

# ***Nikon***

## **D5**

# **Network Guide**

- Read this manual thoroughly before using the camera.
- After reading this manual, keep it in a readily accessible place for future reference.

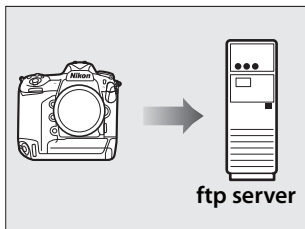
**En**

# What Networks Can Do for You

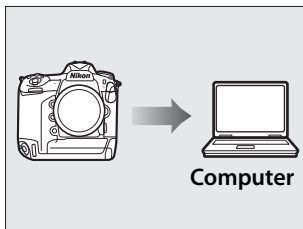
This guide describes how to connect to a network, access the camera remotely, and upload images to computers and ftp servers over Ethernet connections. Once a connection has been established, you can:

## 1 Upload existing photos and movies

### FTP upload (📖45)

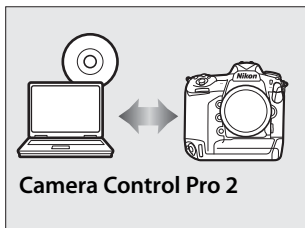


### Image transfer (📖14)

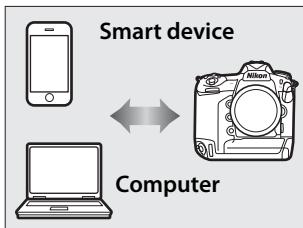


## 2 Take or browse photos remotely

### Camera control (📖18)

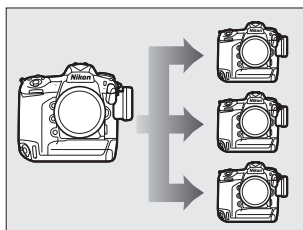


### HTTP server (📖21)



### 3 Control multiple cameras (requires optional WT-6 or WT-5 wireless transmitters)

#### Synchronized release (📖 49)



#### Tip

See page 5 for information on configuring the camera for connection to a host computer, page 39 for information on configuring the camera for connection to an ftp server.

#### Nikon Manual Viewer 2



Install the Nikon Manual Viewer 2 app on your smartphone or tablet to view Nikon digital camera manuals, anytime, anywhere. Nikon Manual Viewer 2 can be downloaded free of charge from the App Store and Google Play. Download of the app and any product manuals requires an Internet connection, for which fees may be levied by your phone or Internet service provider.

## **Trademark Information**

IOS is a trademark or registered trademark of Cisco Systems, Inc., in the United States and/or other countries and is used under license. Windows is either a registered trademark or a trademark of Microsoft Corporation in the United States and/or other countries. Mac, OS X, iPhone, and iPad are registered trademarks of Apple Inc. in the United States and/or other countries. XQD is a trademark of Sony Corporation. CompactFlash is a trademark of SanDisk Corporation. All other trade names mentioned in this guide or the other documentation provided with your Nikon product are trademarks or registered trademarks of their respective holders.

## **Memory Cards**

This camera is available in XQD- and CompactFlash-compatible models. The instructions in this guide assume an XQD memory card is used, but the operations for both models are identical.

## **Apple Public Source License**

This product includes Apple mDNS source code that is subject to the terms of the Apple Public Source License located at URL

***<http://developer.apple.com/opensource/>***.

This file contains Original Code and/or Modifications of Original Code as defined in and that are subject to the Apple Public Source License Version 2.0 (the 'License'). You may not use this file except in compliance with the License. Please obtain a copy of the License at

***<http://www.opensource.apple.com/license/apsl/>*** and read it before using this file.

The Original Code and all software distributed under the License are distributed on an 'AS IS' basis, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND APPLE HEREBY DISCLAIMS ALL SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT OR NON-INFRINGEMENT. Please see the License for the specific language governing rights and limitations under the License.

# Notices

- No part of this guide may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Nikon's prior written permission.
- Nikon reserves the right to change the appearance and specifications of the hardware and software described in this guide at any time and without prior notice.
- Nikon will not be held liable for any damages resulting from the use of this product.
- While every effort has been made to ensure that the information in this guide is accurate and complete, we would appreciate it were you to bring any errors or omissions to the attention of the Nikon representative in your area (address provided separately).

## **Notice Concerning Prohibition of Copying or Reproduction**

Note that simply being in possession of material that has been digitally copied or reproduced by means of a scanner, digital camera, or other device may be punishable by law.

### **• Items prohibited by law from being copied or reproduced**

Do not copy or reproduce paper money, coins, securities, government bonds, or local government bonds, even if such copies or reproductions are stamped "Sample."

The copying or reproduction of paper money, coins, or securities which are circulated in a foreign country is prohibited.

Unless the prior permission of the government has been obtained, the copying or reproduction of unused postage stamps or post cards issued by the government is prohibited.

The copying or reproduction of stamps issued by the government and of certified documents stipulated by law is prohibited.

- **Cautions on certain copies and reproductions**

The government has issued cautions on copies or reproductions of securities issued by private companies (shares, bills, checks, gift certificates, etc.), commuter passes, or coupon tickets, except when a minimum of necessary copies are to be provided for business use by a company. Also, do not copy or reproduce passports issued by the government, licenses issued by public agencies and private groups, ID cards, and tickets, such as passes and meal coupons.

- **Comply with copyright notices**

Under copyright law, photographs or recordings of copyrighted works made with the camera can not be used without the permission of the copyright holder. Exceptions apply to personal use, but note that even personal use may be restricted in the case of photographs or recordings of exhibits or live performances.

## **Background Knowledge**

This guide assumes basic knowledge of ftp servers, local area networks (LANs), and wireless networks. For more information on installing, configuring, and using the devices in a network, contact the manufacturer or network administrator. Information on configuring computers for connection to wireless networks may be found in the on-line help for the Wireless Transmitter Utility.

## **Life-Long Learning**

As part of Nikon's "Life-Long Learning" commitment to ongoing product support and education, continually-updated information is available on-line at the following sites:

- **For users in the U.S.A.:** <http://www.nikonusa.com/>
- **For users in Europe and Africa:** <http://www.europe-nikon.com/support/>
- **For users in Asia, Oceania, and the Middle East:** <http://www.nikon-asia.com/>

Visit these sites to keep up-to-date with the latest product information, tips, answers to frequently-asked questions (FAQs), and general advice on digital imaging and photography. Additional information may be available from the Nikon representative in your area. See the following URL for contact information: <http://imaging.nikon.com/>

## **Illustrations**

The appearance and content of the software and operating system dialogs, messages, and displays shown in this guide may vary with the operating system used. For information on basic computer operations, see the documentation provided with the computer or operating system.

# Table of Contents

What Networks Can Do for You.....	ii
Notices.....	v

## **Introduction** **1**

---

Network Options.....	2
The Wireless Transmitter Utility .....	4

## **Transfer, Control, and HTTP** **5**

---

Ethernet Connections .....	5
Step 1: Connecting an Ethernet Cable.....	6
Step 2: Enabling the Ethernet .....	8
Step 3: The Connection Wizard .....	8
Step 4: Pairing .....	12

For information on connecting to a wireless LAN using an optional WT-6 or WT-5 wireless transmitter, see the manual provided with the device.

Image Transfer .....	14
Camera Control .....	18
HTTP Server.....	21
Computer and Android Web Browsers.....	27
iPhone Web Browsers .....	34



---

Ethernet Connections .....	39
Step 1: Connecting an Ethernet Cable .....	40
Step 2: Enabling the Ethernet.....	41
Step 3: The Connection Wizard.....	41

For information on connecting to a wireless LAN using an optional WT-6 or WT-5 wireless transmitter, see the manual provided with the device.

FTP Upload.....	45
-----------------	----

---

## **Synchronized Release**

---

Selecting Wireless LAN for Synchronized Release .....	50
Synchronized Release Options .....	50
Taking Pictures.....	52

---

## **Menu Guide**

---

## **Appendices**

---

Creating Profiles on a Computer .....	65
Creating an FTP Server .....	67
Manual Profile Creation.....	75
Troubleshooting .....	77
Index.....	78



# Introduction

This guide describes how to use the camera in (chiefly Ethernet) network environments, including connecting to and operating the camera in a network. Be sure to read this guide and the camera manual thoroughly and to keep them where they will be read by all those who use the product. Information on using optional WT-6 and WT-5 wireless transmitters can be found in the manuals for the devices in question.

## Symbols and Conventions

The following symbols and conventions are used throughout this guide:



This icon marks cautions, information that should be read before use to prevent damage to the product.



This icon marks notes, information that should be read before using the device.



This icon marks references to other pages in this guide.

Save where otherwise noted, it is assumed that default camera settings are used.

# Network Options

The camera can be connected to Ethernet or wireless networks using the built-in Ethernet port or an optional WT-6 or WT-5 wireless transmitter (note that an Ethernet cable — available separately from commercial sources — is required for an Ethernet connection). Choose from the following connection modes:

<b>FTP upload</b> (📖45)	Upload existing photos and movies to a computer or ftp server, or upload new photos as they are taken.
<b>Image transfer</b> (📖14)	
<b>Camera control</b> (📖18)	Control the camera using optional Camera Control Pro 2 software and save new photos and movies directly to the computer.
<b>HTTP server</b> (📖21)	View and take pictures remotely using a browser-equipped computer or smart device.
<b>Synchronized release</b> (wireless only; 📖49)	Synchronize the shutter releases for multiple remote cameras with a master camera.

## Ethernet Connection

Ethernet connections require no adjustments to wireless LAN settings.

## FTP Servers

Servers can be configured using standard ftp services available with supported operating systems, such as IIS (Internet Information Services). Internet ftp connections and connection to ftp servers running third-party software are not supported.

## HTTP Sever Mode

Internet connections are not supported in http server mode.

## **Routers**

Connection to computers on other networks via a router is not supported.

## **Firewall Settings**

TCP ports 21 and 32768 through 61000 are used for ftp, TCP ports 22 and 32768 through 61000 for sftp, and TCP port 15740 and UDP port 5353 for connections to computers. File transfer may be blocked if the server firewall is not configured to allow access to these ports.

# The Wireless Transmitter Utility

The Wireless Transmitter Utility is used for pairing in image transfer and camera control modes (📖 13) and can also help create network profiles. You can install the utility after downloading it from the following website:

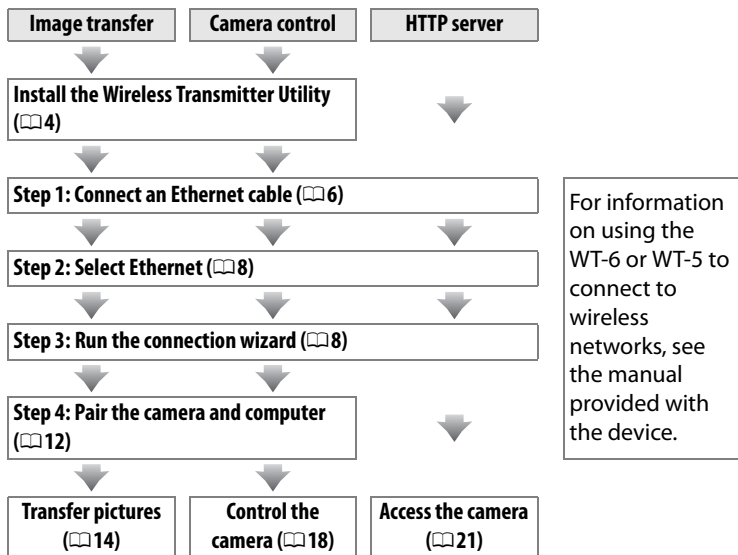
***<http://downloadcenter.nikonimglib.com/>***

Be sure to use the latest versions of the Wireless Transmitter Utility and the camera firmware.

# Transfer, Control, and HTTP

## Ethernet Connections

Follow the steps below to connect to a computer in image transfer, camera control, and http server modes.



### ✓ Choosing a Power Source

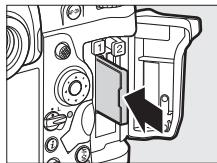
To prevent the camera powering off unexpectedly during setup or data transfer, use a fully-charged battery or an optional AC adapter. For more information, see the camera manual.

## Step 1: Connecting an Ethernet Cable

After starting the camera and logging in, ready the camera as described below. Do not turn the camera off or disconnect the Ethernet cable while data are being transferred to the computer.

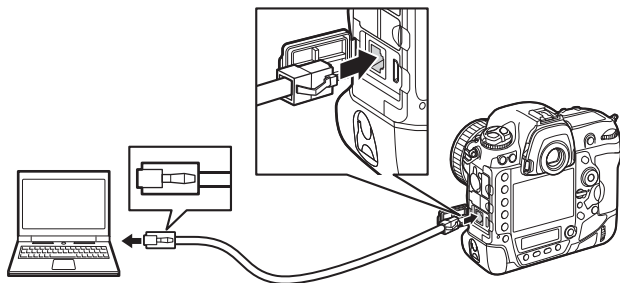
### 1 Insert a memory card.

Turn the camera off and insert a memory card. This step can be omitted in camera control mode (18).



### 2 Connect an Ethernet cable.

Connect the Ethernet cable as shown below. Do not use force or insert the connectors at an angle.

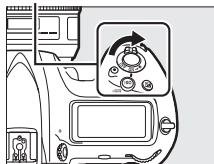




### 3 Turn the camera on.

Rotate the power switch to turn the camera on.

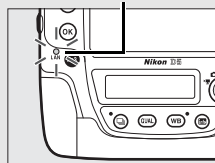
Power switch



#### Connection Status




Connection status is shown by the network indicator.

Network indicator



Network indicator	Status
● (off)	Network functions disabled (55) or Ethernet cable not connected.
○ (green)	Waiting to connect.
⚙ (flashes green)	Connected.
⚙ (flashes amber)	Error.

#### The Viewfinder Display


Connection status is also shown in the camera viewfinder.  is displayed when the camera is connected via Ethernet,  when it is connected to a wireless network, and a flashing  when an error has occurred.

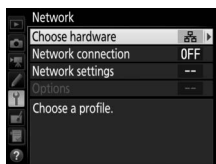


## Step 2: Enabling the Ethernet


Select the Ethernet as the network device used by the camera.

### 1 Select **Choose hardware**.

In the setup menu, select **Network**, then highlight **Choose hardware** and press . The menu offers a choice of **Wired LAN** and **Wireless LAN**.



### 2 Select **Wired LAN**.


Highlight **Wired LAN** and press  to select the highlighted option and return to the network menu.

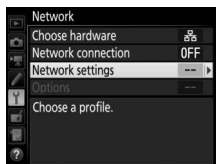


## Step 3: The Connection Wizard




Follow the on-screen instructions to create a network profile.

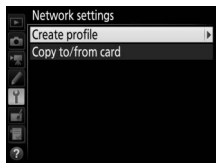
### 1 Display network profiles.

In the network menu, highlight **Network settings** and press  to display the profiles list and other network settings.



### 2 Select **Create profile**.

Highlight **Create profile** and press . Note that if the list already contains nine profiles, you will need to delete an existing profile using the  () button before proceeding (see 57).



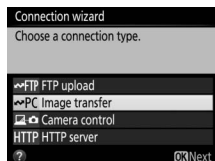
### 3 Start the connection wizard.

Highlight **Connection wizard** and press  to start the connection wizard.




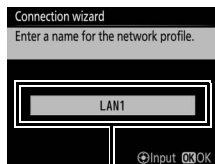
### 4 Choose a connection type (📖 2).

Highlight **Image transfer**, **Camera control**, or **HTTP server** and press .



### 5 Name the new network profile.

A default profile name will be displayed; to change the name as described in “Text Entry” (📖 10), press the center of the multi selector. The profile name will appear in the **Network > Network settings** list in the camera setup menu. Press  to proceed to the next step when entry is complete.








Profile name

## Text Entry

The following dialog is displayed when text entry is required.



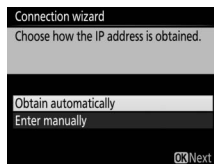
To enter a new letter at the current cursor position, tap the letters on the touch-screen keyboard (tap the keyboard selection button to cycle through the upper-case, lower-case, and symbol keyboards). You can also use the multi selector to highlight the desired character in the keyboard area and press the center of the multi selector (note that if a character is entered when the field is full, the last character in the field will be deleted). To delete the character under the cursor, press the  (DELETE) button. To move the cursor to a new position, tap the display or hold the  button and press  or .

To complete entry and return to the previous menu, press . To exit to the previous menu without completing text entry, press MENU.

## 6 Obtain or select an IP address.

Highlight one of the following options and press **OK**.

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically.
- **Enter manually:** When prompted, enter an IP address and subnet mask by pressing **←** and **→** to highlight segments and **↑** and **↓** to change. Press **OK** to proceed when entry is complete.

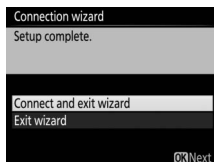


## 7 Choose your next step.

The IP address will be displayed; press **OK**. Your next step depends on the connection type selected in Step 4 on page 9:



**If you chose Image transfer or Camera control, pair the camera and computer as described on page 12.**



**If you chose HTTP server, proceed to Step 8.**

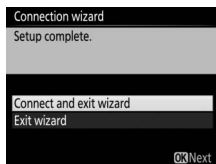
### Routers

Connection to computers on other networks via a router is not supported.

## 8 Exit the wizard.

Highlight one of the following options and press **OK**.

- **Connect and exit wizard:** Save the new network profile and connect to the server.
- **Exit wizard:** Save the new network profile and exit.



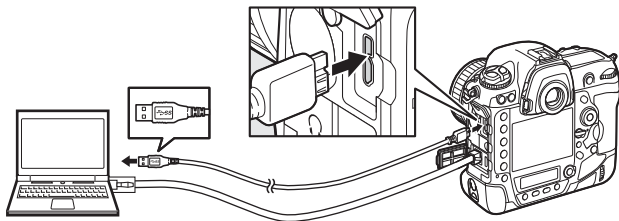
Proceed to “HTTP Server” (21).

## Step 4: Pairing

If you selected **Image transfer** or **Camera control** in Step 4 of the connection wizard (9), pair the camera with the computer as described below. Pairing allows the computer to connect to the camera.

### 1 Connect the camera to the computer via USB.

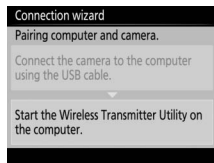
When prompted, connect the camera to the computer using the USB cable supplied with the camera.



---

## 2 Start the Wireless Transmitter Utility.

When prompted, start the copy of the Wireless Transmitter Utility installed on the computer. Pairing will begin automatically.



---

## 3 Disconnect the camera.

The message at right will be displayed when pairing is complete. Disconnect the USB cable.

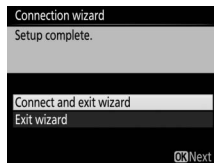


---

## 4 Exit the wizard.

Highlight one of the following options and press **OK**.

- **Connect and exit wizard:** Save the new network profile and connect to the server.
- **Exit wizard:** Save the new network profile and exit.



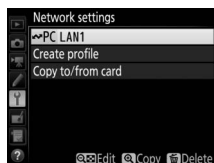
Proceed to “Image Transfer” (📖 14) or “Camera Control” (📖 18).

# Image Transfer

Image transfer is used to upload photographs and movies to the computer from a camera memory card. The explanation that follows assumes that existing pictures are used.

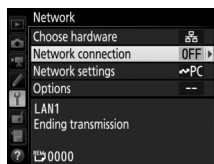
## 1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. Image transfer profiles are indicated by a PC icon. Highlight a profile and press **OK** to select the highlighted profile and return to the network menu.



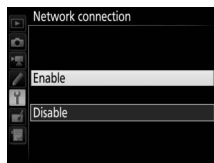
## 2 Select Network connection.

Highlight **Network connection** and press **OK**.

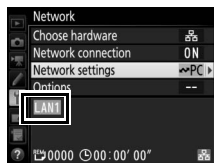


## 3 Select Enable.

Highlight **Enable** and press **OK** to connect to the network and return to the network menu.




The profile name will be displayed in green when a connection is established.






## 4 View pictures.



Press the  button to view pictures. Display the first picture to be sent in single-image playback or highlight it in the thumbnail list.



## 5 Upload pictures.

Press  and the center of the multi selector. A white transfer icon will appear on the picture and upload will begin immediately. The transfer icon turns green during upload, and turns blue when upload is complete. Additional pictures will be uploaded in the order selected.

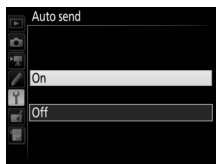


To upload a picture that has already been uploaded once, press  and the center of the multi selector once to remove the blue transfer icon, and then press  and the center of the multi selector again to mark the image with a white transfer icon.



## Uploading New Photographs as They Are Taken

To upload new photographs as they are taken, select **On** for **Network > Options > Auto send** in the setup menu (61).



### Upload Marking

The image currently displayed full-frame or highlighted in thumbnail playback can be marked for upload by pressing the  button, highlighting **Select/deselect for transfer** in the -button menu, and pressing .

## Interrupting Transmission/Removing Transfer Marking

To cancel transmission of images marked with white or green transfer icons, select the images during playback and press **OK** and the center of the multi selector. The transfer icon will be removed.

Any of the following actions will also interrupt transmission:

- Turning the camera off (transfer marking is saved, and transfer will resume when the camera is next turned on)
- Selecting **Yes** for **Network > Options > Deselect all?** (p. 62; this option also removes transfer marking from all images)

### Firewall Settings

TCP port 15740 and UDP port 5353 are used for host computer connections. Computer firewalls must be configured to allow access to these ports, as otherwise the computer may not be able to access the camera.

### Interval Timer Photography

Upload will be interrupted if the standby timer expires while interval timer photography is in progress. Choose a long standby time before starting the interval timer.

### Voice Memos

Voice memos can not be uploaded separately, but will be included when the associated pictures are transmitted.

### During Upload

Do not remove the memory card or disconnect the Ethernet cable during upload.

### Loss of Signal

Wireless transmission may be interrupted if the signal is lost. Transmission can be resumed by turning the camera off and then on again.

### Destination Folders

By default, images are uploaded to the following folders:

- **Windows:** \Users\ (user name) \Pictures\Wireless Transmitter Utility
- **Mac:** /Users/ (user name) /Pictures/Wireless Transmitter Utility

The destination folder can be selected using the Wireless Transmitter Utility.

## Transfer Status

During playback, the status of images selected for upload is shown as follows:

### : “Send”

Images that have been selected for upload are marked with a white transfer icon.

### : “Sending”

A green transfer icon is displayed during upload.

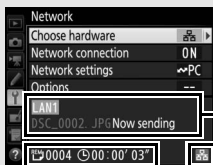
### : “Sent”



Images that have been uploaded successfully are marked with a blue transfer icon.




## Network Status

Network status can be viewed in the top level of the network menu.



 : The number of images remaining and the estimated time required to send them.


**Status area:** The status of the connection to the host. The profile name is displayed in green when a connection is established. While files are being transferred, the display shows “Now sending” preceded by the name of the file being sent. Errors that occur during transfer are also displayed here (📖77).

**Signal strength:** Wireless signal strength. Ethernet connections are shown by .

# Camera Control

Select this option to control the camera from a computer running Camera Control Pro 2 (available separately) and save photographs directly to the computer hard disk instead of the camera memory card (movies will still be saved to the camera memory card; insert a memory card before shooting movies). Note that the camera standby timer will not expire when the camera is in camera control mode.

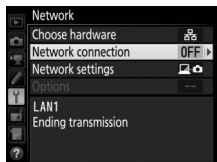
## 1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. Camera control profiles are indicated by a  icon. Highlight a profile and press **OK** to select the highlighted profile and return to the network menu.



## 2 Select Network connection.

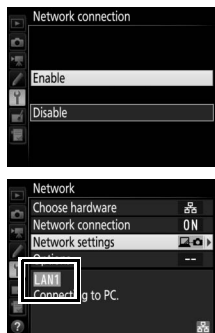
Highlight **Network connection** and press **OK**.



### 3 Select Enable.

Highlight **Enable** and press **OK** to connect to the network and return to the network menu.

The profile name will be displayed in green when a connection is established.



### 4 Start Camera Control Pro 2.

Start the copy of Camera Control Pro 2 (available separately) installed on the host computer. For information on using Camera Control Pro 2, see the Camera Control Pro 2 manual (pdf).

#### Firewall Settings

TCP port 15740 and UDP port 5353 are used for host computer connections. Computer firewalls must be configured to allow access to these ports, as otherwise the computer may not be able to access the camera.

#### Ethernet Networks

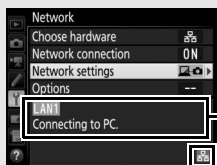
Do not disconnect the Ethernet cable while the camera is on.

#### Wireless Networks


Operations may take longer on wireless networks. If the signal is disrupted while pictures are being transferred to Camera Control Pro 2, the camera network indicator or the LED on the WT-5 will flash amber; disable and re-enable the network connection (0055). Transfer will resume when the connection is re-established. Note that transfer can not be resumed if you turn the camera off before transfer is complete.

## Network Status

Network status can be viewed in the top level of the network menu.



**Status area:** The status of the connection to the host. The profile name is displayed in green when a connection is established. Errors are also displayed here (see 77).

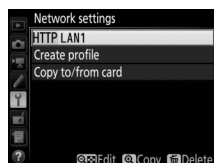
**Signal strength:** Wireless signal strength. Ethernet connections are shown by .

# HTTP Server

Select **HTTP server** to view the pictures on the camera memory card or take photographs from the web browser on a computer or smart device (see page 26 for system requirements). Up to five users can access the camera at one time, although only one can take photographs or edit text. Note that the standby timer will not expire automatically when the camera is in http server mode.

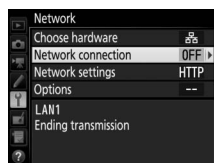
## 1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. HTTP server profiles are indicated by a HTTP icon. Highlight a profile and press **OK** to select the highlighted profile and return to the network menu.



## 2 Select Network connection.

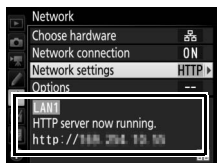
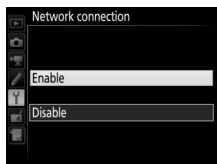
Highlight **Network connection** and press **OK**.



### 3 Select **Enable**.

Highlight **Enable** and press **OK** to connect to the network and return to the network menu.

The URL used for connection to the camera is displayed when a connection is established.

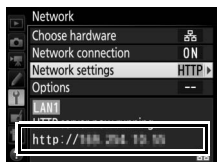


### 4 Launch the web browser.

Launch the web browser on the computer or smart device.

### 5 Enter the camera URL.

Enter the camera URL ("http://" followed by the camera IP address, as shown in the network menu) in the browser window address field.





## 6 Log in.

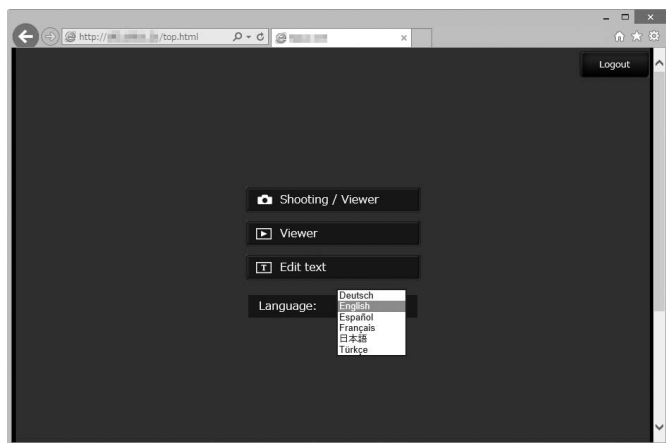
Enter your user name and password in the web browser login dialog (the user name and password are set using **Network > Options > HTTP user settings** in the network menu as described on page 62; the default user name is “nikon” while the default password is blank).



---

## 7 Choose a language.

Click **Language** and choose the desired option.



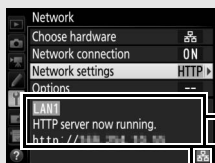
---

## 8 Choose an operating mode.


Choose **Shooting/Viewer** to take pictures (☞ 27, 34) and **Shooting/Viewer** or **Viewer** to view existing pictures (☞ 29, 36). To use the computer or smart device web browser to edit image comments and copyright and IPTC information stored on the camera, select **Edit text** (☞ 31, 38). Up to five users at a time can connect using **Viewer**, but only one user at a time can connect using **Shooting/Viewer** or **Edit text** (if another user is already connected using **Shooting/Viewer** or **Edit text**, these options will not be displayed and only four users will be able to connect using **Viewer**).

## Network Status

Network status can be viewed in the top level of the network menu.



**Status area:** The status of the connection to the host. The camera URL is displayed when a connection is established. Errors are also displayed here (see 77).

**Signal strength:** Wireless signal strength. Ethernet connections are shown by .

## HTTP Server System Requirements

Operation has been confirmed with the following systems:

### Windows

OS	Windows 10, Windows 8.1, Windows 7
Browser	<ul style="list-style-type: none"><li>• <b>Windows 10:</b> Microsoft Edge</li><li>• <b>Windows 8.1:</b> Internet Explorer 11</li><li>• <b>Windows 7:</b> Internet Explorer 10</li></ul>
Graphics	<ul style="list-style-type: none"><li>• <b>Resolution:</b> 1024 × 768 pixels (XGA) or more; 1280 × 1024 pixels or more recommended</li><li>• <b>Color:</b> 24-bit color (True Color) or more</li></ul>

### Mac

OS	OS X version 10.10, 10.9, or 10.8
Browser	<ul style="list-style-type: none"><li>• <b>OS X version 10.10:</b> Safari 8</li><li>• <b>OS X version 10.9:</b> Safari 7</li><li>• <b>OS X version 10.8:</b> Safari 6</li></ul>
Graphics	<ul style="list-style-type: none"><li>• <b>Resolution:</b> 1024 × 768 pixels (XGA) or more; 1280 × 1024 pixels or more recommended</li><li>• <b>Color:</b> 24-bit color (millions of colors) or more</li></ul>

### Android OS

OS	Android 5.0, 4.4
Browser	Chrome

### iOS

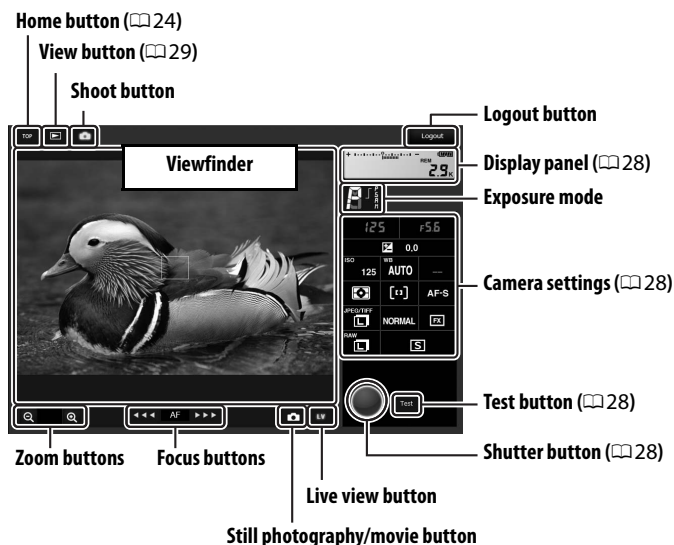
OS	iOS 8, iOS 7
Browser	The version of Safari included with the operating system

# Computer and Android Web Browsers

This section describes the http server displays for computer and Android web browsers (dialogs are shown with all buttons displayed for explanatory purposes). Click or tap to adjust camera settings. For information on the displays for iPhones, see page 34.

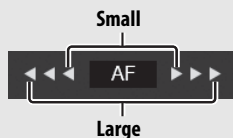
## ■ The Shooting Window

The following controls can be accessed by selecting **Shooting/Viewer** on the server home page. To display the view through the camera lens in the viewfinder area, tap or click the live view button. Tap or click the button again to exit live view.




### 🔍 Focus Buttons

The size of the focus adjustment increases with the distance of the button from the center of the display.




<b>Display panel</b>	Contains the exposure indicator and shows the battery level and number of exposures remaining.
<b>Camera settings</b>	Click or tap icons to adjust settings for photography or movie recording. See the camera manual for details.
<b>Shutter button</b>	Take a photograph or start and end movie recording. To focus, click or tap the desired subject in the viewfinder area.
<b>Test button</b>	Take a test photo and display it in the viewfinder without recording it to the camera memory card. Not available in movie live view.

### **Enabling Live View on the Camera**

When the view through the camera lens is displayed in the viewfinder area, pressing the camera  button will display the view through the lens in the camera monitor. Press the button again to end live view on the camera.

### **The Release Mode Button**

Rotating the camera release mode dial to  enables the release mode button, which can be used to choose from single-frame, high-speed continuous, and low-speed continuous release modes. In high- and low-speed continuous release modes, the camera takes photographs while the shutter-release button is pressed.



## ■ The Viewer Window

The viewer window can be accessed by selecting **Viewer** on the server home page or by clicking or tapping the view button in the shooting window. The viewer window offers a choice of thumbnail, film-strip (📖 30), and full-frame views (📖 30).

### Thumbnail View

View multiple small (“thumbnail”) images per page. The controls at the top of the window can be used for navigation.



Navigation controls

Thumbnails (click or tap to view pictures full frame). Movies are indicated by 🎬; voice memos are listed as separate files.



### Navigation Controls

View most recent picture in folder

Page number



Full-frame view (📖 30)

Film-strip view (📖 30)

Thumbnail view (📖 29)

Folder selection

Thumbnails per page

Page controls

## Film-Strip View

Choose the picture displayed from the thumbnails at the bottom of the window.



Current picture (click or tap ◀ or ▶ to view additional pictures)

Copy current picture to computer or smart device

Thumbnails (click or tap to select)

## Full-Frame View

View pictures full frame.



Current picture (click or tap ◀ or ▶ to view additional pictures)

Copy current picture to computer or smart device



## ■ The Text Edit Window

The text edit window, which is used to edit image comments and copyright and IPTC information stored on the camera, can be accessed by selecting **Edit text** on the server home page.

Home button (📖 24)

The diagram illustrates the Text Edit Window interface. At the top, there is a header bar with a 'Save' button on the left and a 'Logout' button on the right. Below the header, the main content area is divided into three sections. The first section is labeled 'Image comment (📖 32)' and contains a 'Save' button and a 'Logout' button. The second section is labeled 'Copyright information (📖 32)' and contains a 'Clear' button. The third section is labeled 'IPTC information (📖 33)' and contains a 'Clear' button. The 'Image comment' section includes a 'Save' button and a 'Logout' button. The 'Copyright information' section includes a 'Clear' button. The 'IPTC information' section includes a 'Clear' button.

Save button

Image comment (📖 32)

Logout button

Save

Logout

Image comment

■ Attach comment

Input comment :

Copyright information

■ Attach copyright information

Artist :

Copyright :

IPTC

Auto embed during shooting : Off

Select IPTC preset : P-1

Profile : Unused

Caption :

Clear

Copyright information (📖 32)

IPTC information (📖 33)

Clear button

### ✓ Saving Changes

Changes are not saved automatically. Click or tap the save button to save changes.

### ✓ The Clear Button

Clicking or tapping the clear button immediately deletes the displayed text, even if you exit without clicking the save button.

## Image Comment

Create a comment that can be appended to subsequent images. Comments can be viewed as metadata in ViewNX-i or Capture NX-D. The following options are available:

- **Attach comment:** Select this option to attach the comment to all subsequent photographs.
- **Input comment:** Input a comment up to 36 characters long.

## Copyright Information

Add copyright information to new photographs as they are taken. Copyright information can be viewed as metadata in ViewNX-i or in Capture NX-D. The following options are available:

- **Attach copyright information:** Select this option to attach copyright information to all subsequent photographs.
- **Artist/copyright:** Enter a photographer name up to 36 characters long and a copyright holder name up to 54 characters long.

## Viewing Image Comments and Copyright Information on the Camera

Image comments and copyright information can be viewed during full-frame playback on the corresponding pages of the camera photo information display.

### Copyright Information

To prevent unauthorized use of the artist or copyright holder names, make sure that **Attach copyright information** is not selected and that the **Artist** and **Copyright** fields are blank before lending or transferring the camera to another person. Nikon does not accept liability for any damages or disputes arising from the use of the **Copyright information** option.

## **IPTC Information**

Embed IPTC presets in photographs as they are taken. The following options are available:

- **Auto embed during shooting:** Selecting this tab displays a list of IPTC presets; highlight a preset and press the save button to embed the selected preset in all subsequent photographs. Select **Off** to take photos with no IPTC presets.
- **Select IPTC preset:** Selecting this tab displays a list of IPTC presets. Choose a preset to copy to the camera.



### **IPTC Information**

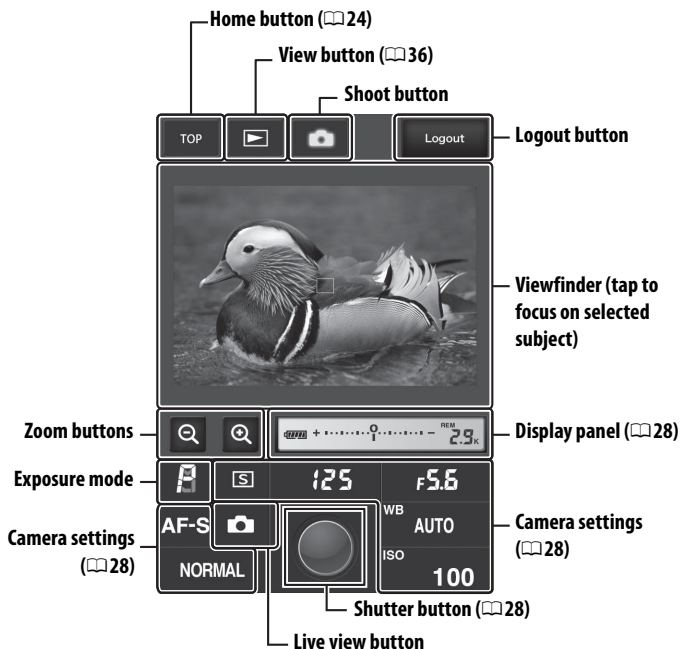
IPTC is a standard established by the International Press Telecommunications Council (IPTC) with the intent of clarifying and simplifying the information required when photographs are shared with a variety of publications. Embedded IPTC information can be viewed by selecting the IPTC page in the photo information display during full-frame playback. See the camera manual for more information.

# iPhone Web Browsers


This section describes the http server displays for iPhone web browsers (dialogs are shown with all buttons displayed for explanatory purposes). Tap to adjust camera settings. For information on computer, Android, or iPad displays, see page 27.

## ■ The Shooting Window


The following controls can be accessed by selecting **Shooting/Viewer** on the server home page. Use the live view button to start live view photography (📷) or movie live view (🎥). The view through the camera lens will be displayed in the viewfinder area. To exit live view, use the live view button to turn live view off.



## **Enabling Live View on the Camera**

When the view through the camera lens is displayed in the viewfinder area, pressing the camera  button will display the view through the lens in the camera monitor. Press the button again to end live view on the camera.

## **The Release Mode Button**

Rotating the camera release mode dial to  enables the release mode button, which can be used to choose from single-frame, high-speed continuous, and low-speed continuous release modes. In high- and low-speed continuous release modes, the camera takes photographs while the shutter-release button is pressed.



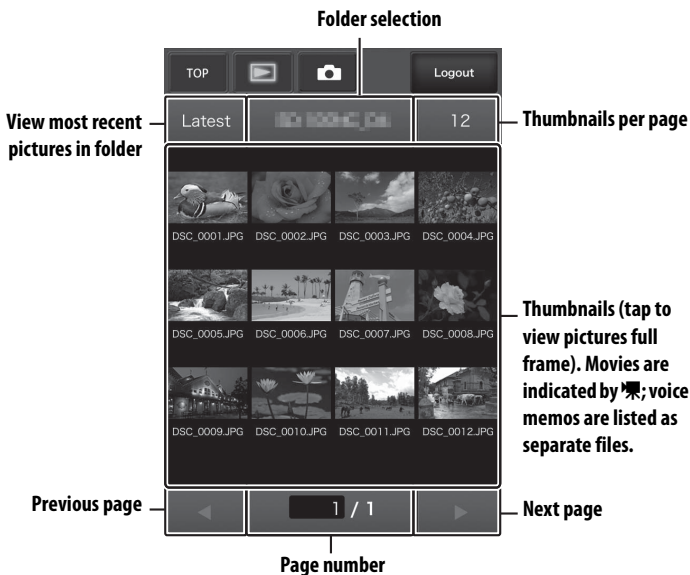
**Release mode  
button**

## ■ The Viewer Window

The viewer window can be accessed by selecting **Viewer** on the server home page or tapping the view button in the shooting window. The viewer window for iPhone web browsers offers a choice of thumbnail and full-frame views (📖 37).

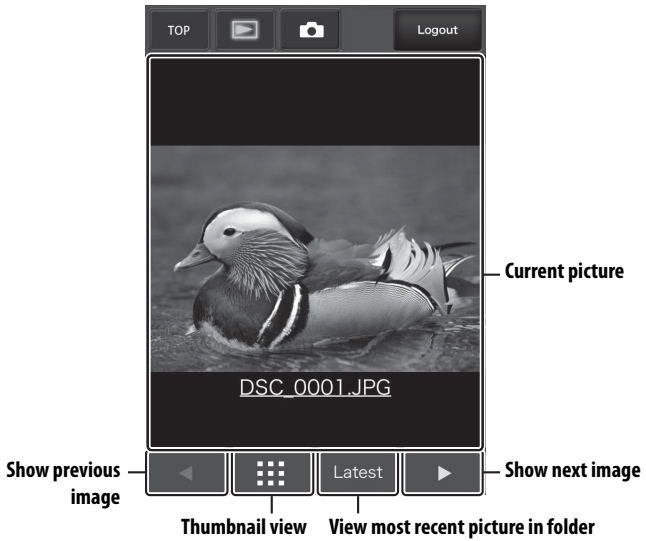
### Thumbnail View

View multiple small (“thumbnail”) images per page.



## Full-Frame View

View pictures full frame.



## ■ The Text Edit Window

The text edit window, which is used to edit image comments and copyright and IPTC information stored on the camera, can be accessed by selecting **Edit text** on the server home page.

Home button (📖 24)

Save button

TOP Save Logout

Logout button

Image comment

☐ Attach comment

Input comment : 0/36bytes

Image comment (📖 32)

Copyright information

☐ Attach copyright information

Artist : 0/36bytes

Copyright : 0/54bytes

Copyright information (📖 32)

IPTC

Auto embed during shooting :

Off ▼

Select IPTC preset :

P-1 ▼

Clear

Clear button

Profile : 0/18bytes

Unused

### ✓ Saving Changes

Changes are not saved automatically. Tap the save button to save changes.



# FTP

## Ethernet Connections

Follow the steps below to connect to an ftp server.

**FTP server**



**Step 1: Connect an Ethernet cable (📖 40)**



**Step 2: Select Ethernet (📖 41)**



**Step 3: Run the connection wizard (📖 41)**



**Transfer pictures (📖 45)**

For information on using the WT-6 or WT-5 to connect to wireless networks, see the manual provided with the device.

### ✔ **Choosing a Power Source**

To prevent the camera powering off unexpectedly during setup or data transfer, use a fully-charged battery or an optional AC adapter. For more information, see the camera manual.

### 🔧 **FTP Servers**

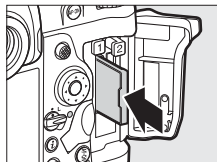
This guide assumes that you are connecting to an existing ftp server. Servers can be configured using standard ftp services, such as IIS (Internet Information Services), available with supported operating systems (📖 67). Internet ftp connections and connection to ftp servers running third-party software are not supported.

## Step 1: Connecting an Ethernet Cable

After starting the ftp server, connect the camera as described below. Do not turn the camera off or disconnect the Ethernet cable while data are being exchanged with the ftp server.

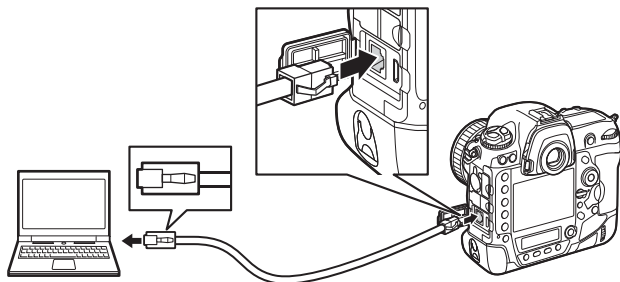
### 1 Insert a memory card.

Turn the camera off and insert a memory card.



### 2 Connect an Ethernet cable.

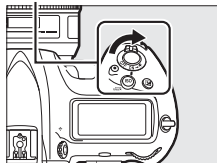
Connect the camera to the ftp server as shown below. Do not use force or insert the connectors at an angle.



### 3 Turn the camera on.

Rotate the power switch to turn the camera on.

Power switch

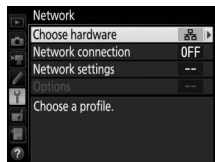


## Step 2: Enabling the Ethernet

Select the Ethernet as the network device used by the camera.

### 1 Select **Choose hardware**.

In the setup menu, select **Network**, then highlight **Choose hardware** and press . The menu offers a choice of **Wired LAN** and **Wireless LAN**.



### 2 Select **Wired LAN**.

Highlight **Wired LAN** and press to select the highlighted option and return to the network menu.

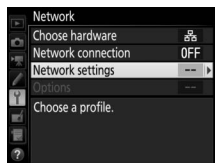


## Step 3: The Connection Wizard

Follow the on-screen instructions to create a network profile.

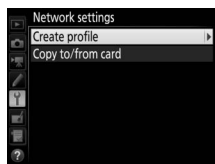
### 1 Display network profiles.

In the network menu, highlight **Network settings** and press to display the profiles list and other network settings.



### 2 Select **Create profile**.

Highlight **Create profile** and press . Note that if the list already contains nine profiles, you will need to delete an existing profile using the (FORMAT) button before proceeding.



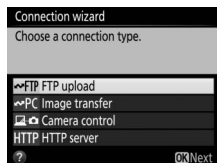
### 3 Start the connection wizard.

Highlight **Connection wizard** and press  to start the connection wizard.





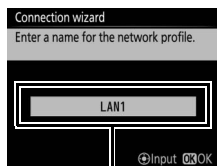
### 4 Choose a connection type.

Highlight **FTP upload** and press .




### 5 Name the new network profile.








A default profile name will be displayed; to change the name, press the center of the multi selector ( 10). The profile name will appear in the **Network > Network settings** list in the camera setup menu. Press  to proceed to the next step when entry is complete.

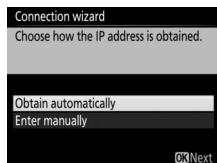


Profile name

### 6 Obtain or select an IP address.

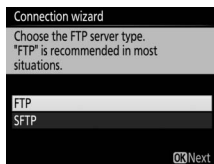
Highlight one of the following options and press .

- **Obtain automatically:** Select this option if the network is configured to supply the IP address automatically. Press  to proceed to Step 7.
- **Enter manually:** When prompted, enter an IP address and subnet mask by pressing  and  to highlight segments and  and  to change. Press  to exit when entry is complete, then press  again to proceed to Step 7.



## 7 Choose the server type.

Highlight **FTP** or **SFTP** (secure ftp) and press **OK**.



## 8 Enter the IP address.

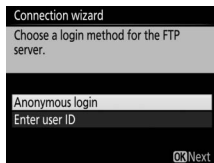
Press the center of the multi selector, enter the server URL or IP address (10) and press **OK**, and then press **OK** to connect.



## 9 Log in.

Highlight one of the following options and press **OK**.

- **Anonymous login:** Select this option if the server does not require a user ID or password.
- **Enter user ID:** Enter a user ID and password when prompted and press **OK**.



### Firewall Settings

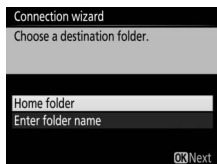
Ports 21 and 32768 through 61000 are used for ftp, ports 22 and 32768 through 61000 for sftp. File transfer may be blocked if the server firewall is not configured to allow access to these ports.

---

## 10 Choose a destination folder.

Highlight one of the following options and press **OK**.

- **Home folder:** Select this option to upload pictures to the server's home folder.
- **Enter folder name:** Select this option to upload pictures to another folder (the folder must already exist on the server). Enter a folder name and path when prompted and press **OK**.

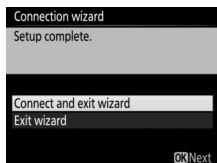


---

## 11 Exit the wizard.

Highlight one of the following options and press **OK**.

- **Connect and exit wizard:** Save the new network profile and connect to the server.
- **Exit wizard:** Save the new network profile and exit.



Proceed to “FTP Upload” (📖45).

# FTP Upload

Photos and movies can be uploaded from camera memory cards to an ftp server as described below, or photos can be uploaded as they are taken. For information on setting up an ftp server, see page 67.

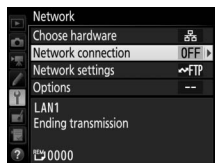
## 1 Display network profiles.

In the setup menu, select **Network** > **Network settings** to display the profiles list. FTP server profiles are indicated by a ~FTP icon. Highlight a profile and press **OK** to select the highlighted profile and return to the network menu.



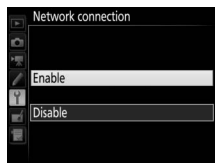
## 2 Select Network connection.

Highlight **Network connection** and press **OK**.

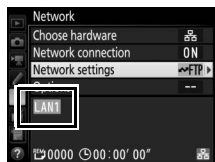


## 3 Select Enable.


Highlight **Enable** and press **OK** to connect to the network and return to the network menu.



The profile name will be displayed in green when a connection is established.




## 4 View pictures.



Press the  button to view pictures. Display the first picture to be sent full frame or highlight it in the thumbnail list.



## 5 Upload pictures.

Press  and the center of the multi selector. A white transfer icon will appear on the picture and upload will begin immediately. The transfer icon turns green during upload, and turns blue when upload is complete. Additional pictures will be uploaded in the order selected.



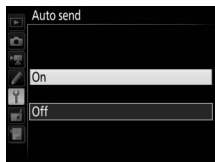
To upload a picture that has already been uploaded once, press  and the center of the multi selector once to remove the blue transfer icon, and then press  and the center of the multi selector again to mark the image with a white transfer icon.





## Uploading New Photographs as They Are Taken

To upload new photographs as they are taken, select **On** for **Network > Options > Auto send** in the setup menu (☞ 61).



## Interrupting Transmission/Removing Transfer Marking

To cancel transmission of images marked with white or green transfer icons, select the images during playback and press **ⓧ** and the center of the multi selector. The transfer icon will be removed. Any of the following actions will also interrupt transmission:

- Turning the camera off (transfer marking is saved, and transfer will resume when the camera is next turned on)
- Selecting **Yes** for **Network > Options > Deselect all?** (☞ 62; this option also removes transfer marking from all images)

### **During Upload**

Do not remove the memory card or disconnect the Ethernet cable during upload.

### **Interval Timer Photography**

Upload will be interrupted if the standby timer expires while interval timer photography is in progress. Choose a long standby time before starting the interval timer.

### **Voice Memos**

Voice memos can not be uploaded separately, but will be included when the associated pictures are transmitted.

### **Loss of Signal**

Wireless transmission may be interrupted if the signal is lost, but can be resumed by turning the camera off and then on again.

## Transfer Status

During playback, the status of images selected for upload is shown as follows:

### : **"Send"**

Images that have been selected for upload are marked with a white transfer icon.

### : **"Sending"**

A green transfer icon is displayed during upload.

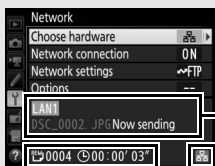
### : **"Sent"**



Images that have been uploaded successfully are marked with a blue transfer icon.




## Network Status

Network status can be viewed in the top level of the network menu.



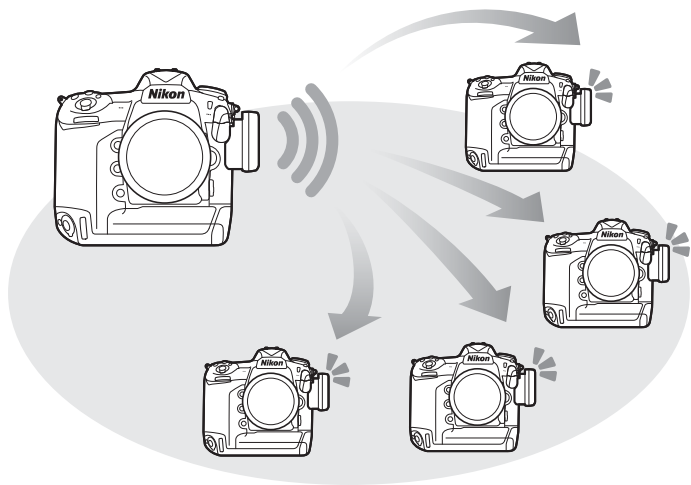
 : The number of images remaining and the estimated time required to send them.

**Status area:** The status of the connection to the host. The profile name is displayed in green when a connection is established. While files are being transferred, the display shows "Now sending" preceded by the name of the file being sent. Errors that occur during transfer are also displayed here (77).

**Signal strength:** Wireless signal strength. Ethernet connections are shown by .

# Synchronized Release

Synchronized release groups one master D5 camera with up to ten remote cameras and synchronizes the shutters on the remote D5 camera with the release on the master camera. The master and remote cameras must all be equipped with optional WT-6 or WT-5 wireless transmitters. Note that the standby timer will not expire automatically when the camera is in synchronized release mode.



## D4S and D4 Cameras

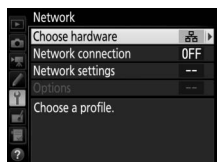
Synchronized release can also be used with D4S or D4 cameras to which WT-5 wireless transmitter have been connected.

# Selecting Wireless LAN for Synchronized Release

Select wireless LAN for all cameras that will be used in synchronized release mode.

## 1 Select **Choose hardware**.

In the setup menu, select **Network** > **Choose hardware**.



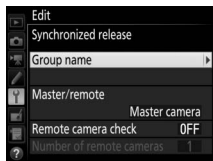
## 2 Select **Wireless LAN**.

Highlight **Wireless LAN** and press **OK** to return to the network menu.



# Synchronized Release Options

The following options are available for synchronized release: **Group name**, **Master/remote**, **Remote camera check**, and **Number of remote cameras**. To view synchronized release settings, select **Network** > **Network settings** in the setup menu, highlight **Synchronized release**, and press **Q/Menu** (**⚡**).



## ■ ■ Master Camera

Configure the master camera as follows:

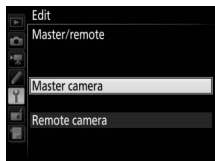
### Group Name

Enter a group name of up to 16 characters (□10). The master and remote cameras must all be in the same group.



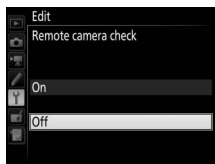
### Master/Remote

Select **Master camera** to designate the current camera as the master camera. Each group can have only one master; pressing the shutter-release button on the master releases the shutters on the remote cameras.



### Remote Camera Check

Select **On** to check whether the remote cameras are ready. The camera network indicator (and the LED lamp on the WT-5, if applicable) will flash amber to warn if the number of cameras returning “ready” is less than that selected for **Number of remote cameras**.



### Number of Remote Cameras

Enter the number (1–10) of remote cameras in the group. This option is available only if **On** is selected for **Remote camera check**.



## ■ Remote Cameras

Configure the remote cameras as follows:

### Group Name

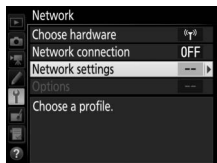
Enter a group name of up to 16 characters (□10). The master and remote cameras must all be in the same group.

### Master/Remote

Select **Remote camera** to designate the current camera as a remote camera. The shutters on the remote cameras will be released when the shutter-release button on the camera selected as the **Master camera** is pressed.

## Taking Pictures

- 1 Display network settings.  
In the setup menu, select **Network** > **Network settings**.

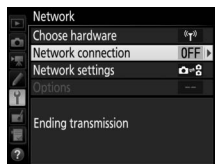


- 2 Select **Synchronized Release**.  
Highlight **Synchronized release**, press (F4), and adjust the settings for master and remote cameras as described on pages 51 and 52. Press to select synchronized release and return to the network menu.




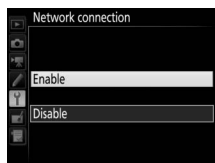
### 3 Select Network connection.

Highlight **Network connection** and press .



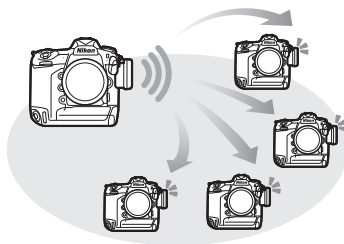
### 4 Select Enable.

Highlight **Enable** and press  to connect to the network and return to the network menu.



### 5 Take pictures.

Pressing the shutter-release button on the master camera releases the shutters on the remote cameras.



#### Remote Camera Check

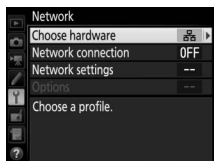
If remote camera check (book icon 51) is on, warnings will be displayed if any of the remote cameras are not ready.





# Menu Guide

This section describes the items in the **Network** menu.



## Choose Hardware

Y setup menu → Network

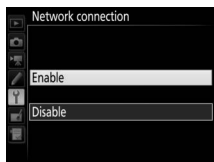
Choose the network type (wired or wireless LAN, 2).



## Network Connection

Y setup menu → Network

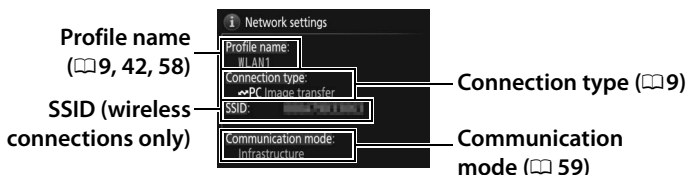
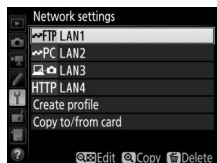
Choose **Enable** to enable the network connection. Note that this increases the drain on the battery; **Disable** is recommended when the network is not in use.



Highlight **Network settings** and press to display the network profiles list, where you can create new profiles or select an existing profile.

## ■ ■ The Profile List

The camera can store up to nine network profiles. Highlight a profile and press to connect to the highlighted host computer or ftp server, or press (FORMAT) to delete the highlighted profile (book 57). To view information on the highlighted profile, press (/?).



To edit the highlighted profile, press () (book 58).

## ■ ■ Create Profile

Choose **Connection wizard** to create network profiles with the help of a wizard (□ 8, 41), **Configure manually** to enter ftp and http server settings manually (□ 75).

## ■ ■ Copy to/from Card


This option is available only with ftp and http server connections. Select **Copy profile from card** to copy profiles from the root directory of the memory card to the profile list. Selecting **Copy profile to card** displays the camera profile list; highlight a profile and press **OK** to copy the profile to the card (password-protected profiles can not be copied; □ 58). If there are two memory cards inserted in the camera, the card in the Slot 1 will be used for both “copy from” and “copy to” operations.

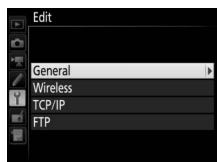
## ■ ■ Deleting Network Profiles

Press **Format** (□) to delete the profile currently highlighted in the profile list. A confirmation dialog will be displayed; highlight **Yes** and press **OK**.



## ■ ■ Editing Network Profiles

To edit the profile currently highlighted in the profile list, press  (⚡) and choose from the following options:



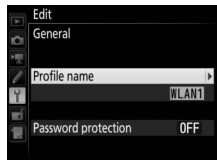
<b>General</b>	Edit the profile name and password (📖 58).
<b>Wireless</b>	Edit wireless settings (wireless connections only; 📖 59).
<b>TCP/IP</b>	Edit TCP/IP settings (📖 60).
<b>FTP</b>	Edit ftp settings (📖 60).

### ✓ Editing Profiles

If the shutter-release button is pressed while menus are displayed, the monitor will turn off and any changes to the current profile will be lost.

## General

Choose **Profile name** to edit the profile name, **Password protection** to enter a profile password and enable or disable password protection. Enabling password protection prevents others from viewing network settings.



## Wireless

Edit the following wireless settings:

- **SSID:** Enter the name (SSID) of the network on which the host computer or ftp server is located.
- **Communication mode:** Select **Infrastructure** for wireless communication via a wireless network access point, **Access point** to use the camera as an access point to connect to the ftp server or computer instead of connecting via a wireless network access point.
- **Channel:** Select a channel (access point mode only; in infrastructure mode, the channel will be selected automatically).
- **Authentication:** The authentication used on the network. Choose from open system, shared key, WPA-PSK, and WPA2-PSK (infrastructure) or open system and WPA2-PSK (access point mode).
- **Encryption:** The encryption used on the network. The options available depend on the authentication used:
  - Open:** None; 64- or 128-bit WEP available when **Infrastructure** is selected for **Communication mode**
  - Shared:** 64- or 128-bit WEP
  - WPA-PSK:** TKIP; AES
  - WPA2-PSK:** AES
- **Encryption key:** If the network uses encryption, enter the network key. The number of characters required depends on the type of key used:



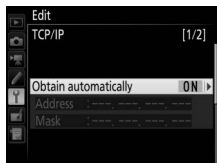
	WEP (64-bit)	WEP (128-bit)	TKIP, AES
Number of characters (ASCII)	5	13	8–63
Number of characters (hex)	10	26	64

- **Key index:** If WEP64 or WEP128 is selected for **Encryption** in infrastructure mode, choose a key index matching that used by the access point or host computer. A key index is not required when **No encryption** is selected.

## TCP/IP

If the network is configured to supply IP addresses automatically, select **Enable** for **Obtain automatically**. Otherwise select **Disable** and enter the following information:

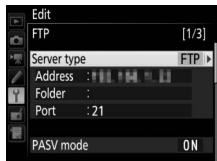
- **Address/Mask:** Enter an IP address and subnet mask.
- **Gateway:** If the network requires a gateway address, select **Enable** and enter the address supplied by the network administrator.
- **Domain Name Server (DNS):** If a Domain Name Server exists on the network, select **Enable** and enter the address supplied by the network administrator.



## FTP

Edit the following ftp settings:

- **Server type:** Choose ftp or sftp and enter the URL or IP address (required), destination folder, and port number.
- **PASV mode:** Select **Enable** to enable PASV mode.
- **Anonymous login:** Select **Enable** for anonymous login, or select **Disable** to supply a **User ID** and **Password**.
- **Proxy server:** If a proxy server is required for ftp, select **Enable** and enter the address and port number for the proxy server.



Edit the following settings.

### ■■ **Auto Send**

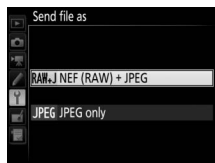
If **On** is selected for image transfer or ftp server connections, photos will automatically be uploaded to the server as they are taken (note, however, that photos can only be taken when a memory card is inserted in the camera). Movies can not be uploaded using this option; transfer movies during playback as described on pages 14 and 45.

### ■■ **Delete After Send**

Select **Yes** to delete photographs from the camera memory card automatically once upload is complete (image transfer and ftp server connections only; files marked for transfer before this option is selected are unaffected). Sequential file numbering is used while this option is in effect, regardless of the item selected for Custom Setting d7 in the camera menus. Deletion may be suspended during some camera operations.

### ■■ **Send File As**

When transferring NEF+JPEG images to a computer or ftp server (image transfer and ftp server connections only), choose whether to upload both the NEF (RAW) and JPEG files or only the JPEG copy.



### ■■ **Overwrite If Same Name**

Choose **Yes** to overwrite files with duplicate names during upload to an ftp server, **No** to add numbers to the names of newly uploaded files as necessary to prevent existing files being overwritten.

## ■ ■ *Protect If Marked for Upload*

Select **Yes** to automatically protect files marked for upload to an ftp server. Protection is removed as the files are uploaded.

## ■ ■ *Send Marking (FTP Upload Mode Only)*

Select **On** to add a timestamp to the pictures on the camera memory card giving the time of upload. The timestamp can be viewed using ViewNX-i or Capture NX-D. For more information, see online help for the software in question or the Capture NX-D manual.

## ■ ■ *Send Folder*

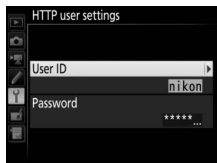
Select a folder for upload (image transfer and ftp server connections only). All photos in the selected folder (including those already marked as “sent”) will be uploaded, beginning immediately. Movies can not be uploaded using this option; transfer movies during playback as described on pages 14 and 45.

## ■ ■ *Deselect All?*

Select **Yes** to remove transfer marking from all images selected for upload to a computer or ftp server (image transfer and ftp server connections only). Upload of images with a “sending” icon will immediately be terminated.

## ■ ■ *HTTP User Settings*

Enter a user name and password for connection to an http server (http server connections only).



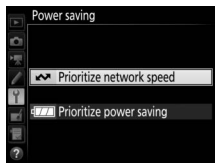
## ■ ■ *MAC Address*

Display the MAC address of the hardware selected for **Choose hardware** (□55). This option is available only when **Enable** is selected for **Network connection**.



## ■ ■ Power Saving

Choose **Prioritize network speed** for faster network speeds, **Prioritize power saving** for reduced power consumption. **Prioritize network speed** ensures that LAN connections remain active even when data are not being exchanged with the server and allows Ethernet connections using the high-speed 1000BASE-T standard. **Prioritize power saving** limits Ethernet connections to 100BASE-TX and ensures that LAN connections are terminated automatically when data transfer ends. The camera network indicator will turn off (☐ 7).





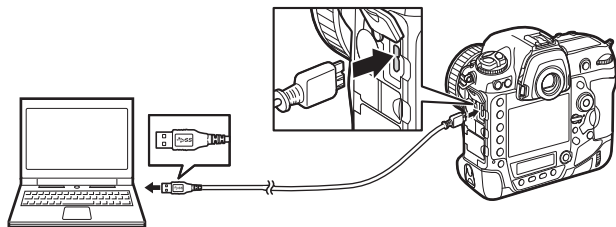
# Appendices

## Creating Profiles on a Computer

The Wireless Transmitter Utility (📖 4) can be used to create network profiles.

### 1 Connect the camera.

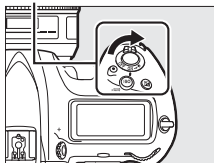
Start the computer and connect the camera using the supplied USB cable as shown below.



### 2 Turn the camera on.

Rotate the power switch to turn the camera on.

Power switch



---

### **3 Start the Wireless Transmitter Utility.**

Double-click the Wireless Transmitter Utility icon on the desktop (Windows) or click the Wireless Transmitter Utility icon in the Dock (Mac).

---

### **4 Create a profile.**

Follow the on-screen instructions to create a network profile.

# Creating an FTP Server

Images can be uploaded to ftp servers created using the standard ftp services included with Windows 10 (Enterprise/Pro/Home), Windows 8.1, Windows 8.1 (Enterprise/Pro), and Windows 7 (Professional/Enterprise/Ultimate). Under Windows, Internet Information Services (IIS) are required to configure ftp servers (installation instructions are available from Microsoft). Be sure to use only characters that appear in the keyboard area of the camera text-entry dialog (📖 10) for such settings as user ID, password, and folder names.

The following settings are used below for illustrative purposes:



ftp server

**IP address:** 192.168.1.3

**Subnet mask:** 255.255.255.0

**ftp server port:** 21

---

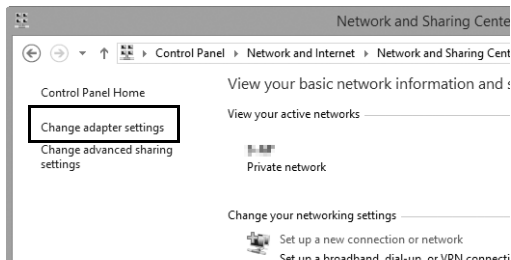
## 1 Go to Network and Sharing Center.

Select **Network and Internet** > **Network and Sharing Center** in the **Control Panel**.

---

## 2 Display the network adapter list.

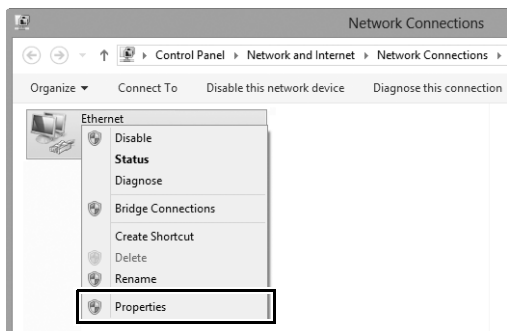
Click **Change adapter settings**.



---

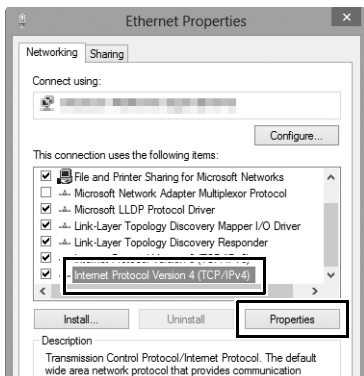
## 3 Open the network properties dialog.

If you are connecting via Ethernet, right-click **Ethernet** (Windows 8.1) or **Local Area Connection** (Windows 7) and select **Properties**. If you are connecting via a wireless LAN adapter, right-click **Wi-Fi** (Windows 8.1) or **Wireless Network Connection** (Windows 7) and select **Properties**.



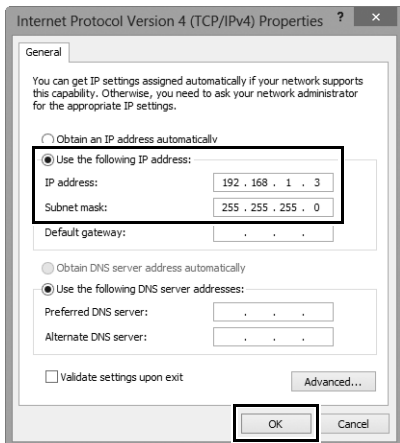
## 4 Display TCP/IP settings.

Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.



## 5 Enter an IP address and subnet mask.

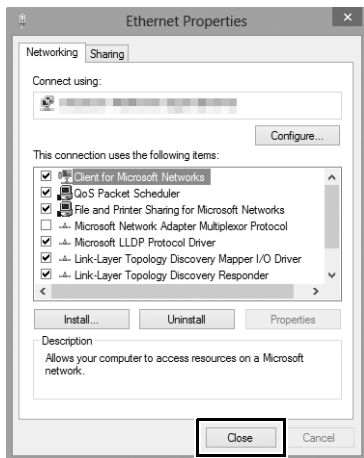
Enter an IP address and subnet mask for the ftp server and click **OK**.



---

## 6 Close the network properties dialog.

Click **Close**.



---

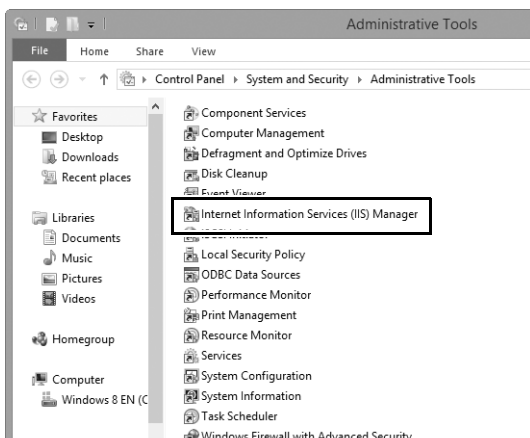
## 7 Open Administrative Tools.

Select **System and Security** > **Administrative Tools** in the **Control Panel**.



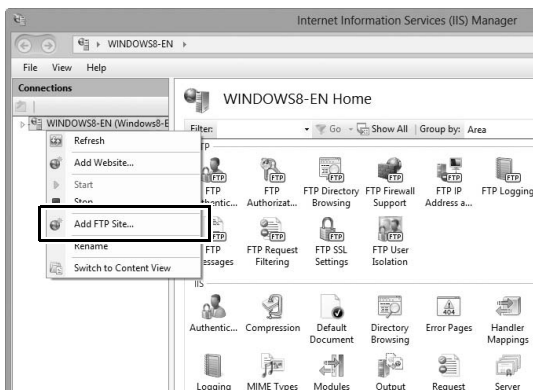
## 8 Open the IIS manager.

Double-click **Internet Information Services (IIS) Manager**.



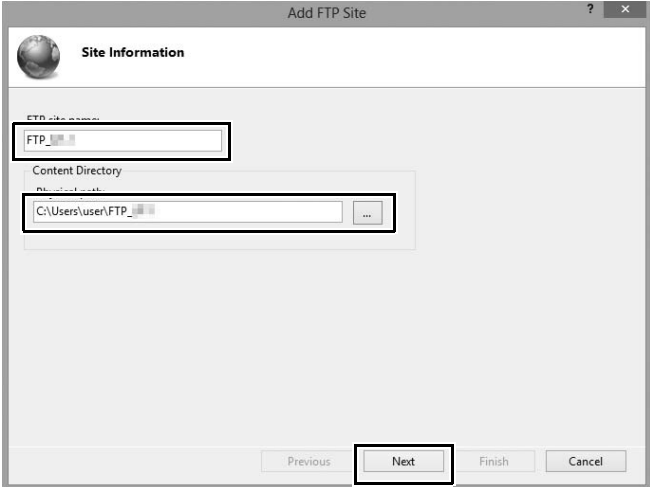
## 9 Select Add FTP Site....

Right-click the computer user name and select **Add FTP Site....**



## 10 Enter site information.

Name the site and choose the path to the folder that will be used for ftp upload. Click **Next** to proceed.



The screenshot shows the 'Add FTP Site' wizard window. The title bar says 'Add FTP Site'. The main window has a title 'Site Information' and a globe icon. There are two input fields: 'FTP site name' with the text 'FTP\_...' and 'Content Directory' with the text 'C:\Users\user\FTP\_...'. Both fields are highlighted with black rectangles. At the bottom, there are four buttons: 'Previous', 'Next' (highlighted with a black rectangle), 'Finish', and 'Cancel'.

### **Anonymous Login**

To allow anonymous login, select a folder in the user's public folder as the content directory.

## 11 Choose binding and SSL options.

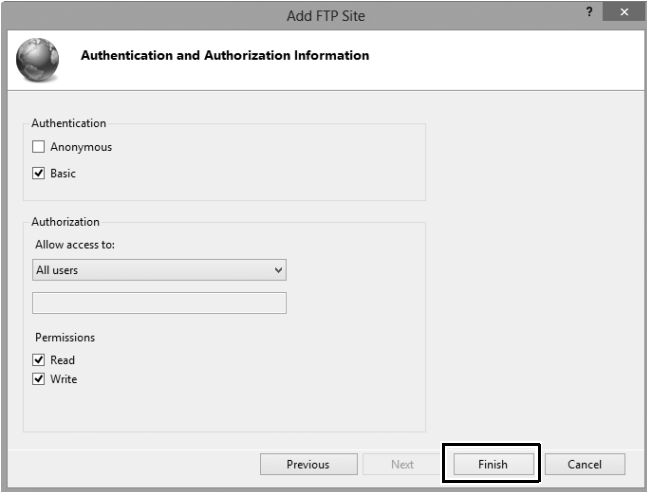
Select the IP address entered in Step 5, note the port number, select **Start FTP site automatically**, and check **No SSL**. Click **Next** to proceed.

The screenshot shows the 'Add FTP Site' dialog box with the 'Binding and SSL Settings' tab selected. The 'Binding' section contains a dropdown for 'ID Address' set to '192.168.1.3' and a text box for 'Port' set to '21'. Below these is an unchecked checkbox for 'Enable Virtual Host Names:' with a text box for 'Virtual Host (example: ftp.contoso.com):'. The 'SSL' section has a checked checkbox for 'Start FTP site automatically' and three radio buttons: 'No SSL' (selected), 'Allow SSL', and 'Require SSL'. Below the radio buttons is an 'SSL Certificate:' dropdown set to 'Not Selected' with 'Select...' and 'View...' buttons. At the bottom are 'Previous', 'Next', 'Finish', and 'Cancel' buttons.

## 12 Choose authentication options.

Adjust settings as described below and click **Finish**.

- **Authentication:** Basic
- **Allow access to:** All users
- **Permissions:** Read/Write




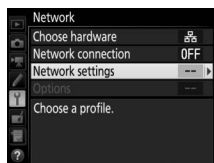
The screenshot shows a Windows-style dialog box titled "Add FTP Site" with a standard title bar (minimize, maximize, close buttons). The main content area is titled "Authentication and Authorization Information" and features a globe icon. It is divided into three sections: "Authentication" with radio buttons for "Anonymous" (unchecked) and "Basic" (checked); "Authorization" with a label "Allow access to:" and a dropdown menu set to "All users"; and "Permissions" with checkboxes for "Read" (checked) and "Write" (checked). At the bottom, there are four buttons: "Previous", "Next", "Finish" (which is highlighted with a black rectangular box), and "Cancel".

# Manual Profile Creation





Follow the steps below to manually configure the camera for connection to ftp and http servers. Note that changes to the current profile will be lost if the camera is turned off during setup; to prevent unexpected loss of power, use a fully-charged battery or an optional AC adapter. If you are connecting to an ftp server behind a firewall, you may also need to adjust firewall settings to create exceptions for the ftp ports used by the camera (ports 21, 22, and 32768 through 61000).

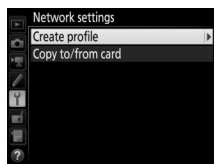
## 1 Display network profiles.

Select **Network** in the setup menu, then highlight **Network settings** and press  to display the profiles list and other network settings.



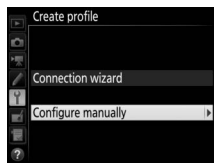
## 2 Select Create profile.

Highlight **Create profile** and press . Note that if the list already contains nine profiles, you will need to delete an existing profile using the  () button before proceeding ( 57).



## 3 Select Configure manually.

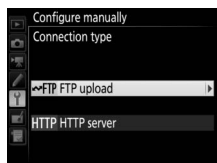
Highlight **Configure manually** and press .



---

## 4 Select a connection type.

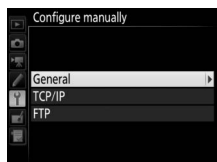
Highlight **FTP upload** or **HTTP server** and press .



---

## 5 Adjust settings.

Adjust settings as described in “Editing Network Profiles” (p 58).



### Editing Profiles

If the shutter-release button is pressed while menus are displayed, the monitor will turn off and any changes to the current profile will be lost. Choose a longer monitor off delay for Custom Setting c4 in the camera menus.

# Troubleshooting

Problem	Solution	Page
The camera displays a TCP/IP or ftp error.	Check settings for the host and/or wireless LAN adapter and adjust camera settings appropriately.	8, 41, 58
	Check firewall settings.	16, 19, 43
	Confirm that you can write to the destination folder on the ftp server.	74
	Change the current PASV mode setting.	60
"Connecting to PC" does not clear from the camera display.	Check firewall settings.	16, 19, 43
The camera displays the message, "Ethernet cable is not connected".	Connect an Ethernet cable or select <b>Wireless LAN</b> for <b>Choose hardware</b> .	6, 40
The camera displays a memory card error.	Confirm that the card is properly inserted.	6, 40
Transfer is interrupted before all photographs are sent.	Transfer will resume if the camera is turned off and then on again.	16, 47
No connection is established when the camera URL is entered in a web browser (http server connections only).	Confirm that the browser is not using a proxy connection.	—

# Index

## Symbols

☞: "Send" .....	17, 48
☞: "Sending" .....	17, 48
☞: "Sent" .....	17, 48

## A

Android OS .....	26, 27
Authentication .....	59
Auto send .....	61

## C

Camera control .....	2, 5, 18
Camera Control Pro 2 .....	18
Channel .....	59
Choose hardware .....	8, 41, 55
Communication mode .....	56, 59
Connection status .....	7
Connection type .....	9, 42, 56
Connection wizard .....	8, 41
Copy to/from card .....	57
Create profile .....	57

## D

Delete after send .....	61
Deselect all? .....	62
DNS .....	60
Domain Name Server .....	60

## E

Encryption .....	59
Encryption key .....	59
Errors .....	7, 17, 20, 25, 48, 77
Ethernet .....	2, 8, 41
Ethernet cable .....	6, 40

## F

Firewall .....	3, 16, 19, 43
Folders .....	16, 44, 72
FTP server .....	2, 39, 60, 67, 75
FTP upload .....	2, 39, 45

## G

Gateway .....	60
Group name .....	51, 52

## H

HTTP server .....	2, 5, 21, 26, 75
HTTP user settings .....	62

## I

Image transfer .....	2, 5, 14
iOS .....	26
IP address .....	11, 42, 60
iPhone .....	34

## K

Key index .....	59
-----------------	----

## M

Mac .....	26
MAC address .....	62
Master/remote .....	51
Memory card .....	6, 40, 57

## N

Network .....	55
Network connection .....	55
Network indicator .....	7
Network settings .....	8, 41, 56, 75
Network status .....	17, 20, 25, 48
Number of remote cameras .....	51

## O

Options .....	61
Overwrite if same name .....	61



## **P**

Pairing .....	12
Password protection .....	58
PASV mode .....	60
Port number .....	3, 19, 43, 60, 73, 75
Power saving .....	63
Profile name .....	56, 58
Protect If marked for upload .....	62
Proxy server .....	60

## **R**

Remote camera check .....	51
Routers .....	3, 11

## **S**

Send file as .....	61
Send folder .....	62
Send marking .....	62
Shooting window .....	27, 34
SSID .....	56, 59
Synchronized release .....	2, 49, 50, 52

## **T**

TCP/IP .....	60
Text edit window .....	31, 38
Text entry .....	10

## **V**

Viewer window .....	29, 36
---------------------	--------

## **W**

Windows 10 .....	26
Windows 7 .....	26
Windows 8.1 .....	26
Wireless LAN .....	2, 59
Wireless Transmitter Utility .....	4, 13, 65
WT-5 .....	49
WT-6 .....	49



A series of horizontal lines for handwriting practice, consisting of 15 evenly spaced lines.



No reproduction in any form of this manual, in whole or in part (except for brief quotation in critical articles or reviews), may be made without written authorization from NIKON CORPORATION.

**NIKON CORPORATION**

© 2016 Nikon Corporation

Printed in Singapore



SB5L01(11)  
6MB29811-01