



Installation Instructions

EtherNet/IP Web Server Module

Catalog Number 1756-EWEB

Use this manual as a guide to install the EtherNet/IP® Web Server Module. Note that this document covers hardware installation and some configuration procedures to get you started. Refer to the *EtherNet/IP Web Server Module User Manual*, publication number ENET-UM527, for more detailed configuration information.

The following table lists the contents of this document and where to find specific information.

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Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. *Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls* (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at <http://www.ab.com/manuals/gi>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.





In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual we use notes to make you aware of safety considerations.

WARNING 	Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.
ATTENTION 	Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you: <ul style="list-style-type: none">• identify a hazard• avoid a hazard• recognize the consequence
SHOCK HAZARD 	Labels may be located on or inside the drive to alert people that dangerous voltage may be present.
BURN HAZARD 	Labels may be located on or inside the drive to alert people that surfaces may be dangerous temperatures.

Environment and Enclosure

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC publication 60664-1), at altitudes up to 2000 meters without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR Publication 11. Without appropriate precautions, there may be potential difficulties ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbance.

This equipment is supplied as "open type" equipment. 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 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.

NOTE: See NEMA Standards publication 250 and IEC publication 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure. Also, see the appropriate sections in this publication, as well as the Allen-Bradley publication 1770-4.1 ("Industrial Automation Wiring and Grounding Guidelines"), for additional installation requirements pertaining to this equipment.

Preventing 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.
 - If available, use a static-safe work station.
 - When not in use, store the equipment in appropriate static-safe packaging.
-

European Hazardous Location Approval

European Zone 2 Certification (The following applies when the product bears the EEx Marking)

This equipment is intended for use in potentially explosive atmospheres as defined by European Union Directive 94/9/EC.

The LCIE (Laboratoire Central des Industries Electriques) certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment intended for use in potentially explosive atmospheres, given in Annex II to this Directive. The examination and test results are recorded in confidential report No. 28 682 010.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 50021.

IMPORTANT

When using this equipment, consider the following:

- This equipment is not resistant to sunlight or other sources of UV radiation.
 - The secondary of a current transformer shall not be open-circuited when applied in Class I, Zone 2 environments.
 - Equipment of lesser Enclosure Type Rating must be installed in an enclosure providing at least IP54 protection when applied in Class I, Zone 2 environments.
 - This equipment shall be used within its specified ratings defined by Allen-Bradley.
 - Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 40% when applied in Class I, Zone 2 environments.
-

North American Hazardous Location Approval

The following information applies when operating this equipment in hazardous locations:

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 "I" 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.

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.
-

Informations sur l'utilisation de cet équipement en environnements dangereux:

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

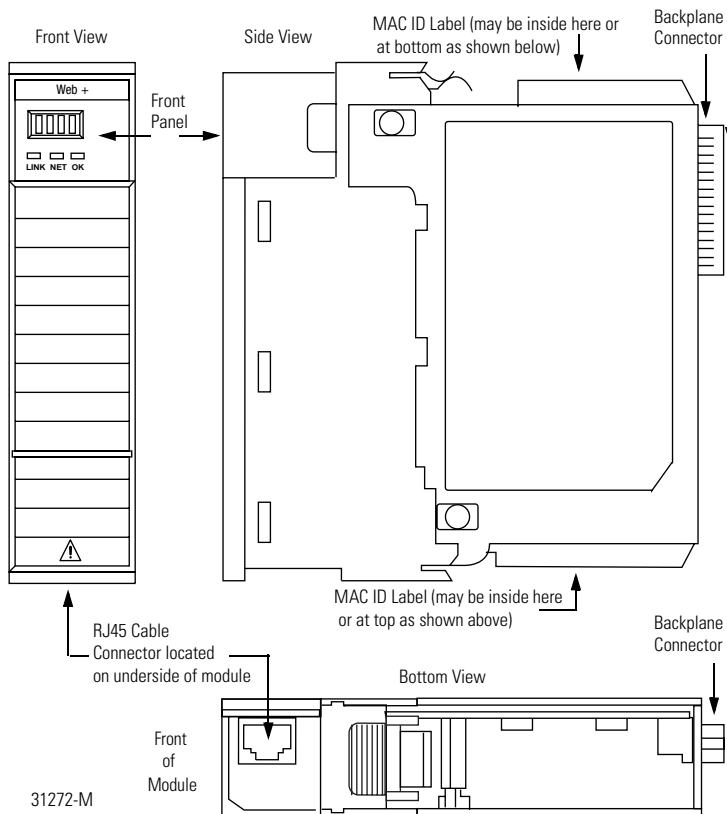
du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.

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.
-

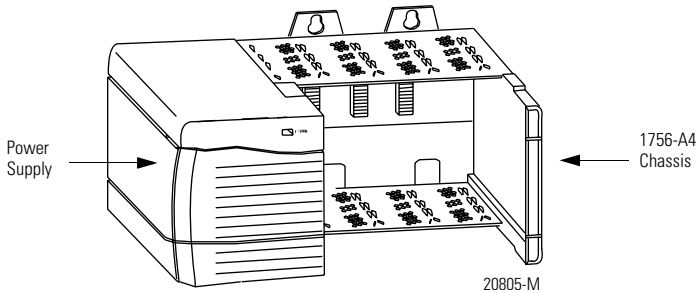
Identify Module Components

Use the following figure to identify the external features of the 1756-EWEB module.



Prepare the Chassis for Module Installation

Before you install the module, you must install and connect a ControlLogix™ chassis and power supply.

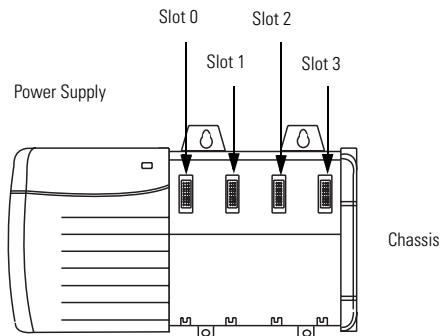


For information on installing these products, refer to the publications listed in the following table.

Chassis Type	Chassis Installation	Power Supply	Power Supply Installation
Series B: 1756-A4, -A7, -A10, -A13	Pub. No. 1756-IN080	1756-PA72/B	Pub. No. 1756-5.67
		1756-PB72/B	
		1756-PA75/A	Pub. No. 1756-5.78
		1756-PB75/A	

Determine Module Slot Location

You can install the module in any slot in the ControlLogix chassis. You can also install multiple 1756-EWEB modules in the same chassis. The figure below shows chassis slot numbering in a 4-slot chassis. Slot 0 is the first slot and is always the left-most slot in the rack (the first slot to the right of the power supply).



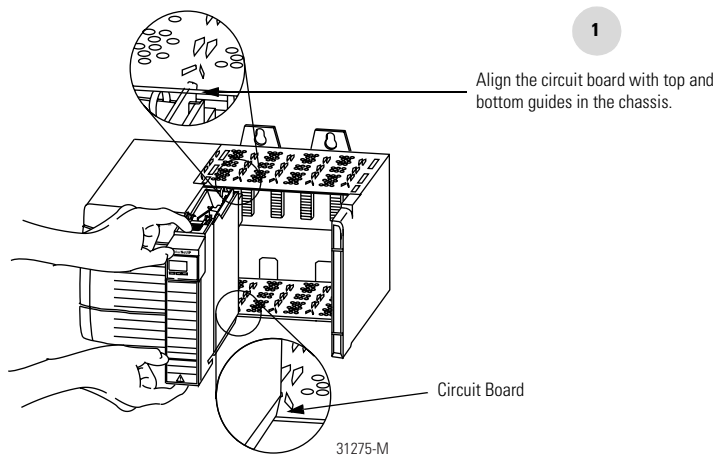
WARNING



When you insert or remove the module while backplane power is on, an electrical 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 electrical arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts may create electrical resistance that can affect module operation.

Install the Module

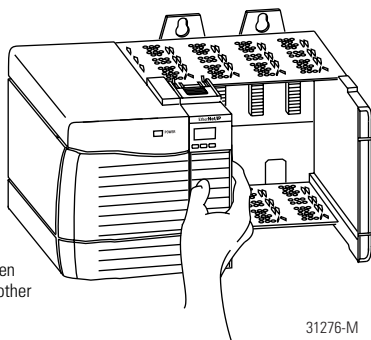


2

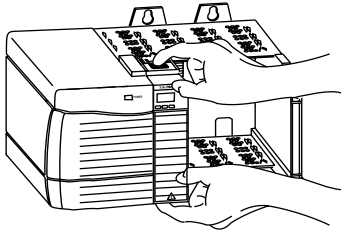
Slide the module into the chassis. Make sure the module backplane connector properly connects to the chassis backplane.

3

The module is properly installed when it is flush with the power supply or other installed modules.



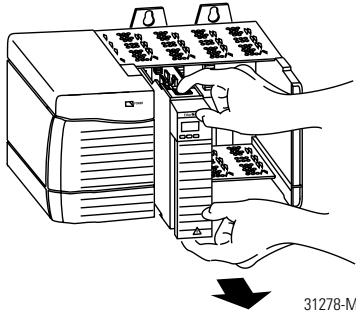
Removing or Replacing the Module (when applicable)



31277-M

1

Push on upper and lower module tabs to disengage them.



31278-M

2

Slide module out of chassis.

IMPORTANT

If you are replacing an existing module with an identical one, and you want to resume identical system operation, you must install the new module in the same slot.

Installing or Removing the Module Under Power

This module is designed to be installed or removed while chassis power is applied.

WARNING

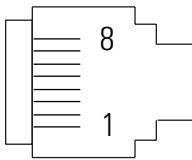


When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding. Repeated electrical arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts may create electrical resistance that can affect module operation.

Wire the EtherNet/IP Connector

Use an RJ45 connector to connect to the EtherNet/IP network. Wire the connector according to the following illustration:

8 ----- NC
 7 ----- NC
 6 ----- RD-
 5 ----- NC
 4 ----- NC
 3 ----- RD+
 2 ----- TD-
 1 ----- TD+



RJ 45

For detailed EtherNet/IP connection information, see the *EtherNet/IP Media Planning and Installation Guide*, publication number ENET-IN001.

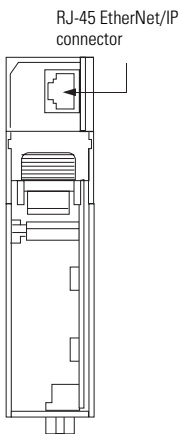
Connect the Module to the EtherNet/IP Network

WARNING

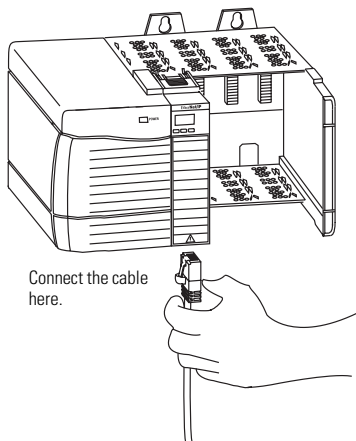


If you connect or disconnect the communications cable with power applied to this module or any device on the network, an electrical arc can occur. This could cause an explosion in hazardous location installations.

Attach the RJ45 connector to the EtherNet/IP port on the bottom of the module as shown below:



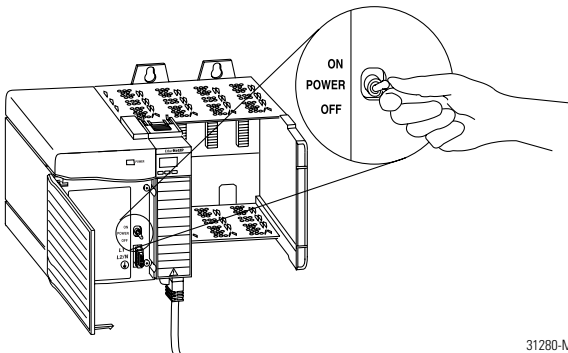
This is the bottom, back of the module that connects into the chassis.



IMPORTANT

We recommend connecting the module to the network via a 100MB EtherNet/IP switch, which will reduce collisions and lost packets and increase network bandwidth. For detailed EtherNet/IP connection information, see the following publications:

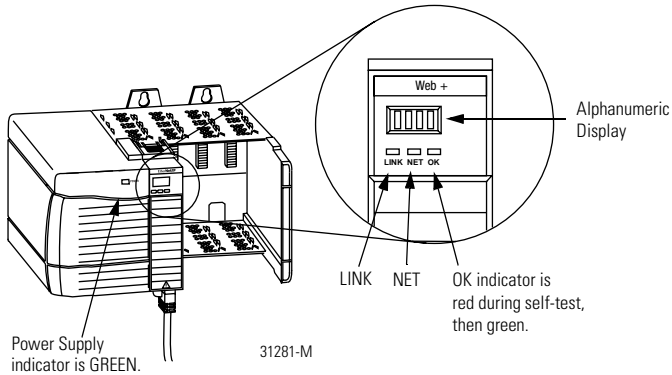
- *EtherNet/IP Performance and Application Guide*, publication ENET-AP001
- *EtherNet/IP Media Planning and Installation Guide*, publication ENET-IN001

Apply Chassis Power

31280-M

Check Power Supply and Module Status

Check the LED indicators and alphanumeric display to determine if the power supply and module are operating properly.



The alphanumeric display should cycle through the following states: “TEST - PASS - OK - REV x.x,” where “x.x” is the module’s firmware revision. The display then alternates between “OK” and the module’s EtherNet/IP address.

Obtain an IP Address

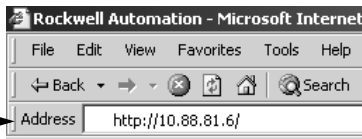
By default, the web server module is DHCP enabled. If you connect the web server module to a network that has a DHCP server, that server will assign a dynamic IP address to the web server module and the four-digit display on the front of the web server module will display each of the four numbers of the IP address.

If your network does not have a DHCP server, use one of the methods described in chapter 2 of the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527 to assign an IP address to the web server module.

Access the Home Page of the Module

From your web browser, enter the IP address of the web server module. The module displays its Home page.

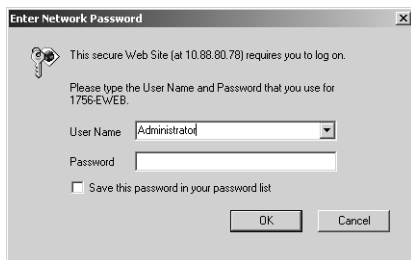
Specify the IP address of the web server module in the Address window of your web browser.



This is the module's home page..

Log Into the Module

Many of the features of the web server module require you to log in with appropriate access. If you select a feature, such as New Data View, the web server module prompts you to enter your user name and password. The default user name is “Administrator” with no password (leave the Password field blank).



Default Access:

User Name: Administrator
(not case sensitive)

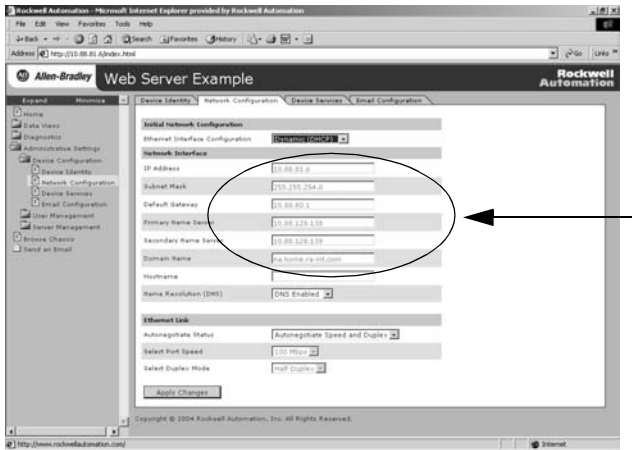
Password:

(leave blank, no password)

You can set up as many as 25 user accounts. Each account can have read, read and write, or administrator access. For more information, see the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527.

Confirm the Network Configuration

On the Administrator Settings → Device Configuration → Network Configuration page, you can verify the IP address and other network settings.



For more information, see the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527.

Using the Web Server Module

To help familiarize yourself with the web server module, some of the tasks you can accomplish include:

- Create a data view
- Configure email
- Configure the time server
- Enable/disable other services

These tasks are described in the following section.

Create a Data View


Before you can create a data view in the web server, the tags you want to view must exist in the controller that is local (in the same chassis) to the web server module. The tags in the controller must be controller-scoped. For example, create:

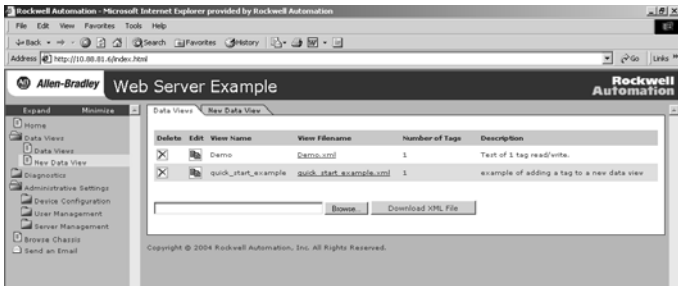
TEST
type DINT
controller-scope
value 123

To create a create a data view, you need Administrator or Write access. You create a data view from the Data Views → New Data View page.

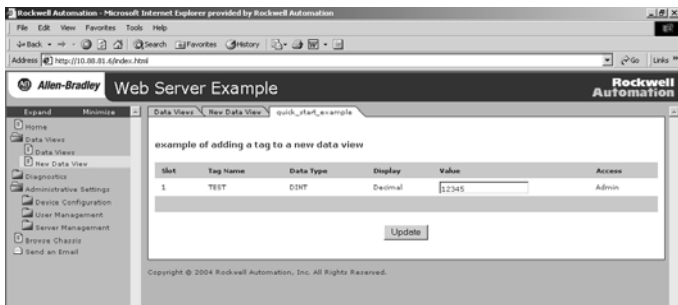


1. In the Create Data View window, specify a name for the data view and enter a description (optional).
2. In the New Data View window, specify at least one tag (EWEB_test in this example). You must specify the:
 - slot number of the controller
 - tag name (exactly as it is in the controller)
 - type of tag
 - how to display the tag data
 - access limit of the data view

- Click on the Add  button to add the tag to the data view
Continue adding as many tags as you want to configure.
- Click Create View.
- From the Data Views → Data View page, select the data view you just created.



- Click on the filename link to view the tags in this data view.



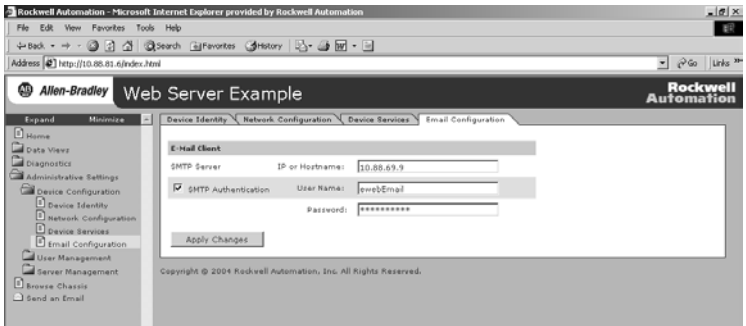
- Type the new value in the box next to the tag and click the Update button. This changes the value in the controller. You can use RSLogix™ 5000 programming software to verify that the value changed.

Note: To change a data value, you need Administrator or Write access.

For more information, see the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527A.

Configure Email

You configure the SMTP server that manages email on the Administrative Settings → Device Configuration → Network Configuration page.

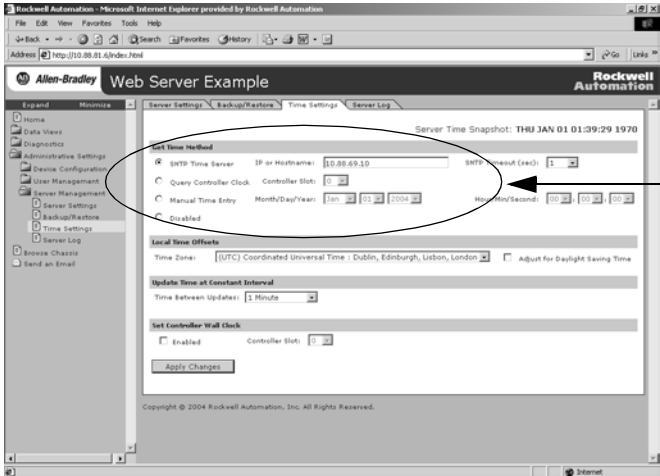


You can enter and send an email from the Send an Email link on the web server module. Or you can have a controller execute a MSG instruction that initiates email and email through the web server module.

For more information, see the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527.

Configure the Time Server

You select the method the web server module uses to maintain an accurate date and time stamp on the Administrative Settings → Server Management → Time Settings page. This makes sure that files you save to the web server module have accurate date and time stamps.



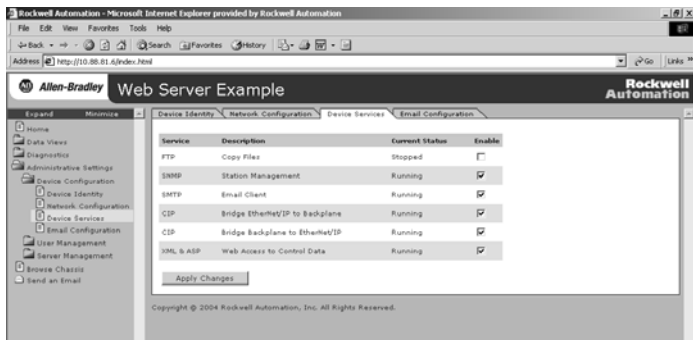
Select:

- SNTP Time Server to get the date and time from an SNTP server on the network.
- Query Controller to get the date and time from the local controller.
- Manual Time Entry to specify your own date and time.

For more information, see the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527.

Enable/Disable Other Services

You can enable other services from the Administrative Settings → Device Configuration → Device Services page.



Select the services you want to use. Enable the:

- FTP (File Transfer Protocol) service to allow file transfers to and from the web server module
- SNMP (Simple Network Management Protocol) service if your system uses SNMP management software
- SMTP (Simple Mail Transfer Protocol) to service email
- CIP (Common Industrial Protocol) Bridge EtherNet/IP to Backplane service to allow navigation and bridging to only the web server module and not to any other device in the chassis
- CIP (Common Industrial Protocol) Bridge Backplane to EtherNet/IP service to allow navigation and bridging to the web server module and to any other device in the chassis
- XML/ASP (Extended Markup Language/Active Server Page) service to allow web access to the module

For more information, see the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527.

Troubleshooting the Module

If the alphanumeric display and LED indicators do not sequence through the expected states refer to the following troubleshooting tables. The three bi-color (red/green) LED status indicators on the 1756-EWEB module provide diagnostic information about the module and its connections to the network.

NET (Network) Status Indicator

The Network Status LED provides the following information:

State	Status	Description
Off	Not Powered, No IP Address	Module is not powered, or does not have an IP address. <ul style="list-style-type: none"> • Verify there is chassis power and the module is completely inserted into the chassis and backplane. • Make sure the module has been configured.
Flashing Green	No Connections	Module has obtained an IP address, but has no established connections.
Green	CIP Connections	Module has an IP address and at least one established connection.
Flashing Red	Connection Timeout	One or more of the connections in which the module is the target has timed out.
Red	Duplicate IP Address	Module has detected that its IP address is already in use. Assign a unique IP address to the module.

Link Status Indicator

The Link Status LED provides the following information:

State	Status	Description
Off	No data transmission	Module is not ready to communicate.
Green	Ready	Module is ready to communicate.
Flashing Green	Data transmission in progress	Module is communicating over the network.

OK Status Indicator

The OK Status LED provides the following module information:

State	Status	Description
Off	No Power	Module does not have 24V DC power. Verify there is chassis power and the module is completely inserted into chassis and backplane.
Flashing Green	Standby	Module is not configured.
Green	Operational	Module is operating correctly.
Flashing Red	Minor Fault	A recoverable fault has been detected. This could be caused by an error in the configuration.
Red	Major Fault	An unrecoverable fault has been detected. Recycle power to the module. If this does not clear the fault, replace the module.
Flashing Red and Green	Self Test	Module performing power-up self-test.

Where to Find More Information on Configuring the Module

For more details on configuring your web server module, refer to the *EtherNet/IP Web Server Module User Manual*, publication ENET-UM527A.

Specifications

Specification:	Value:
Module Location	Any slot in the ControlLogix chassis
Maximum Backplane Current Load	700mA @ 5.1V DC 3mA @ 24V DC from I/O chassis backplane
Power Dissipation	3.65W maximum
Isolation voltage (continuous-voltage withstand rating)	50V
Operational Temperature	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), 0 to 60°C (32 to 140°F)
Storage Temperature	IEC 60068-2-1 (Test Ab, Un-packaged Non-operating Cold), IEC 60068-2-2 (Test Bb, Un-packaged Non-operating Dry Heat), IEC 60068-2-14 (Test Na, Un-packaged Non-operating Thermal Shock): -40 to 85°C (-40 to 185°F)
Relative Humidity	IEC 60068-2-30 (Test Db, Un-packaged Non-operating Damp Heat): 5 to 95% non-condensing
Vibration	IEC 60068-2-6 (Test Fc, Operating): 2g @ 10-500Hz
Operating Shock	IEC 60068-2-27 (Test Ea, Unpackaged Shock): 30g
Non-Operating Shock	IEC 60068-2-27 (Test Ea, Unpackaged Shock): 50g
Emissions	CISPR 11: Group 1, Class A

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Specification:	Value:
ESD Immunity	IEC 61000-4-2: 6kV contact discharges 8kV air discharges
Radiated RF Immunity	IEC 61000-4-3: 10V/m with 1kHz sine-wave 80%AM from 30MHz to 1000MHz 10V/m with 200Hz 50% Pulse 100%AM at 900Mhz
EFT/B Immunity	IEC 61000-4-4: ± 2 kV at 5kHz on communications ports
Surge Transient Immunity	± 2 kV line-earth(CM) on shielded ports ± 2 kV line-earth unshielded ports
Conducted RF Immunity	IEC 61000-4-6: 10Vrms with 1kHz sine-wave 80%AM from 150kHz to 80MHz
Enclosure Type Rating	None (open-style)
Conductors - Wiring Category	2 ¹ - on communications ports
EtherNet/IP Connector	RJ45 Category 5

Specification:	Value:
User Manual	Publication ENET-UM527A
Certifications (when product is marked)	<p>UL: UL Listed Industrial Control Equipment</p> <p>CSA: CSA Certified Process Control Equipment CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations</p> <p>CE²: European Union 89/336/EEC EMC Directive, compliant with: EN 50081-2; Industrial Emissions EN 61326; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions</p> <p>C-Tick²: Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions</p> <p>EEx²: European Union 94/9/EC ATEX Directive, compliant with: EN 50021; Potentially Explosive Atmospheres, Protection "n" (Zone 2)</p> <p>EtherNet/IP: ODVA conformance tested to EtherNet/IP specifications</p>

¹ Use this Conductor Category information for planning conductor routing. Refer to Publication 1770-4.1, "Industrial Automation Wiring and Grounding Guidelines".

² See the Product Certification link at www.ab.com for Declarations of Conformity, Certificates, and other certification details.

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EtherNet/IP is a registered trademark of Digital Equipment Corporation, Intel and Xerox.

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Rockwell Automation Support

Rockwell Automation provides technical information on the web to assist you in using our products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running:

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell tests all of our products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned:

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

www.rockwellautomation.com

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