándares vigentes.

El personal debidamente capacitado debe realizar las actividades relacionadas a la instalación, ajustes, puesta en servicio, uso, ensamblaje, desensamblaje y mantenimiento de conformidad con el código de práctica aplicable. Si este equipo se usa de una manera no especificada por el fabricante, la protección provista por el equipo puede resultar afectada.

ATENÇÃO: Leia este e os demais documentos sobre instalação, configuração e operação do equipamento que estão na seção Recursos adicionais antes de instalar, configurar, operar ou manter este produto. Os usuários devem se familiarizar com as instruções de instalação e fiação além das especificações para todos os códigos, leis e normas aplicáveis.

É necessário que as atividades, incluindo instalação, ajustes, colocação em serviço, utilização, montagem, desmontagem e manutenção sejam realizadas por pessoal qualificado e especializado, de acordo com o código de prática aplicável.

Caso este equipamento seja utilizado de maneira não estabelecida pelo fabricante, a proteção fornecida pelo equipamento pode ficar prejudicada.

ВНИМАНИЕ: Перед тем как устанавливать, настраивать, эксплуатировать или обслуживать данное оборудование, прочитайте этот документ и документы, перечисленные в разделе «Дополнительные ресурсы». В этих документах изложены сведения об установке, настройке и эксплуатации данного оборудования. Пользователи обязаны ознакомиться с инструкциями по установке и прокладке соединений, а также с требованиями всех применимых норм, законов и стандартов.

Все действия, включая установку, наладку, ввод в эксплуатацию, использование, сборку, разборку и техническое обслуживание, должны выполняться обученным персоналом в соответствии с применимыми нормами и правилами.

Если оборудование используется не предусмотренным производителем образом, защита оборудования может быть нарушена.

注意：本製品を設置、構成、稼働または保守する前に、本書および本機器の設置、設定、操作についての参考資料の該当箇所に記載されている文書に目を通してください。ユーザは、すべての該当する条例、法律、規格の要件に加えて、設置および配線の手順に習熟している必要があります。

設置調整、運転の開始、使用、組立て、解体、保守を含む諸作業は、該当する実施規則に従って訓練を受けた適切な作業員が実行する必要があります。

本機器が製造メーカーにより指定されていない方法で使用されている場合、機器により提供されている保護が損なわれる恐れがあります。

ACHTUNG: Lesen Sie dieses Dokument und die im Abschnitt „Weitere Informationen“ aufgeführten Dokumente, die Informationen zu Installation, Konfiguration und Bedienung dieses Produkts enthalten, bevor Sie dieses Produkt installieren, konfigurieren, bedienen oder warten. Anwender müssen sich neben den Bestimmungen aller anwendbaren Vorschriften, Gesetze und Normen zusätzlich mit den Installations- und Verdrahtungsanweisungen vertraut machen.

Arbeiten im Rahmen der Installation, Anpassung, Inbetriebnahme, Verwendung, Montage, Demontage oder Instandhaltung dürfen nur durch ausreichend geschulte Mitarbeiter und in Übereinstimmung mit den anwendbaren Ausführungsvorschriften vorgenommen werden.

Wenn das Gerät in einer Weise verwendet wird, die vom Hersteller nicht vorgesehen ist, kann die Schutzfunktion beeinträchtigt sein.

ATTENTION: Lisez ce document et les documents listés dans la section Ressources complémentaires relatifs à l'installation, la configuration et le fonctionnement de cet équipement avant d'installer, configurer, utiliser ou entretenir ce produit. Les utilisateurs doivent se familiariser avec les instructions d'installation et de câblage en plus des exigences relatives aux codes, lois et normes en vigueur.

Les activités relatives à l'installation, le réglage, la mise en service, l'utilisation, l'assemblage, le démontage et l'entretien doivent être réalisées par des personnes formées selon le code de pratique en vigueur.

Si cet équipement est utilisé d'une façon qui n'a pas été définie par le fabricant, la protection fournie par l'équipement peut être compromise.

주요: 본 제품 설치, 설정, 작동 또는 유지 보수가 하기 전에 본 문서를 포함하여 설치, 설정 및 작동에 관한 참고 자료 섹션의 문서들을 반드시 읽고 숙지하십시오. 사용자는 모든 관련 규정, 법규 및 표준에서 요구하는 사항에 대해 반드시 설치 및 배선 지침을 숙지해야 합니다.

설치, 조정, 가동, 사용, 조립, 분해, 유지보수 등 모든 작업은 관련 규정에 따라 적절한 교육을 받은 사용자를 통해서만 수행해야 합니다.

본 장비를 제조사가 명시하지 않은 방법으로 사용하면 장비의 보호 기능이 손상될 수 있습니다.

ATTENZIONE: Prima di installare, configurare ed utilizzare il prodotto, o effettuare interventi di manutenzione su di esso, leggere il presente documento ed i documenti elencati nella sezione "Altre risorse", riguardanti l'installazione, la configurazione ed il funzionamento dell'apparecchiatura. Gli utenti devono leggere e comprendere le istruzioni di installazione e cablaggio, oltre ai requisiti previsti dalle leggi, codici e standard applicabili.

Le attività come installazione, regolazioni, utilizzo, assemblaggio, disassemblaggio e manutenzione devono essere svolte da personale adeguatamente addestrato, nel rispetto delle procedure previste.

Qualora l'apparecchio venga utilizzato con modalità diverse da quanto previsto dal produttore, la sua funzione di protezione potrebbe venire compromessa.

DİKKAT: Bu ürünün kurulumu, yapılandırılması, işletilmesi veya bakımı öncesinde bu dokümanı ve bu ekipmanın kurulumu, yapılandırılması ve işletimi ile ilgili ilave Kaynaklar bölümünde yer listelenmiş dokümanları okuyun. Kullanıcılar yürürlükteki tüm yönetmelikler, yasalar ve standartların gereksinimlerine ek olarak kurulum ve kablolama talimatlarını da öğrenmek zorundadır. Kurulum, ayarlama, hizmete alma, kullanma, parçaları birleştirme, parçaları sökme ve bakım gibi aktiviteler sadece uygun eğitimleri almış kişiler tarafından yürürlükteki uygulamaya yönetmeliklerine uygun şekilde yapılabilir.

Bu ekipman üretici tarafından belirlenmiş amacın dışında kullanılırsa, ekipman tarafından sağlanan koruma bozulabilir.

注意事項：在安装、設定、操作或維護本产品前，請先閱讀此文件以及列於「其他資源」章節中有關安裝、設定與操作此設備的文件。使用者必須熟悉安裝和配線指示，並符合所有法規、法律和標準要求。

包括安裝、調整、交付使用、使用、組裝、拆卸和維護等動作都必須交由已經過適當訓練的人員進行，以符合適用的實作法規。

如果將設備用於非製造商指定的用途時，可能會造成設備所提供的保護功能受損。

POZOR: Než začnete instalovat, konfigurovat či provozovat tento výrobek nebo provádět jeho údržbu, přečtěte si tento dokument a dokumenty uvedené v části Dodatečné zdroje ohledně instalace, konfigurace a provozu tohoto zařízení. Uživatelé se musejí vedle požadavků všech relevantních vyhlášek, zákonů a norem nutně seznámit také s pokyny pro instalaci a elektrické zapojení.

Činnosti zahrnující instalaci, nastavení, uvedení do provozu, užívání, montáž, demontáž a údržbu musí vykonávat vhodně proškolený personál v souladu s příslušnými prováděcími předpisy. Pokud se toto zařízení používá způsobem neodpovídajícím specifikaci výrobce, může být narušena ochrana, kterou toto zařízení poskytuje.

UWAGA: Przed instalacją, konfiguracją, użytkowaniem lub konserwacją tego produktu należy przeczytać niniejszy dokument oraz wszystkie dokumenty wymienione w sekcji Dodatkowe źródła omawiające instalację, konfigurację i procedury użytkowania tego urządzenia. Użytkownicy mają obowiązek zapoznać się z instrukcjami dotyczącymi instalacji oraz oprzewodowania, jak również z obowiązującymi kodeksami, prawem i normami.

Działania obejmujące instalację, regulację, przekazanie do użytkowania, użytkowanie, montaż, demontaż oraz konserwację muszą być wykonywane przez odpowiednio przeszkolony personel zgodnie z obowiązującym kodeksem postępowania.

Jeśli urządzenie jest użytkowane w sposób inny niż określony przez producenta, zabezpieczenie zapewniane przez urządzenie może zostać ograniczone.

OBS! Läs detta dokument samt dokumentet, som står listat i avsnittet Övriga resurser, om installation, konfigurering och drift av denna utrustning innan du installerar, konfigurerar eller börjar använda eller utföra underhållsarbete på produkten. Användare måste bekanta sig med instruktioner för installation och kabeldragning, förutom krav enligt gällande koder, lagar och standarder.

Åtgärder som installation, justering, service, användning, montering, demontering och underhållsarbete måste utföras av personal med lämplig utbildning enligt lämpligt bruk.



Om denna utrustning används på ett sätt som inte anges av tillverkaren kan det hända att utrustningens skyddsanordningar försätts ur funktion.

LET OP: Lees dit document en de documenten die genoemd worden in de paragraaf Aanvullende informatie over de installatie, configuratie en bediening van deze apparatuur voordat u dit product installeert, configureert, bedient of onderhoudt. Gebruikers moeten zich vertrouwd maken met de installatie en de bedringsinstructies, naast de vereisten van alle toepasselijke regels, wetten en normen.

Activiteiten zoals het installeren, afstellen, in gebruik stellen, gebruiken, monteren, demonteren en het uitvoeren van onderhoud mogen uitsluitend worden uitgevoerd door hiervoor opgeleide personeel en in overeenstemming met de geldende praktijkregels.

Indien de apparatuur wordt gebruikt op een wijze die niet is gespecificeerd door de fabrikant, dan bestaat het gevaar dat de beveiliging van de apparatuur niet goed werkt.

North American Hazardous Location Approval

The following information applies when operating this equipment in hazardous locations.	Informations sur l'utilisation de cet équipement en environnements dangereux.
<p>Products marked "CL I, DIV 2, GP A, B, C, D" are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.</p>	<p>Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'à une utilisation en environnements de Classe I Division 2 Groupes A, B, C, D dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.</p>
 <p>WARNING: Explosion Hazard -</p> <ul style="list-style-type: none"> Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous. Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product. Substitution of components may impair suitability for Class I, Division 2. If this product contains batteries, they must only be changed in an area known to be nonhazardous. 	 <p>AVERTISSEMENT: Risque d'Explosion -</p> <ul style="list-style-type: none"> Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement. Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs externes reliés à cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit. La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2. S'assurer que l'environnement est classé non dangereux avant de changer les piles.

UK and European Hazardous Location Approval

The following applies to products marked  II 3 G:

- Are Equipment Group II, Equipment Category 3, and comply with the Essential Health and Safety Requirements relating to the design and construction of such equipment given in Annex II to EU Directive 2014/34/EU and Schedule 1 of the UKEX Regulation 2016 No.1107. See the UKEX and EU Declaration of Conformity at <https://rok.auto/certifications> for details.
- The type of protection is Ex ec IIC T4 Gc.
- Equipment protection by increased safety "e", reference certificate number UL 25 ATEX 3391X and UL25UKEX3013X.
- Are intended for use in areas in which explosive atmospheres caused by gases, vapors, mists, or air are unlikely to occur, or are likely to occur only infrequently and for short periods. Such locations correspond to Zone 2 classification according to UKEX Regulation 2016 No.1107 and ATEX directive 2014/34/EU.



ATTENTION: This equipment is not resistant to sunlight or other sources of UV radiation.

IEC Hazardous Location Approval

The following applies to products marked IECEx certification:

- Are intended for use in areas in which explosive atmospheres caused by gases, vapors, mists, or air are unlikely to occur, or are likely to occur only infrequently and for short periods. Such locations correspond to Zone 2 classification.
- The type of protection is Ex ec IIC T4 Gc.
- IECEx certificate number IECEx UL 25.0041X.

Special Conditions for Safe Use

**WARNING:**

- This equipment is not resistant to sunlight or other sources of UV radiation.
- This equipment shall be mounted in an ATEX/IECEx Zone 2 certified enclosure with a minimum ingress protection rating of at least IP54 (in accordance with EN/IEC 60079-0) and used in an environment of not more than Pollution Degree 2 (as defined in EN/IEC 60664-1) when applied in Zone 2 environments. The enclosure must be accessible only by the use of a tool.
- This equipment shall be used within its specified ratings defined by Rockwell Automation.
- Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 140% of the peak-rated voltage when applied in Zone 2 environments.
- The instructions in the user manual shall be observed.
- Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
- Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.

Environment and Enclosure



ATTENTION: This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in EN 60664-1), at altitudes up to 2000 m (6562 ft) without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR 11. This equipment is not intended for use in residential environments and may not provide adequate protection to radio communication services in such environments.

This equipment is supplied as open-type equipment for indoor use. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of 5VA, V2, V1, V0 (or equivalent) if non-metallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, Rockwell Automation publication [1770-4.1](#) for additional installation requirements
 - NEMA 250 and EN 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosures
-

Prevent Electrostatic Discharge



ATTENTION: This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
 - Wear an approved grounding wriststrap.
 - Do not touch connectors or pins on component boards.
 - Do not touch circuit components inside the equipment.
 - Use a static-safe workstation, if available.
 - Store the equipment in appropriate static-safe packaging when not in use.
 - Use only a soft dry anti-static cloth to wipe down equipment. Do not use any cleaning agents.
-

Linear and Star Network Considerations

When using the tap in a linear or star network, be sure that Ring Supervisor mode is not enabled. By default, the tap is configured to be a non-supervisor ring node.

IMPORTANT For 1783-ETAP3T and 1783-ETAP1T2SFP modules running firmware revision 1.0T1 or later, DIP switch 1 is used to make the tap a ring supervisor in a DLR network. To avoid adversely impacting communication in a linear or star network, take these precautions:

- Make sure switch 1 remains in the Off position. If switch 1 is in the On position, the tap is automatically enabled as a ring supervisor.
 - Make sure that the Ring Supervisor mode is not enabled in FactoryTalk[®] Linx software or the Studio 5000 Logix Designer[®] application. When switch 1 is in the Off position, the programming software controls whether the tap is a ring supervisor.
-

Device Level Ring (DLR) Network Considerations

When using the tap in a DLR network, consider whether the tap will be a ring supervisor. By default, the tap is configured to be a non-supervisor ring node. Use one of these methods for controlling supervisor functionality:

- Use RSLinx[®] Classic software or the Studio 5000 Logix Designer application to set the Ring Supervisor mode and other supervisor-related parameters. This is the default method. If you choose this option, follow the procedures in the online Help that accompanies the software to enable Ring Supervisor mode.
- To automatically enable Ring Supervisor mode with the current supervisor-related parameters stored in the tap's memory, use the DIP switches. See [Set the DIP Switch on page 11](#) for additional information.

IMPORTANT Use these precautions when configuring a DLR network:

- Make sure that at least one node is acting as supervisor before connecting the last link of a DLR network and physically closing the ring.
 - Do not connect nodes that do not support a DLR as members of the ring.
-

Grounding Considerations

This product is intended to be mounted to a well-grounded mounting surface, such as a metal pane or DIN rail.



ATTENTION: This product is grounded through the DIN rail to chassis ground. Use zinc-plated yellow-chromate steel DIN rail to verify proper grounding. The use of other DIN rail materials (for example, aluminum or plastic) that can corrode, oxidize, or are poor conductors, can result in improper or intermittent grounding. Secure the DIN rail to mounting surface approximately every 200 mm (7.8 in.) and use end-anchors appropriately.

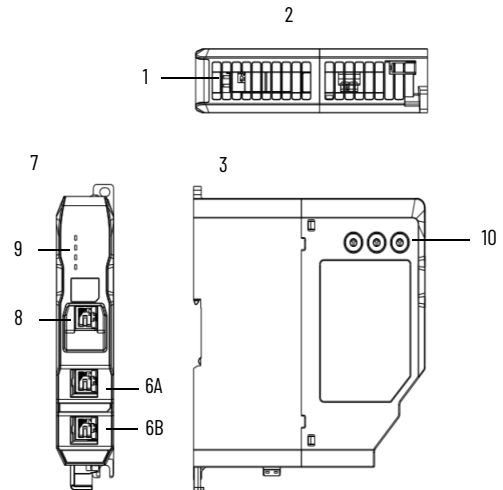
See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for additional information.

1783-ETAP3T Module Components

Item	Description	Item	Description
1	DIP switch	6	Ports for connection to linear or ring network A: Port 1 B: Port 2
2	Top view	7	Front view (1783-ETAP3T)
3	Side view	8	Device port
4	DC connector	9	Status Indicators
5	Bottom view	10	Rotary switches

By default, the individual ports on the tap auto-negotiate link speeds (10 Mbps, 100 Mbps, or 1000 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 can result in higher error rates, or loss of network connectivity.



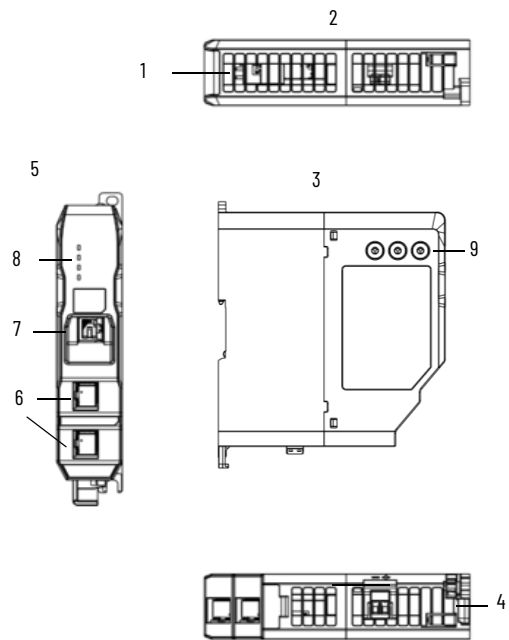
1783-ETAP1T2SFP Module Components

Item	Description	Item	Description
1	DIP switch	6	Ports for connection to linear or ring network ⁽¹⁾
2	Top view	7	Device port
3	Side view	8	Status indicators
4	DC connector	9	Rotary switches

(1) The 1783-ETAP1T2SFP taps have two SFP slots. The 1783-ETAP2T1SFP taps have one SFP slot.

By default, the 10BASE-T_e, 100BASE-T_X, and 1000BASE-T ports on the Device port auto-negotiate link speeds (10 Mbps, 100 Mbps, or 1000 Mbps) and duplex setting (full or half). You can install a 1G small form-factor pluggable (SFP) module into the SFP slots.

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 can result in higher error rates or loss of network connectivity.



Software Requirements

You must have these versions of software.

Software	Version
FactoryTalk Linx	6.00.00 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 switch.

This publication describes these steps in detail.

Mount the Tap

The 1783-ETAP3T and 1783-ETAP1T2SFP 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-ETAP3T 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-ETAP1T2SFP modules:

- When mounting the tap, be sure to provide 7.62 cm (3 in.) of space on the front and 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

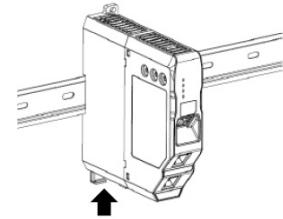
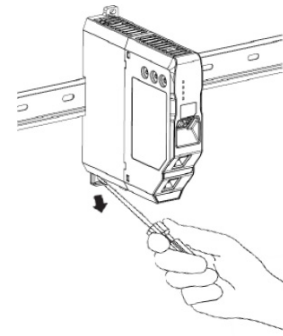
This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

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.



Panel Mounting

To mount a panel tap, use the following steps.

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



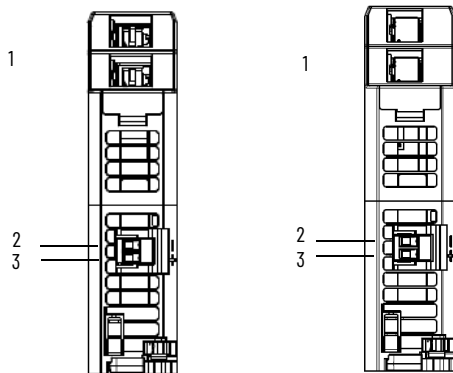
ATTENTION: Power to this equipment must be supplied from a source compliant with the following:

- Class 2 or LIM (Limited-Energy Circuit) on EN/IEC/UL/CSA61010-1
- SELV source approved to EN/IEC/UL/CSA60950-1, EN/IEC/UL/CSA61010-2-201 or EN/IEC/UL/CSA62368-1

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



ATTENTION: From the product label that states “SEE MANUAL FOR INSTALL INFO”, see DC power connection in [Specifications on page 15](#).



1783-ETAP3T, 1783-ETAP1T2SFP 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.



WARNING: If you connect or disconnect the communication cable with power that is applied to this module or any device on the network, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

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

1783-ETAP3T	1783-ETAPIT2SFP											
		<table border="1"> <thead> <tr> <th>Item</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Device port on 1783-ETAP3T module front panel</td> </tr> <tr> <td>2</td> <td>Ports on 1783-ETAP3T module for connection to the linear or ring network</td> </tr> <tr> <td>3</td> <td>Device port on 1783-ETAPIT2SFP module front panel</td> </tr> <tr> <td>4</td> <td>See the preceding WARNING for information on connecting RJ45 ports and installing an SFP module.</td> </tr> </tbody> </table>	Item	Description	1	Device port on 1783-ETAP3T module front panel	2	Ports on 1783-ETAP3T module for connection to the linear or ring network	3	Device port on 1783-ETAPIT2SFP module front panel	4	See the preceding WARNING for information on connecting RJ45 ports and installing an SFP module.
Item	Description											
1	Device port on 1783-ETAP3T module front panel											
2	Ports on 1783-ETAP3T module for connection to the linear or ring network											
3	Device port on 1783-ETAPIT2SFP module front panel											
4	See the preceding WARNING for information on connecting RJ45 ports and installing an SFP module.											

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 and connect the other end of the Ethernet cable to the linear or ring network.
5. Repeat with the other port 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.

Install an SFP Module



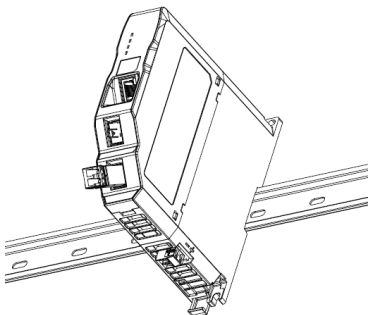
WARNING: When you insert or remove the small form-factor pluggable (SFP) optical transceiver while power is on, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.



ATTENTION: Under certain conditions, viewing the optical port may expose the eye to hazard. When viewed under some conditions, the optical port may expose the eye beyond the maximum permissible-exposure recommendations. Class 1 laser product. Laser radiation is present when the system is open and interlocks bypassed. Only trained and qualified personnel are allowed to install, replace, or service this equipment.

You can install a 1G small form-factor pluggable (SFP) module into the SFP slots of the tap.

To install the SFP module, grasp the module on the sides and insert it into the slot until you feel the connector snap into place.



Update the Module Firmware

To update the module firmware, Download firmware and access product release notes from the Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.

Use ControlFLASH™, ControlFLASH Plus™ software to update product firmware. See the online help for more information.

If the firmware update process is interrupted (by cable break or power supply issue), try the update process again.

Security Considerations

To help maintain a secure system, follow these guidelines:

- Limit physical access to authorized personnel
- Implement physical barriers, such as locked cabinets
- Only purchase products from official suppliers
- Only download firmware and software from the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.

To secure networks and communication and data, follow these guidelines:

- Implement network technologies that filter, block, and control access to help secure networks
- Configure authorization policies to define conditions for remote access
- Select control products that offer security options

For more information, see [Additional Resources on page 15](#).

Download the EDS File

To use FactoryTalk Linx communication software to configure the tap, follow these steps to download the EDS file for the tap.

IMPORTANT If the port on your personal computer that is connected to the tap is configured to obtain its IP address automatically, expect a wait time of up to two minutes before communication is established after connecting the tap to a computer.
If two or more taps are connected to one another, and each tap is using the default IP address, the computer is only able to communicate with the tap to which it is directly connected.

1. Obtain the EDS file from rok.auto/pcdc.
2. From the Network dropdown menu, choose the EtherNet/IP™ network.
3. From the Device Type dropdown, choose Communication Adapter.
4. In the Bulletin/catalog number field, type 1783-ETAP3T, 1783-ETAP1T2SFP.
5. Click Search.
6. Click Download to download the EDS file for the tap.
7. Save the file to an appropriate location on your computer.
8. Use your configuration software to register the downloaded file.
If you are using RSLinx Classic communication software, use the EDS Hardware Installation Tool.
Choose Start > All Programs > Rockwell Software > FactoryTalk Linx > Tools.

Set the Network Internet Protocol (IP) Address

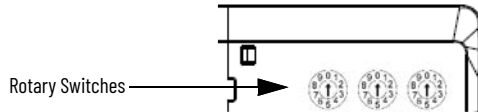
The tap ships DHCP-enabled and with the rotary switches on the side of the tap set to 999. Out-of-the-box, the tap does not have an IP address. The tap requires an IP address to operate on an EtherNet/IP network.

IMPORTANT Make sure that you assign a unique IP address to the tap, that is, use an IP address that differs from all other devices on the EtherNet/IP network. If the tap uses the same IP address as another device on the network, the result is a Duplicate IP address condition.



If the network uses the 192.168.1.x format, we **recommend** that you use the rotary switches to set the last octet of network IP address. Valid numbers range from 001...254. When you use rotary switches to set the IP address, the address is static and remains the same on future power cycles.

To set the IP address, turn the switches to the appropriate numbers before you install the tap. The leftmost switch represents the first digit in the octet, the middle switch represents the second digit, and the right-most switch represents the third digit.



At power-up, the tap reads the rotary switches to determine if they are set to a valid number for the last octet of the IP address. If the settings are a valid number, the following conditions result:

- IP address = 192.168.1.xxx (where xxx represents the switch settings)
- Subnet mask = 255.255.255.0
- Gateway address = 192.168.1.1

IMPORANT: Out of the box, the gateway address = 192.168.1.1. If the address switches are set to 001, the gateway address is set to 0.0.0.0.

Table 1 - Switch Position Descriptions

Switch Position	Description
001...254	IP address set to 192.168.1.xyz where xyz = values of switches X, Y, Z Subnet mask: 255.255.255.0 Gateway address: 192.168.1.1
999	IP address set to per configuration software (RSLinx, FTLinx)
888	Resets module to initial out of box settings
889	Securely wipes If use this mode, set to 888 before setting to 889
900	Enter Explicit Protected Mode
000	Exit Explicit Protected Mode
902	Enable Web Server
903	Disable Web Server
All other values	Reserved

- The tap does not have an assigned host name, nor does it use any Domain Name System.



WARNING: When you change switch settings while power is on, an electric arc can occur. This arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

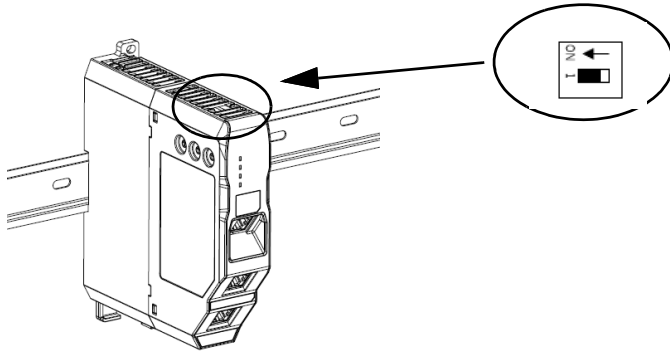
If the network does not use 192.168.1.x, do not change the switch positions before you install the tap. After you install and power up the tap, you can use the following to set the network IP address:

- DHCP server
- BOOTP DHCP EtherNet/IP Commissioning Tool - We recommend that you use version 3.02.00 or later.

Set the DIP Switch

The tap has DIP switches on the top of it. You can use switch 1 to enable DLR Ring Supervisor when the tap is on a DLR network.

When a switch is pushed down, from the top view of the tap, it is in the On position.



Out of the box, the switches are in the Off position. Set switch 1 to the appropriate position for your application, as described in the following table, before you install the tap.

Switch 1	Power-up Behavior
Off	You can use software to enable the tap as a DLR Supervisor and to configure DLR Supervisor-related parameters. However, the tap does not function as a DLR Supervisor until you configure it to be one via software. ⁽¹⁾
On	The tap is enabled to be a DLR Supervisor. You can configure remaining DLR Supervisor parameters, for example, supervisor precedence, via software. ⁽¹⁾

(1) You use FactoryTalk Linx software or an Add-on Profile in Logix Designer application to configure the parameters. For information about supervisor-related parameters, see the EtherNet/IP Device Level Ring Application Technique, publication [ENET-AT007](#).

To change operation, move the switches to the desired positions and then cycle power to the tap. Switch changes only affect the tap behavior after power is cycled to the tap.

Use the Web Interface

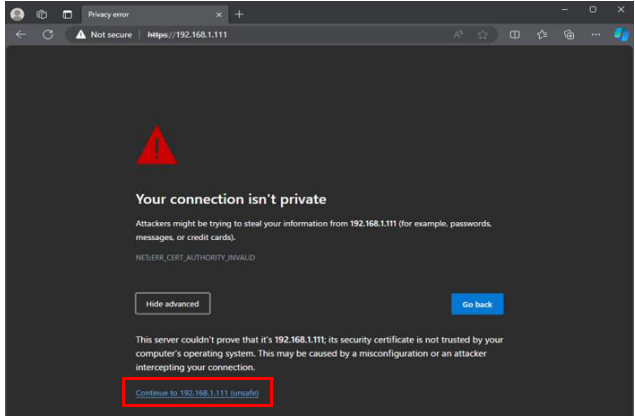
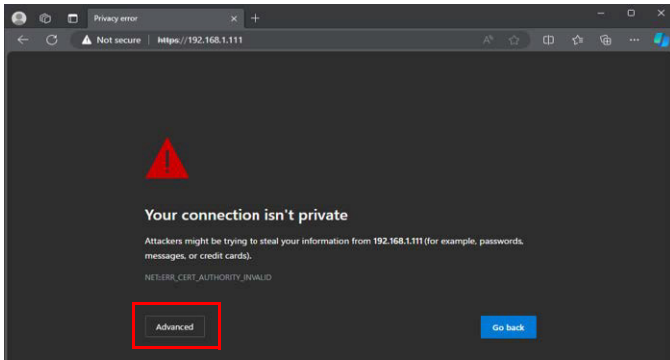
The tap supports a Web interface that provides diagnostic read-only information. Follow these steps to access the Web interface.

1. Connect a computer to any of the tap's Ethernet ports.
2. Browse to the tap by entering the tap's IP address in your web browser's address bar.



If you configure the tap with an IP address, you can also access the tap Web interface from any computer that is connected to the network.

3. Click Enter.
4. If the following message appears, use steps 5 and 6.
5. Click Advanced, and then click "Continue to 192.168.1.111 (unsafe)."



You see the 1783-ETAP3T tap page, which provides general information about the tap.



6. In the left pane, click Diagnostics. You see links to these pages:
 - Diagnostic Overview
 - Network Settings
 - Ethernet Statistics
 - Ring Statistics

Webpage	Topics
Diagnostic Overview	<ul style="list-style-type: none"> • Module resource utilization • Web server read and write hits • Module settings • Ring status • Network management features
Network Settings	<ul style="list-style-type: none"> • Network interface details, such as IP address and subnet mask • Ethernet interface configuration method • Ethernet port details
Ethernet Statistics	<ul style="list-style-type: none"> • Ethernet counters • Ethernet port details • Error information
Ring Statistics	Ring supervisor, configuration, and fault details

Use Protected Mode

The tap supports protected mode. Explicit and Implicit protected modes are available for the tap.

Explicit and Implicit Protected Mode

- Explicit protected mode is a security enhancement that is triggered when a certain rotary switches pattern is selected.
- Implicit protected mode is a security enhancement that is automatically triggered as soon as the tap establishes status I/O connection.

When you are in either Implicit or Explicit mode, the following configuration changes cannot be made:

- Change Ethernet configuration settings, such as port speed.
- Change IP settings, such as IP address, mask, and DHCP mode
- Update the device firmware.
- Disable or enable Ethernet ports via the Module Properties dialog box in the Logix Designer application project.
- Reset the tap via the Module Properties dialog box in the Logix Designer application project.

CIP Security Changes

CIP Security™ configuration includes parameters that are configured in FactoryTalk Policy Manager software and deployed to the tap via FactoryTalk Services Platform.

Restrictions on CIP Security Configuration Imposed by Protected Mode

Whether the security model has been deployed to the tap or not determines what putting the tap in protected mode means. If the tap has not been configured for CIP Security when you transition the tap to explicit/implicit protected mode, any attempt to configure the tap for CIP Security is rejected. If the tap has been configured for CIP Security when you transition the tap to explicit/implicit protected mode, attempts to configure the tap for CIP Security are accepted. The CIP Security configuration changes are successful in this case because the changes are coming from the trusted policy authority.

Enter and Exit Protected Mode

Table 2 - Enter and Exit Protected Mode

Protected Mode	Description
Explicit Protected Mode	The tap enters Explicit Protected Mode when rotary switches are set to value 900 during startup.
Implicit Protected Mode	The tap enters Implicit Protected Mode as soon as I/O connection is established to the Tap (status connection). The adapter exits Implicit Protected Mode as soon as all I/O connections to the Tap (status connection) are stopped.

Enter Explicit Protected Mode

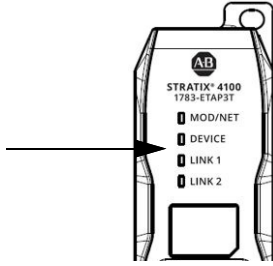
To enter Explicit Protected Mode, use the following steps.

1. Note the current position of the rotary switches.
2. Power down the tap.
3. Set the rotary switches to 900, then power up the tap.
The tap confirms that the switch is entering into Explicit Protected Mode. The status indicators show this with the following conditions:
 - MOD/NET indicator is flashing red.
 - All other indicators are off.
4. Power down the tap and restore previous values to the rotary switches.
5. Power up the tap to normal working condition with Explicit Protected Mode enabled.

To exit Explicit Protected Mode, use the following steps.

1. Note the current position of the rotary switches.
2. Power down the tap.
3. Set the rotary switches to 000, then power up the tap.
The tap confirms that the switch is entering into Explicit Protected Mode. The status indicators show this with the following conditions:
 - MOD/NET indicator is flashing red.
 - All other indicators are off.
4. Power down the tap and restore previous values to the rotary switches.
5. Power up the tap to normal working condition with Explicit Protected Mode disabled.

Status Indicators



Indicator	Status	Description
MOD/NET	Off	One of these conditions exists: <ul style="list-style-type: none"> • Tap is not powered. • Tap is powered up but the IP address is not configured.
	Flashing green	One of these conditions exists: <ul style="list-style-type: none"> • An IP address is configured but no CIP™ connections are established.
	Steady green	Tap is powered, an IP address is configured, and CIP connection is established.
	Flashing red	One of these conditions exists: <ul style="list-style-type: none"> • Recoverable fault such as: <ul style="list-style-type: none"> - Firmware update in progress. - Rotary Switch setting was changed during product running. - When the Rotary Switch is set to the following values: (000, 255...998). - Firmware could be corrupted, update is required.
	Steady red	One of these conditions exists: <ul style="list-style-type: none"> • Duplicate IP address. • Unrecoverable fault detected.
DEVICE LINK 1 LINK 2	Off	One of these conditions exists: <ul style="list-style-type: none"> • No link. • Port disabled. • Connecting an ineligible SFP transceiver (LINK 1 and 2 only). • (LINK2 only) Port that is disabled because of rapid ring fault condition, and this tap is the active ring supervisor. • (LINK2 only) Ring network has encountered a rare, partial network fault, and this tap is the active supervisor. • Connecting an ineligible SFP transceiver (LINK1 and 2 only for 1783-ETAP1T2SFP).
	Steady green	One of these conditions exists: <ul style="list-style-type: none"> • Link exists. • (LINK2 only) The ring network is operating normally and this tap is the active supervisor.
	Flashing green	Link exists and there is activity.

Specifications

Attribute	1783-ETAP3T	1783-ETAPIT2SFP
Power consumption, max	3.70 W	7.25 W
Current consumption, max	180 mA @ 24V DC	375 mA @ 24V DC
DC power supply voltage rating	<ul style="list-style-type: none"> 24V DC (18...32V DC) 	
Ethernet connections	<ul style="list-style-type: none"> RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 Category 5 cable according to ISO/IEC 24702 	
DC power connections	<ul style="list-style-type: none"> One 0.33...3.3 mm² (22...12 AWG) single wire connection only Stranded/Solid copper wire rated at 105°C (221 °F) or greater 1.2 mm (3/64 in.) insulation max 	
Torque	0.6 N•m (5 lb•in) on power connector	
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold) IEC 60068-2-2 (Test Bd, Operating Dry Heat) IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	-25 °C ≤ Ta ≤ +70 °C (-13 °F ≤ Ta ≤ +158 °F)	
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing	
Temperature, surrounding air, Ta, max	70 °C (158 °F)	
Supported SFP modules ⁽¹⁾	1783-SFP1GSX 1783-SFP1GLX 1783-SFP1GEXE 1783-SFP1GZX 1783-SFP1GTE	
Temp Code	T4	

(1) You must purchase SFP modules separately. For SFP module specifications, see Stratix Ethernet Device Specifications Technical Data, publication [1783-TD002](#). The tap is supported only SGMII (Serial Gigabit Media-Independent Interface) for SFP module communication.



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.

Additional Resources

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

Resource	Description
Stratix Ethernet Switches Specifications Technical Data, publication 1783-TD002	Contains technical specifications, environmental specifications, certifications, and other information pertaining to Stratix® Ethernet switches.
Stratix 4100 Ethernet Taps Packaging Contents, publication 1783-PC029	Contains packaging information for the Stratix 4100 Ethernet Taps Switches.
Security Design Guide Reference Manual, publication SECURE-RM001	Provides guidance on how to conduct vulnerability assessments, implement Rockwell Automation products in a secure system, harden the control system, manage user access, and dispose of equipment.
Security Configuration User Manual, publication SECURE-UM001	Describes how to configure and use Rockwell Automation products to improve the security of your industrial automation system.
CIP Security Application Technique, publication SECURE-AT001	Describes how to plan and implement a Rockwell Automation system that supports the CIP Security protocol.
FactoryTalk Security Application Technique, publication SECURE-AT002	Describes how to use FactoryTalk Security to implement authentication and authorization in your industrial automation system. Describes how to enforce product-specific security for Studio 5000 Logix Designer, FactoryTalk View, and FactoryTalk AssetCentre.
Converged Plantwide Ethernet (CPwE) Design and Implementation Guide, publication ENET-TD001	Provides guidelines for how to design, implement, and manage industrial Ethernet networks.

You can view or download publications at rok.auto/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 rok.auto/pec.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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