Installation Instructions

Original Instructions

ControlLogix Compute Modules

Catalog Numbers 1756-CMS1B1, 1756-CMS1C1, 1756-CMS1D1, 1756-CMS1H1

ControlLogix® Compute modules can communicate directly with a ControlLogix controller via the system backplane.

These Compute modules offer the following operating systems (OS) within which you can use an application programming interface (API) to create custom applications that access controller data via the backplane.

- 1756-CMS1B1 module - Windows® 10 IoT Enterprise 64 bit OS
- 1756-CMS1C1 module - Linux Debian 32 bit OS
- 1756-CMS1D1 module - Linux Debian 64 bit OS
- 1756-CMS1H1 module - Linux Red Hat 64 bit OS

All Compute modules also offer the following:

- Two GbE ports
- One USB 3.0 device port for OS peripheral connections
- An integrated DisplayPort for high definition monitor connectivity

Summary of Changes

These updated installation instructions include new and revised content as shown in this table.

Description	Page
Moved 1756-CMS1B4 module information to publication 1756-IN093	Throughout
Added information regarding Removal and Insertion Under Power (RIUP)	Throughout

⚠️ **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、稼動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.

주의: 본 제품 설치, 설정, 작동 또는 유지 보수하기 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 İlave 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 uygulama yönetmeliklerine uygun şekilde yapılabilir.

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

注意事項：在安裝、設定、操作或維護本產品前，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, bediend of onderhoudt. Gebruikers moeten zich vertrouwd maken met de installatie en de bedradingsinstructies, 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 opgeleid 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.

IMPORTANT   Any illustrations, charts, sample programs, and layout examples that are shown in this publication are intended solely for the purposes of example. Since there are many variables and requirements that are associated with any particular installation, Rockwell Automation does not assume responsibility or liability for actual use that is based upon the examples that are shown in this publication.

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.
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.	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.
WARNING: **Explosion Hazard –** • 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.	**AVERTISSEMENT:** **Risque d'Explosion –** • 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.

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/IEC 60664-1), at altitudes up to 2000 m (6562 ft) without derating.
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 help prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to help prevent or minimize the spread of flame, complying with a flame spread rating of 5VA or be approved for the application if nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain more 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, publication 1770-4.1, for more installation requirements
- NEMA 250 and EN/IEC 60529, as applicable, for explanations of the degrees of protection provided by 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.

ATTENTION:
- 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.
- In case of malfunction or damage, no attempts at repair should be made. The controller should be returned to the manufacturer for repair. Do not dismantle the controller.
- When installed in a 1756 Series C Chassis, this equipment is certified for use only within the surrounding air temperature range of -25...+60 °C (-15...140 °F). The equipment must not be used outside of this range. When installed in a 1756 Series B Chassis, this equipment is certified for use only within the surrounding air temperature range of -25...+50 °C (-15...122 °F). The equipment must not be used outside of this range.
- Use only a soft dry anti-static cloth to wipe down equipment. Do not use any cleaning agents.
- USB and DisplayPort cables are not to exceed 3.0 m (9.84 ft).

Removal and Insertion Under Power (RIUP)

WARNING: When you insert or remove the module while backplane 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. Repeated electric arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts can create electrical resistance that can affect module operation.

Required System Components

To use the Compute module, you need a ControlLogix system that includes a controller.

You can use the Compute module in the following ways:

- In the same chassis as the ControlLogix controller with which it is communicating.
- In a remote chassis that is connected via an EtherNet/IP™ network to the chassis in which the controller resides.
- In a remote chassis that is connected to a ControlLogix Enhanced Redundancy system via an EtherNet/IP network.

IMPORTANT	ControlLogix Compute modules cannot reside in the redundant pair, that is, the primary or secondary chassis in an enhanced redundancy system.

For more information on how to use a Compute module in different locations, see the ControlLogix Compute Module User Manual, publication 1756-UM003.

Module Overview

Product Dimensions
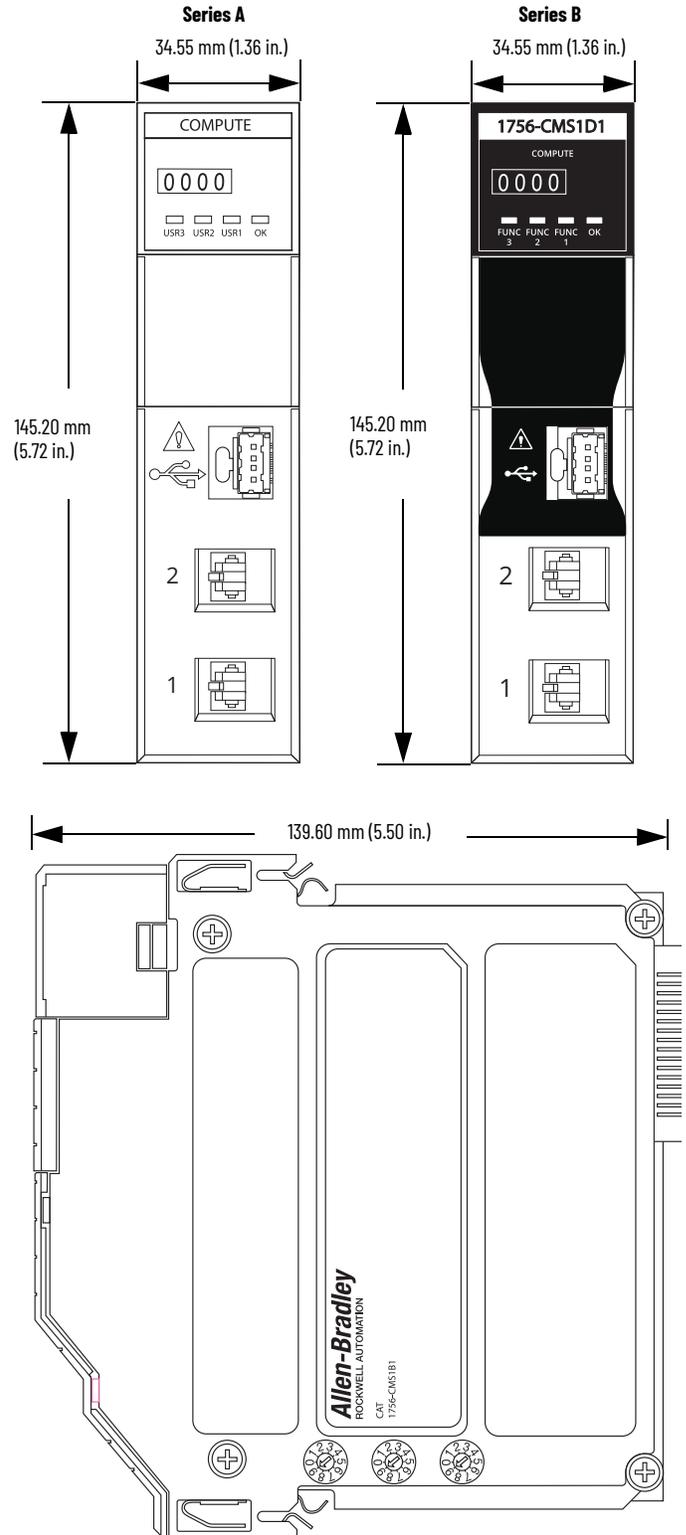
Module Overview

ControlLogix Compute Module Components

Components that are shown are consistent across series A and series B modules.
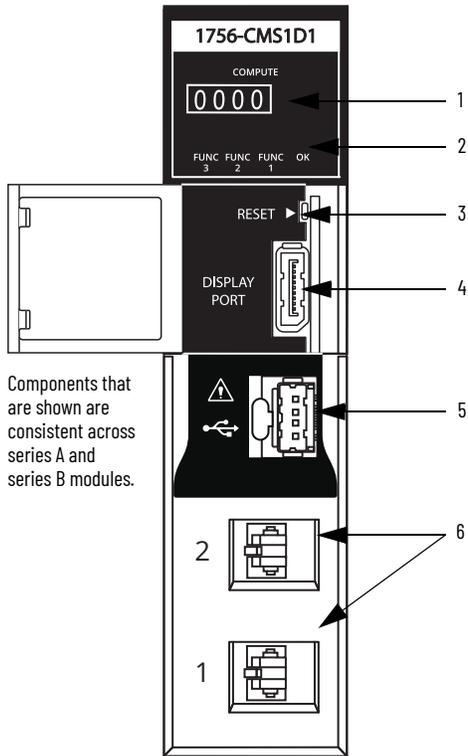
Number	Item	Description
1	Four-character display	Scrolls information about the module
2	Status indicators	User-programmable
3	Reset button	• Used after module operation begins • Located behind the module door
4	DisplayPort connection	• Connector to use a display with the OS on the module • Located behind the module door
5	USB 3.0 port	Connection to peripherals to be used with the OS
6	Ethernet ports 1 and 2	• Connection to a computer or EtherNet/IP network • Port 1 is the bottom port • Port 2 is the top port

Remove the Battery Paper Tab

Compute modules use a battery to maintain the real-time clock on the module when they are without power. A battery is installed in the module when it ships.

A red paper tab covers the side of the battery that faces the backplane when the module is installed in a chassis.

You must pull off the paper tab before you install the module.

Battery Paper Tab
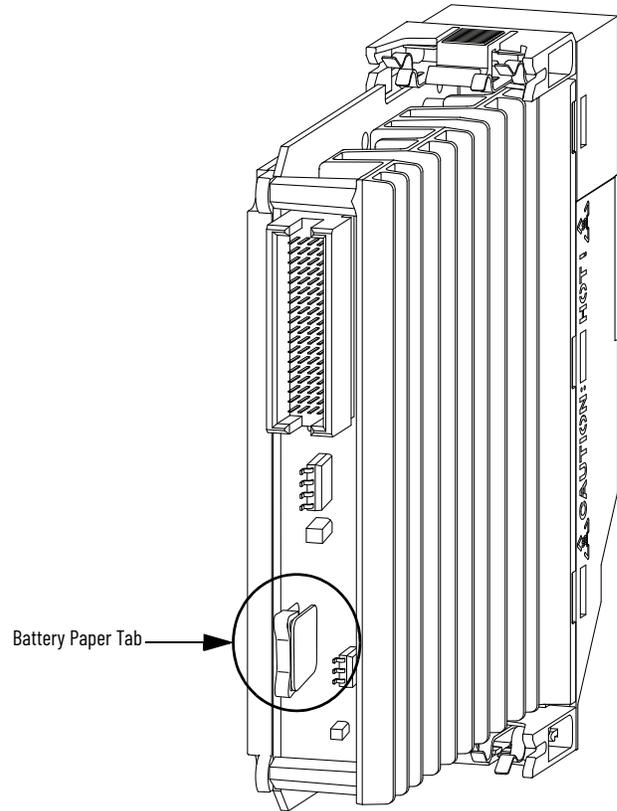
Install the Module

You can install the module in any open slot in a ControlLogix chassis regardless of whether the chassis is local or remote to the controller location.

> ⚠️ **ATTENTION:** The module is designed to support removal and insertion under power (RIUP).

> ⚠️ **WARNING:** When you insert or remove the module while backplane 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. Repeated electric arcing can cause excessive wear to contacts on both the module and its mating connector. Worn contacts can create electrical resistance that can affect module operation.

1. Align the circuit board with the top and bottom guides in the chassis.
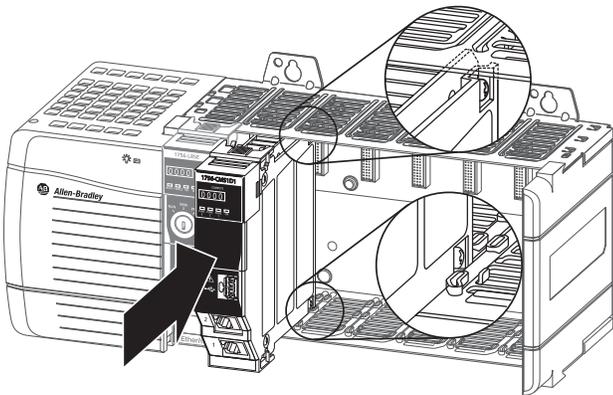
2. Slide the modules into the chassis until it snaps into place.
3. Verify that the module is flush with the other installed devices.
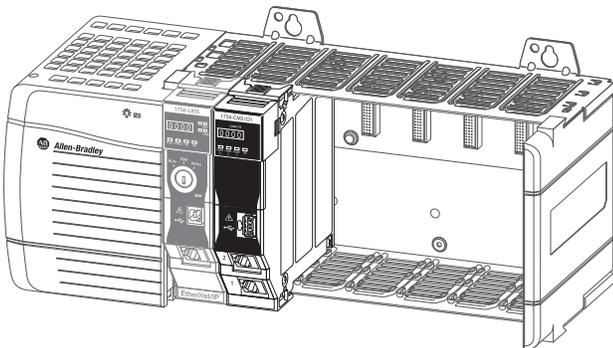
Connect to the DisplayPort

> ⚠️ **WARNING:** If you connect or disconnect the DisplayPort cable with power applied to this module or any connected display devices, an electric arc can occur. This can cause an explosion in hazardous location installations.
> Be sure that power is removed or the area is nonhazardous before proceeding.

The DisplayPort interface lets you connect industrial monitors to the Compute module to use with the OS. You can use the following industrial monitors with your Compute module:

- Super Video Graphics Array (SVGA) to HD 1080p
- High-Definition Multimedia Interface (HDMI)
- Video Graphics Array (VGA)
- Digital Visual Interface (DVI)
- DisplayPort

You must use a VESA-certified DisplayPort adapter to connect some industrial monitors to the module.

> 💡 We recommend that you connect a monitor to the DisplayPort before you power up the module.

Connect a Cable to the DisplayPort
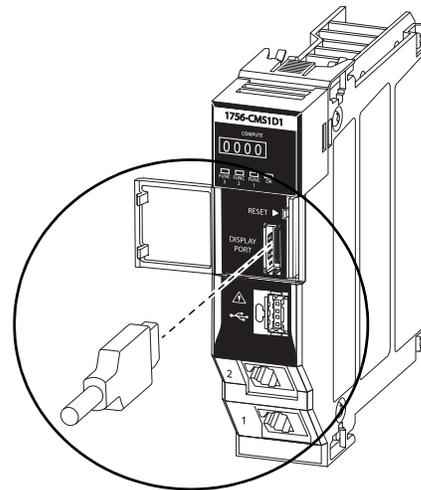
Connect to the USB Port

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

You use the USB port to connect peripherals, for example, a wireless keyboard, to the module.

We recommend the following:

- Connect any peripherals to the USB port before you power up the module.
- Use wireless peripherals with the USB port to reduce the number of cables that are connected to the module.

IMPORTANT When fully inserted, the USB connectors lock into the USB port. Before removing a USB connector, press the silver release tab on the left side of the USB port.

Connect to the USB Port
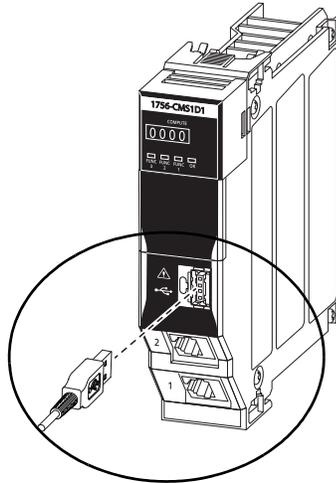
USB Cable Connection
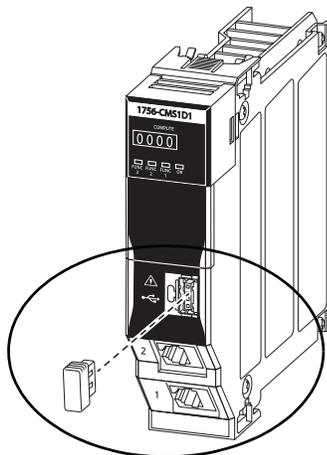
USB Dongle Connection

Connect to an Ethernet Port

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

You use the Ethernet ports to connect the module to the EtherNet/IP networks.

To connect the module to an EtherNet/IP network, connect an RJ45 cable to an embedded Ethernet port.

Connect an Ethernet Cable to the Compute Module
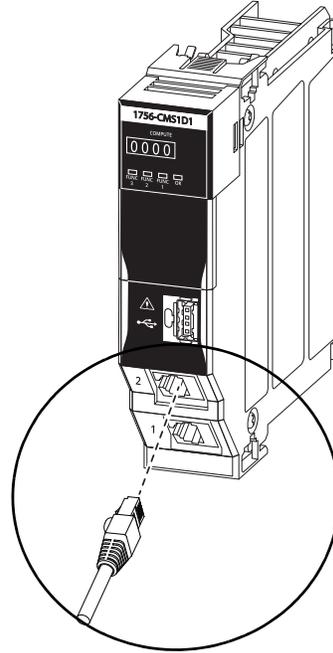
Power the Module

If you've removed power from the system, after you install the module and make the necessary connections to it, you can supply power to the system.

The module performs a power-up sequence. As part of the power-up sequence, you must log in to the OS. The first time that you power up the module, you must complete the standard operating system tasks, such as reading and accepting an End User License Agreement.

The 4-character display and status indicators on the module indicate when the power-up sequence is complete.

For more information on how to use the 4-character display and status indicators and how to log in to the OS, see the ControlLogix Compute Module User Manual, publication 1756-UM003.

Replacement Battery

Compute modules use a battery to maintain the real-time clock on the module when it is without power. A battery is installed in the module when it ships.

> ⚠️ **WARNING:** When you connect or disconnect the battery, an electric arc can occur. This can cause an explosion in hazardous location installations. Be sure that the area is nonhazardous before proceeding.
> For Safety information on the handling of lithium batteries, including the handling and disposal of leaking batteries, see Guidelines for Handling Lithium Batteries, publication AG 5-4.

You can replace the battery if necessary. The battery is a Panasonic Type BR1225A coin type lithium battery. Replacement batteries are commercially available.

To replace the battery, complete these steps.

1. Pull the white plastic battery holder from the back of the module.

   If necessary, pull the holder out far enough to use a small screwdriver to pry out the battery. In this case, insert the screwdriver from the side of the battery that faces the module printed circuit board.

   > **IMPORTANT** Do not attempt to remove the metal guides that hold the battery holder in place.
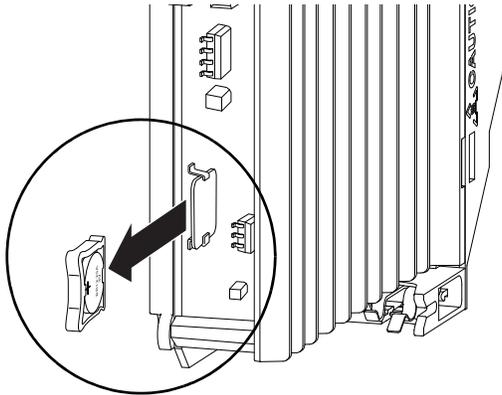

2. Remove the old battery from the holder.

3. Install a new battery into the holder.

   The side of the battery with words and numbers is installed in the side of the holder with tabs to hold it in place.

   Battery Holder Tabs
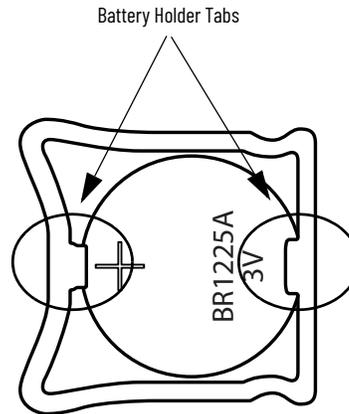
4. Reinstall the battery holder in the back of the module.

   The narrower part of the holder is installed first into the metal guides.

   > **IMPORTANT** Make sure that the battery is installed in an orientation so that the side of the battery with words and numbers faces away from the PCB.
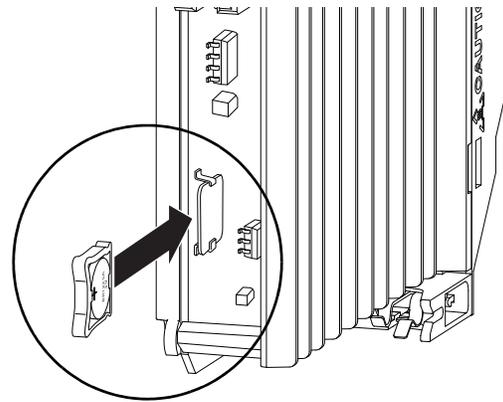
5. Push the battery holder all the way into the back of the module.

Rotary Switches

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

Compute modules have rotary switches on the side of the module.

ControlLogix Compute Module Rotary Switches
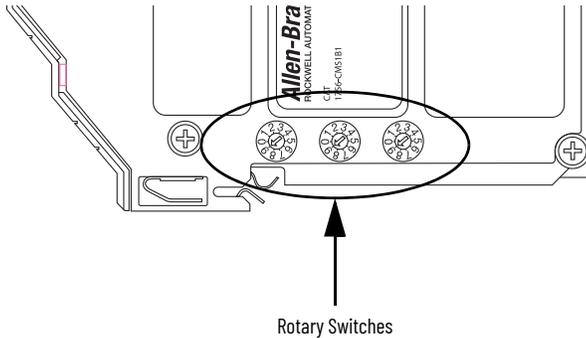
Rotary Switches

You can use the switches after module operation begins.

For more information on how to use the rotary switches after operation has begun, see the ControlLogix Compute Module User Manual, publication 1756-UM003.

Reset Button

Compute modules have a reset button behind the door that functions like the power button on a computer and only works with the OS. For example, if you press and release the button, an orderly shutdown occurs on the OS.

> ⚠ **WARNING:** When you press the reset button while power is on, an electric arc can occur. This can cause an explosion in hazardous location installations.
> Be sure that power is removed or the area is nonhazardous before proceeding.

The button is not used during module installation.

For more information on how to use the reset button after module operation has begun, see the ControlLogix Compute Module User Manual, publication 1756-UM003.

Status Indicators

The module has four programmable status indicators.
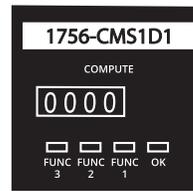
Indicators that are shown are consistent across Series A and Series B modules.

Programmable Status Indicators

You can program the following states.

State	Description
Off	The module is not powered.
Steady green	The module operating normally.
Steady red	One of the following: • A major communication fault has occurred between the module and ControlLogix chassis backplane. • You must troubleshoot your application to determine the cause of the steady red condition on indicator OK. • A module shutdown is complete.

For information on how to program the status indicators, see ControlLogix Compute Modules User Manual, publication 1756-UM003.

Specifications

Attribute	1756-CMS1B1, 1756-CMS1C1, 1756-CMS1D1, 1756-CMS1H1
Temperature, operating IEC 60068-2-1 (Test Ae, Operating Cold), IEC 60068-2-2 (Test Be, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	Series C Chassis: -25 °C < Ta < +60 °C (-13 °F < Ta < +140 °F) Series B Chassis: -25 °C < Ta < +50 °C (-13 °F < Ta < +122 °F)
Temperature, Surrounding Air, max	Series C Chassis: 60 °C (140 °F) Series B Chassis: 50 °C (122 °F)
Enclosure type rating	None (open-style)
Voltage and current ratings	5.1V DC @ 1.40 A
Wire size	Ethernet cabling and installation according to IEC 61918 and IEC 61784-5-2
Temperature Code	T5

Additional Resources

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

Resource	Description
ControlLogix Compute Module User Manual, publication 1756-UM003.	Describes how to use the ControlLogix Compute module.
ControlLogix Compute Module Specifications Technical Data, publication 1756-TD002	Provides specifications for the ControlLogix Compute module.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details

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

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

Documentation Feedback

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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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