



MediCap® USB300 Networking Guide

Applies to Firmware 110701 and Higher¹

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¹ This document applies to USB300 video recorders running firmware version 110701 and higher. To check your firmware version, use the Current Settings option in the Advanced menu. For documentation on earlier versions of the firmware, see medicapture.com/support. For help with upgrading the firmware, please send an email to support@medicapture.com.

Introduction

You can connect the MediCap USB300 to a network via a standard Ethernet cable. Configuring the connection requires knowledge of computer networks and should be performed by a network administrator or consultant.

Two networking features are available on the USB300:

- **Network access to the USB300's internal hard drive** - You can copy recorded videos and images from the USB300's internal hard drive across the network onto a network drive.
- **Recording from the USB300 to a network drive** - You can record videos and images “across the network” into a shared folder on a network drive.

This document describes how to set up the necessary network connections to enable these features.

Supported Windows Editions

The following editions of Windows are supported for connecting with a USB300 via a network (all service packs and updates must be applied to ensure that the edition is current):

- Windows XP Professional
- Windows Vista Business, Windows Vista Enterprise, Windows Vista Ultimate
- Windows 7 Professional, Windows 7 Enterprise, Windows 7 Ultimate, Windows 8.1

The non-professional versions of Windows (Home, Basic and Starter) are not supported for network connections to the USB300. These editions are not designed for professional environments such as medical facilities and lack essential network features for connecting to network attached storage (NAS) devices. Specifically, they do not include the Local Security Policy tool that is required when connecting to NAS devices.

Getting Started

To configure your network, follow these basic steps:

1. Use an Ethernet cable to connect the USB300 to your network (the LAN connection is on the back panel). Plug a USB keyboard into one of the USB connectors on the **back** panel (the keyboard is used to enter configuration information).
2. If you will be accessing the USB300's internal hard drive via the network, complete the procedures in the section titled “How to Setup Network Access to the USB300's Hard Drive” (page 3).
3. If you will be recording to a network drive from the USB300, complete the procedures in the section titled “How to Setup Recording to a Network Drive” (page 7).

How to Setup Network Access to the USB300's Hard Drive

Step 1. Configure the USB300

1. Press the *Menu* button on the USB300. Select the Advanced Menu, then Network Setup.
2. Select "Connect to Network" and ensure that "Yes" is selected.
3. Select "IP Setup" and ensure that "Auto" is selected.¹
4. Return to the Network Setup screen. Select "Shared Internal Drive Setup" and enter the following:
 - Machine Name (the default is *USB300*).
 - Password (if you do not want to password protect the USB300, leave this field blank).
The password is case sensitive.

Note: If you will be connecting Mac computers to the USB300, you cannot use a password; you must leave this field blank. This is due to limitations in the Mac operating system.
5. Highlight "Save" and press the Select button or press Enter on the keyboard. This saves the new settings. **Note: If you do not press the Select button or press Enter on the keyboard while "Save" is highlighted, the new settings will not be saved.**

Step 2. Configure the Computers on Your Network

After you configure the USB300 for network access, you can "map" the USB300's internal hard drive to the computers on your network. The method for mapping a drive depends on the computer's operating system. For detailed information, refer to the documentation on your computer's operating system. The following sections include examples of how to map network drives on computers running Windows XP, Windows Vista, Windows 7, and Windows 8.1.

Important Notes:

- When you map the USB300's drive to your computer, you can view the videos on the drive from your computer. However, on slow networks you may experience delays, or videos may start and stop during playback. For this reason, it is recommended that you copy your videos across the network so they reside on your local hard drive and then view them from there.
- When accessing the USB300 via a network, you can only access the internal hard drive. You cannot access an external USB drive that is plugged into the front or back panel.

How to Map the USB300's Drive on a Windows 8 Computer or Windows 2012 Server

1. Ensure that you are using one of the following editions of Windows 8.1 : Pro or Enterprise, or one of the following editions of Server 2012: Standard R2
2. In the Windows Start menu, select "Control Panel," then Under "View By" change it to "Large Icons" then select "Administrative Tools, then "Local Security Policy."
3. In the directory tree on the left side of the Local Security Policy window, select "Local Policies" and under that select "Security Options." In the Policy list on the right, double-click "Network Security: LAN Manager authentication level."
4. In the drop down list, select "Send LM & NTLM - use NTLMv2 session security if negotiated." Click OK and exit from Administrative Tools.
5. In the Windows Start menu, locate the Start Search field and enter **\\USB300 (the two backslashes are required)**. Press Enter to start the search. This example assumes you used the default Machine Name *USB300* when you configured the USB300 (above);

¹ If IP addresses are not automatically configured on your network, enter the information manually.

otherwise enter the alternate name you selected, preceded by two backslashes. For example, \\Endocam1.

6. If you configured the USB300 with a password (above), the Connect window will now be displayed, otherwise skip to the next step. In the User Name field, enter *USB300* (assuming you used the default Machine Name; otherwise enter the alternate name you selected, for example, *Endocam1*). Also enter the password you previously selected (case sensitive).
7. A hard disk drive icon (HDD) will be displayed, indicating that the drive is now connected.
8. RIGHT click on the drive icon and select “Map Network Drive.” The Map Network Drive window will be displayed.
9. Select a letter for the drive from the pull down list. Make sure that the “Reconnect at Login” option is selected. Click Finish. Close the Search window.
10. Now when you access “Computer” from the Windows Start menu, the USB300’s internal hard drive will be displayed just like the other drives on your computer. You can click on the drive to view the recorded images and videos it contains. You can then copy these files across the network onto your computer’s hard drive or any other drive on the network that you are also connected to (with the necessary access permissions).

How to Map the USB300’s Drive on a Windows 7 Computer

1. Ensure that you are using one of the following editions of Windows 7: Professional, Enterprise, or Ultimate. The Home Premium, Home Basic, and Starter editions are not supported.
2. In the Windows Start menu, select “Control Panel,” then “System and Maintenance,” then “Administrative Tools, then “Local Security Policy.”
3. In the directory tree on the left side of the Local Security Policy window, select “Local Policies” and under that select “Security Options.” In the Policy list on the right, double-click “Network Security: LAN Manager authentication level.”
4. In the drop down list, select “Send LM & NTLM - use NTLMv2 session security if negotiated.” Click OK and exit from Administrative Tools.
5. In the Windows Start menu, locate the Start Search field and enter \\USB300 **(the two backslashes are required)**. Press Enter to start the search. This example assumes you used the default Machine Name *USB300* when you configured the USB300 (above); otherwise enter the alternate name you selected, preceded by two backslashes. For example, \\Endocam1.
6. If you configured the USB300 with a password (above), the Connect window will now be displayed, otherwise skip to the next step. In the User Name field, enter *USB300* (assuming you used the default Machine Name; otherwise enter the alternate name you selected, for example, *Endocam1*). Also enter the password you previously selected (case sensitive).
7. A hard disk drive icon (HDD) will be displayed, indicating that the drive is now connected.
8. RIGHT click on the drive icon and select “Map Network Drive.” The Map Network Drive window will be displayed.
9. Select a letter for the drive from the pull down list. Make sure that the “Reconnect at Login” option is selected. Click Finish. Close the Search window.
10. Now when you access “Computer” from the Windows Start menu, the USB300’s internal hard drive will be displayed just like the other drives on your computer. You can click on the drive to view the recorded images and videos it contains. You can then copy these files across the network onto your computer’s hard drive or any other drive on the network that you are also connected to (with the necessary access permissions).

How to Map the USB300's Drive on a Windows Vista Computer

1. Ensure that you are using one of the following editions of Windows Vista: Business, Enterprise, or Ultimate. The Home Premium, Basic, and Starter editions are not supported.
2. In the Windows Start menu, select "Control Panel," then "System and Maintenance," then "Administrative Tools, then "Local Security Policy."
3. In the directory tree on the left side of the Local Security Policy window, select "Local Policies" and under that select "Security Options." In the Policy list on the right, double-click "Network Security: LAN Manager authentication level."
4. In the drop down list, select "Send LM & NTLM - use NTLMv2 session security if negotiated." Click OK and exit from Administrative Tools.
5. In the Windows Start menu, locate the Start Search field and enter `\\USB300` **(the two backslashes are required)**. Press Enter to start the search. This example assumes you used the default Machine Name `USB300` when you configured the USB300 (page 3); otherwise enter the alternate name you selected, preceded by two backslashes. For example, `\\Endocam1`.
6. If you configured the USB300 with a password (page 3), the Connect window will now be displayed, otherwise skip to the next step. In the User Name field, enter `USB300` (assuming you used the default Machine Name; otherwise enter the alternate name you selected, for example, `Endocam1`). Also enter the password you previously selected (case sensitive).
7. A hard disk drive icon (HDD) will be displayed, indicating that the drive is now connected.
8. RIGHT click on the drive icon and select "Map Network Drive." The Map Network Drive window will be displayed.
9. Select a letter for the drive from the pull down list. Make sure that the "Reconnect at Login" option is selected. Click Finish. Close the Search window.
10. Now when you access "Computer" from the Windows Start menu, the USB300's internal hard drive will be displayed just like the other drives on your computer. You can click on the drive to view the recorded images and videos it contains. You can then copy these files across the network onto your computer's hard drive or any other drive on the network that you are also connected to (with the necessary access permissions).

How to Map the USB300's Drive on a Windows XP Computer

1. Ensure that you are using Windows XP Professional edition. Windows XP Home edition is not supported.
2. In the Windows Start menu, select Search. Depending on which version of Windows Search is installed on your computer, you will then see **either** of the following windows:
 - **“Search Results” window** - If the bar at the top of the window displays the title “Search Results,” then your computer uses Classic Windows Search and you can proceed to Step 3.
 - **“Windows Desktop Search” window** - If the bar at the top of the window displays the title “Windows Desktop Search,” then your computer uses the optional Windows Desktop Search feature. In this case, you must click on the link named “Click here to use Search Companion” which is in the bottom-left corner of the window. This will display additional options. Click on “Computers,” then proceed to Step 4.
3. Click the “Computers” link which is towards the bottom on the left. The Search for Computers window will be displayed.
4. In the Computer Name field, enter *USB300* . This example assumes you used the default Machine Name *USB300* when you configured the USB300 (page 3); otherwise enter the alternate name you selected. Click the Search Now button. The USB300 icon should now be displayed in the right panel.
5. Click the USB300 icon. If you configured the USB300 with a password (step 5 above), the Connect window will now be displayed, otherwise skip to the next step. In the User Name field, enter *USB300* (assuming you used the default Machine Name; otherwise enter the alternate name you selected). Also enter the password you previously selected (case sensitive).
6. The USB300 icon in the right panel will change to a hard disk drive icon (HDD), indicating that the drive is now connected.
7. RIGHT click on the drive icon and select “Map Network Drive.” The Map Network Drive window will be displayed.
8. Select a letter for the drive from the pull down list. Make sure that the “Reconnect at Login” option is selected. Click Finish. Close the Search window.
9. Now when you access “My Computer” from the Windows Start menu, the USB300's internal hard drive will be displayed just like the other drives on your computer. You can click on the drive to view the recorded images and videos it contains. You can then copy these files across the network onto your computer's hard drive or any other drive on the network that you are also connected to (with the necessary access permissions).

How to Setup Recording to a Network Drive

Step 1. Create a Shared Folder on Your Network Server

The first step in setting up the “record to network” feature is to create a shared folder on your network server. When you record with the USB300, videos and images will be recorded “across the network” into this shared folder.

Make a note of the network path name that points to the shared folder you create. For example: \\MY_SERVER\MY_FOLDER

The path name begins with two backslashes and ends with one backslash. Also, if the shared folder is password protected, make a note of the user name and password (case sensitive). You will need this information later in these procedures.

The method used for creating a shared folder on a network server depends on the server's operating system. Please refer to the documentation for your server. Examples for Windows 8.1, Windows 7 and Windows XP are included below.

How to Create a Shared Folder in Windows 8 or Server 2012

1. This example uses the “Create a Shared Folder” wizard (to create a shared folder manually, please refer to Microsoft documentation). To start the wizard, type *shrpwbw* in the Windows Search box and press Enter. The “Welcome” window of the wizard will be displayed. Click Next.
2. There are two fields in the “Folder Path” window:
 - Computer Name - This automatically displays the name of your computer. Do not change the name of your computer, but while reading this example suppose it is MY_SERVER.
 - Folder Path - Click on the Browse button and select an existing folder to share (or you can click on Make New Folder to create a new one). This example uses MY_FOLDER.

Click Next.

Note: This example uses all uppercase letters, but the computer name, folder name, and path name are not case sensitive. A folder's password *is* case sensitive.

3. There are four fields in the “Name, Descriptions and Settings” window:
 - Share Name - Enter the same folder name as in Step 2. In this example, it is MY_FOLDER.
 - Share Path - This name is displayed automatically. Ignore it for now because it will be displayed again in Step 5.
 - Description - You can leave this field blank.
 - Offline Setting - Use the default setting (“Selected files and programs available offline”).Click Next.
4. In the “Shared Folder Permissions” window, select “Customize Permissions” and click the Custom button. In the “Customize Permissions” window, ensure that everyone is allowed all permissions to the folder and click OK. (You can adjust these permissions later after network recording is working, but note that the USB300 must always have Full Control, Change, and Read permissions.) Click Finish.
5. The “Sharing Was Successful” window should now be displayed.

Important: Note the name displayed in the Share Path field. This is the same as the “Network Path” you will enter later when configuring the USB300 **except** the Network Path has a backslash at the end. In this example, the Share Path is \\MY_SERVER\MY_FOLDER. On the USB300, you will enter \\MY_SERVER\MY_FOLDER\ (backslash added to the end). Click Finish.

How to Create a Shared Folder in Windows 7

1. This example uses the “Create a Shared Folder” wizard (to create a shared folder manually, please refer to Microsoft documentation). To start the wizard, type *shrpwbw* in the Windows Search box and press Enter. The “Welcome” window of the wizard will be displayed. Click Next.
2. There are two fields in the “Folder Path” window:
 - Computer Name - This automatically displays the name of your computer. Do **not** change the name of your computer, but while reading this example suppose it is MY_SERVER.
 - Folder Path - Click on the Browse button and select an existing folder to share (or you can click on Make New Folder to create a new one). This example uses MY_FOLDER.

Click Next.

Note: This example uses all uppercase letters, but the computer name, folder name, and path name are not case sensitive. A folder’s password *is* case sensitive.

3. There are four fields in the “Name, Descriptions and Settings” window:
 - Share Name - Enter the same folder name as in Step 2. In this example, it is MY_FOLDER.
 - Share Path - This name is displayed automatically. Ignore it for now because it will be displayed again in Step 5.
 - Description - You can leave this field blank.
 - Offline Setting - Use the default setting (“Selected files and programs available offline”).

Click Next.

4. In the “Shared Folder Permissions” window, select “Customize Permissions” and click the Custom button. In the “Customize Permissions” window, ensure that everyone is allowed all permissions to the folder and click OK. (You can adjust these permissions later after network recording is working, but note that the USB300 must always have Full Control, Change, and Read permissions.) Click Finish.
5. The “Sharing Was Successful” window should now be displayed.

Important: Note the name displayed in the Share Path field. This is the same as the “Network Path” you will enter later when configuring the USB300 **except** the Network Path has a backslash at the end. In this example, the Share Path is \\MY_SERVER\MY_FOLDER. On the USB300, you will enter \\MY_SERVER\MY_FOLDER\ (backslash added to the end).

Click Finish.

How to Create a Shared Folder in Windows XP

1. In this example, the computer name is MY_SERVER. To find the actual name of your computer, open the Control Panel. Click on System, then click on the Computer Name tab. Make a note of the “Full Computer Name,” **not** the “Computer Description.” Do **not** change the name of your computer, but in this example, suppose it is MY_SERVER.
2. Create a new folder on your computer as you normally would (right-click in an Explorer window and select New > Folder). Suppose you name the folder MY_FOLDER.
3. Right-click on MY_FOLDER and select Properties. The Properties window will be displayed.
4. Click on the Sharing tab. Select “Share this folder on the network” and select “Allow network users to change my files.” The “Share Name” will default to the folder name. In this example,

we will use the default (MY_FOLDER). Note that the Share Name is used in the network path name so if you change the Share Name from the default, you should make a note of that. Click OK to close the Properties window.

5. Later in these procedures, you will use the network path name to the shared folder you just created. The network path name in this example is: \\MY_SERVER\MY_FOLDER\ **Note that the path name starts with two backslashes and ends with one backslash.** This example uses all uppercase letters, but note that the computer name, folder name, and path name are not case sensitive.
6. In this example, the folder is not password protected (shared folders in Windows XP cannot be password protected). So later in these procedures when configuring the USB300, you would leave the User Name and Password fields blank.

Step 2. Configure the USB300

1. Press the *Menu* button on the USB300. Select the Advanced Menu, then Network Setup.
2. Select “Connect to Network” and ensure that “Yes” is selected.
3. Select “IP Setup” and ensure that “Auto” is selected.
4. Return to the Network Setup screen. Select “Network Recording Setup” and enter the following:
 - Network Path. This path name should point to the shared folder you created in the previous section, for example, \\MY_SERVER\MY_FOLDER\ **The entry must end with a backslash.**
 - User Name and Password (case sensitive). If your shared folder is not password protected, leave these fields blank. **Do not enter the domain name in the user name field.**
Example: if the domain name is “Clinic” and the user name is “Medi” do not enter “ClinicMedi” in the user name field. Only enter “Medi”.
5. Highlight “Save” and press the Select button or press Enter on the keyboard. This saves the new settings. **Note: If you do not press the Select button or press Enter on the keyboard while “Save” is highlighted, the new settings will not be saved.**
6. Select the Setup Menu and select “Record To: Network Storage.” Select “Save” and then press the *Menu* button to exit the menus.
7. Ensure that the USB300 is connected to your network and that your network is up and running. **Turn the USB300 off and then back on again.** As it powers up, the USB300 will search for your network and establish a link with your network server. You can now start recording to your network server as described in the next section.

Note: During normal operation, if the network is disconnected and then reconnected (or if the network goes down and then comes back up), the USB300 must be turned off and then back on again to reestablish a link with your network server.

Note: Whenever you turn the USB300 off (for example, to move it to a new location), be sure that it is connected to your network **before** it is turned back on. While the USB300 powers up, it will search for your network and establish a link with your network server.

Step 3. Test Network Recording

You can now begin recording to the shared folder that you created on your network server in the previous section. Press the *Record Video* button:

- If recording is successful, the LED next to the *Record Video* button will flash green; the current case number and recording number will be displayed in the upper left corner of the monitor along with a camera icon. When you press the *Record Video* button again, recording will stop. If you access the shared folder from your server, you should see the file you recorded. You can now proceed to the next step that will allow computers on your network to access the shared folder.
- If recording is not successful, the LED next to the Record Video button will flash red and an icon indicating “no network connection” will be displayed in the upper left corner of the monitor.

Here are some troubleshooting tips to review if you are having problems recording to your network server:

- Be sure that your USB300 is connected to your network, *then* turn the USB300 off and back on again. While the USB300 powers up, it will search for your network and establish a link with your network server.
- During normal operation, if the network cable is disconnected and then reconnected (or if the network goes down and then comes back up), the USB300 must be turned off and then back on again to reestablish a link with your network server.
- To test whether or not the USB300 is connected to your network, you can use a computer on the network to access the USB300’s internal hard drive. See “How to Setup Network Access to the USB300’s Hard Drive” on page 3.
- Folder passwords are case sensitive.
- Initially, do not password protect the shared folder (no user name and password). After network recording is working, you can add password protection. Note that folders on Windows XP and Windows Vista computers cannot be password protected.
- If you can record to the shared folder, but the recordings are corrupt or have gaps, this may indicate a slow network or network congestion. Try recording at a lower resolution (configured in the Setup menu on the USB300). Recording to a shared folder requires a robust network, free of network congestion and operating at 100 or 1000 Mbps speeds.

Note: Recording to a shared folder is very similar to recording to the USB300’s internal hard drive or an external USB drive; you can record images while recording videos, you can review videos you recorded in the current patient session, etc. *However, note that you cannot review videos from previous patient sessions as you can when recording to the internal hard drive or an external USB drive.*

Step 4. Configure the Computers on Your Network

How to Map a Shared Folder on a Windows 8, Windows 7, or Windows Vista Computer

In the following steps, you will “map” the shared folder as a drive on your computer (you created the shared folder earlier in these procedures). The shared folder resides on a network server and contains the videos and images that you recorded with the USB300.

1. Click the Start button (the round button in the lower left corner of your desktop). Then click Computer. This will open the Computer window.
2. Click Map Network Drive in the toolbar at the top of the Computer window (if you cannot see Map Network Drive, enlarge the window). This will open the Map Network Drive window.
3. In the Map Network Drive window, click Browse. This will open the Browse For Folder window.
4. In the Browse For Folder window, click the shared folder that you created earlier, and then click OK. This will return you to the Map Network Drive window.
5. In the Map Network Drive window, make a note of the drive letter shown. This will be your “mapped” drive containing the videos and images that you recorded with the USB300.

6. Ensure that “Reconnect at Logon” is selected and click Finish.
7. If you are prompted, enter the User Name and Password (case sensitive) for the shared folder. Then click OK.
8. The shared folder will then be opened. In future, when you access “Computer” from the Windows Start menu, the shared folder will be displayed just like the other drives on your computer. You can click on the drive to view the recorded images and videos it contains.

How to Map a Shared Folder on a Windows XP Computer

In the following steps, you will “map” the shared folder as a drive on your computer (you created the shared folder earlier in these procedures). The shared folder resides on a network server and contains the videos and images that you recorded with the USB300.

1. Open any Windows folder. For example, you could open the My Documents folder (click the green Start button in the lower-left corner of your desktop and then click My Documents).
2. At the top of the folder window, click the Tools menu. Then click Map Network Drive. This will open the Map Network Drive window.
3. In the Map Network Drive window, click Browse. This will open the Browse For Folder window.
4. In the Browse For Folder window, click the shared folder that you created earlier, and then click OK. This will return you to the Map Network Drive window.
5. In the Map Network Drive window, make a note of the drive letter shown. This will be your “mapped” drive containing the videos and images that you recorded with the USB300.
6. Ensure that “Reconnect at Logon” is selected and click Finish.
7. If you are prompted, enter the User Name and Password (case sensitive) for the shared folder. Then click OK.
8. The shared folder will then be opened. In future, when you access “My Computer” from the Windows Start menu, the shared folder will be displayed just like the other drives on your computer. You can click on the drive to view the recorded images and videos it contains.

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