

MEMOCAM GATEWAY

LOCAL CONFIGURATION MANUAL

MEMOCam[®] GATEWAY

Version 4.0.002

P/N v7140005

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INTRODUCTION

Welcome to Video Domain's MemoCam GateWay.

This manual will instruct you on the setup and configuration of your MemoCam GateWay unit.

The MemoCam GateWay is a core component of the **MemoCam iP** system, the award-winning digital CCTV security and surveillance solution.

The MemoCam GateWay is intended for use with MemoCam Plus iP Ready units and MemoCam DVR iP Ready units.

MemoCam **iP** System

The **MemoCam iP** system enables alarm verification and identification, control of restricted areas, as well as home, business and property surveillance. In addition, the system is ideal for simple-to-operate security control centers.

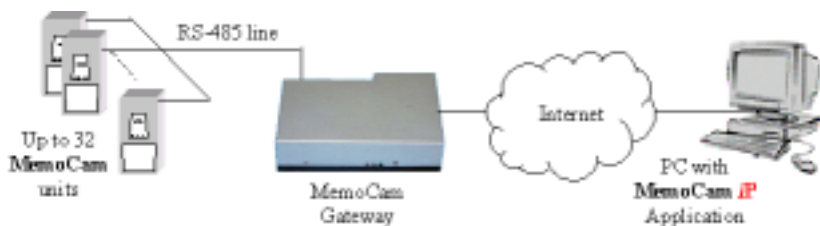


Figure 1. **MemoCam iP** system

A complete **MemoCam iP** system includes:

- ❑ One or more MemoCam Gateway units connected to a LAN or the Internet.
- ❑ One or more MemoCam Plus iP Ready or MemoCam DVR iP Ready units connected to each MemoCam GateWay unit.

MemoCam Plus iP Ready:

A palm-sized MemoCam unit containing a covert CCD camera, PIR detector and a digital video recorder. The MemoCam Plus iP Ready records video images on a local Multimedia card upon dry contact triggers, VMD or PIR activation, and VMD and PIR dual detection. The unit is IP ready for remote management over Internet/LAN.

MemoCam DVR iP Ready:

A palm-sized MemoCam unit with video inputs for up to 3 external cameras. The MemoCam DVR IP Ready records video images on a local Multimedia card upon dry contact triggers and VMD activation, and is iP ready for remote management over Internet/LAN.

- ❑ A PC connected to the LAN or Internet and running the **MemoCam iP** application.

MemoCam *iP* System Features

The MemoCam *iP* system features:

- ❑ Video/control transmission over digital Networks.
- ❑ Image transmission on demand or on alarm.
- ❑ Remote retrieval of recorded images.
- ❑ Remote real-time visual alarm verification.
- ❑ Remote set-up.
- ❑ User and privileged-user login.
- ❑ The **MemoCam *iP*** application supports multiple MemoCam Gateways connected to the Internet.
- ❑ IR remote control snapshot and panic button.
- ❑ Standard RJ-45 Ethernet connection.
- ❑ Notify On Alarm (NOA) messages to a remote site.
 - Unit powered up
 - Switched to Arm
 - Switched to Disarm
 - Alarm triggered
 - Connection link established
 - Connection link lost
 - MMC card inserted
 - MMC card removed
 - MMC card full
 - Video signal lost
 - IR Remote control Panic button pressed
 - Configuration update
- ❑ Continuous display of notification messages for real-time system status monitoring.
- ❑ LED and beep status indicators.
- ❑ Remote firmware upgrades.

The MemoCam GateWay

The MemoCam GateWay is a LAN and Internet interface for MemoCam units. Through the MemoCam GateWay, the **MemoCam iP** system supports image transmission over LAN and Internet, as well as remote configuration, remote alarm notification and remote upgrades.

MemoCam GateWay IP settings are configured from your PC or a LAN. The MemoCam Gateway enables you to connect up to 32 MemoCam units to a LAN or to the Internet.

A PC with the **MemoCam iP** application controls and manages MemoCam units connected to the MemoCam Gateway. A single MemoCam Gateway can serve up to two PCs simultaneously, with each PC connected to a different MemoCam unit. A single PC can support multiple MemoCam GateWays.

MemoCam GateWay Installation Options

In all installations, the MemoCam GateWay units are each assigned a fixed IP address. The IP address used depends on the type of installation and can be either the static IP received from an ISP or a private IP. Consult your system administrator for your LAN network settings and topology, and to allocate a fixed IP address for the MemoCam GateWay unit.

The default TCP port for the MemoCam GateWay units is 4599. The unit's listen port must be modified from the default value if this port cannot be used due to firewall or router settings.

Consult with your network administrator to ensure that the port you use is open for incoming and outgoing channels with your ISP and with associated firewalls.

The following MemoCam GateWay setups are possible. Identify the installation setup used at your site:

MemoCam GateWay on a LAN

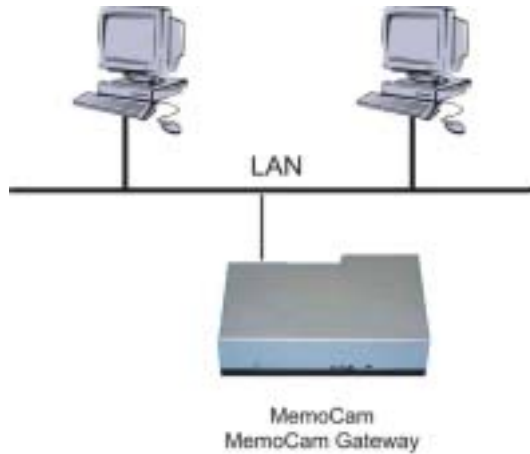


Figure 2. MemoCam GateWay on LAN

In this setup, the MemoCam GateWay units are installed on the LAN.

- ❑ The MemoCam IP Application is installed on the PC that is on the same LAN. For details, refer to the MemoCam Software Manual.
- ❑ To allocate a private IP and subnet to the unit, consult your System Administrator.

MemoCam GateWay over Internet through a LAN

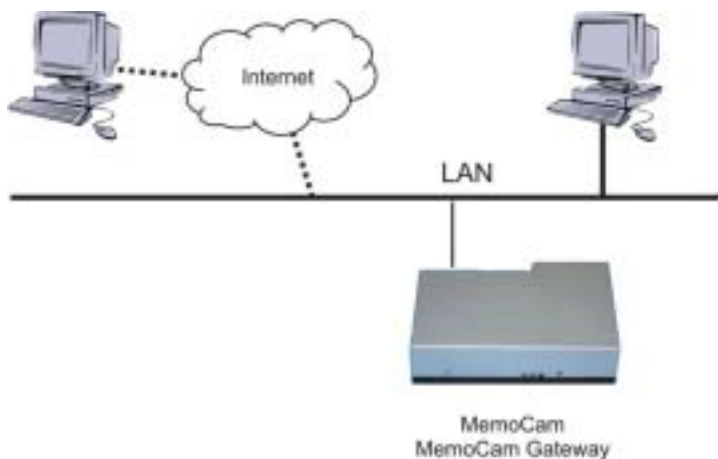


Figure 3. MemoCam GateWay over Internet through LAN

In this setup, the organization is connected to the Internet and has a pool of static IP addresses.

- ❑ Receive the IP address and network gateway address from your system administrator, and set the MemoCam GateWay unit to one of the IP addresses and subnet addresses provided.
- ❑ Set the IP address in the MemoCam IP Application network TCP/IP settings. For details, refer to *the MemoCam Software Manual*.

MemoCam GateWay over Internet through ADSL/Cable

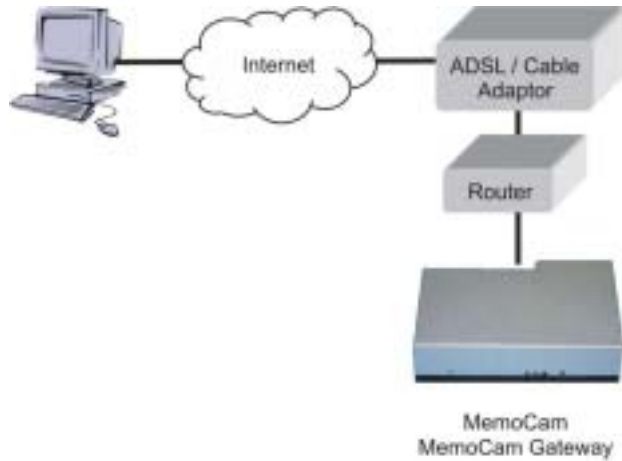


Figure 4. MemoCam GateWay over Internet through ADSL/Cable

In this setup the MemoCam GateWay unit is connected to the Internet through a router using an ADSL/Cable modem.

- For further details on connecting to your MemoCam GateWay through ADSL/Cable, refer to Appendix A, page 37.

STEPS TO CONFIGURE YOUR MEMOCAM GATEWAY UNIT

To configure your MemoCam GateWay, complete the following steps:

Step 1

Verify your MemoCam GateWay network settings (see page 9).

Step 2

Set up your PC for IP configuration (see page 10).

Step 3

Connect your MemoCam GateWay to your PC (see page 14).

Step 4

Verify your network connection (see page 16).

Step 5

Connect to your MemoCam GateWay from your PC (see page 18).

Step 6

Configure your MemoCam GateWay parameters (see page 21).

Step 7

Complete the MemoCam GateWay configuration (see page 36).

STEP 1: VERIFY YOUR MEMOCAM GATEWAY NETWORK SETTINGS

Your MemoCam GateWay is factory-assigned the default IP address 192.168.1.101, the default Subnet Mask 255.255.255.0, and the default gateway address 192.168.1.1.

To use the MemoCam GateWay with your network, you will be required to configure the MemoCam GateWay IP settings to match your network settings.

Your network settings will vary according to your MemoCam GateWay installation type (see page 4). For further details, consult your System Administrator for the appropriate:

- ☐ MemoCam GateWay IP address
- ☐ MemoCam GateWay Subnet Mask
- ☐ Network gateway address

Keep these settings for use in step 6 (see page 24).

STEP 2: SET UP YOUR PC FOR IP CONFIGURATION

Setting up Your PC

Your PC will be used to configure the MemoCam GateWay unit. The minimum requirements for your PC are Win98/2000/XP with an Ethernet Card.

Configure your PC TCP/IP settings to log into the MemoCam GateWay as described below.



You will be required to modify your PC's IP settings for the first-time MemoCam GateWay connection. Your IP settings may be restored later to any required value.



Ensure that your PC and MemoCam GateWay IP address settings are from the same IP pool.

Windows 98 or Windows ME

To configure your PC TCP/IP settings:

1. Click the Windows **Start** button, and select *Settings-> Control Panel->Network*.
2. Select *Internet Protocol TCP/IP* and click **Properties**. The *TCP/IP Properties* window opens.
3. Click the **IP Address** tab to bring it forward.

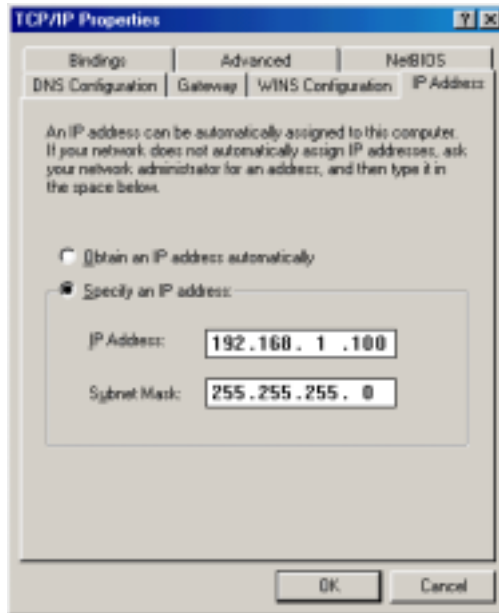


Figure 5. Windows 98/ME (TCP/IP) Properties window



Ensure that you record your PC's original IP settings. You may restore these settings once MemoCam GateWay configuration is completed.

4. Select *Specify an IP address*.
5. Enter the following information:
 - IP Address - 192.168.1.X
 - Subnet Mask - 255.255.255.0
6. Consult your network administrator to determine if you need Gateway or DNS settings.
7. Click **OK**. The *TCP/IP properties* window closes.



Do not use IP address 192.168.1.101. This address is factory-assigned to the MemoCam GateWay unit.

Windows 2000 or Windows XP

To configure your PC TCP\IP settings:

1. Click the Windows **Start** button and select *Settings->Control Panel->Network->Dial Up Connections*. The *Network and Dial-up Connections* window opens.
2. Right-click on *Local Area Connections*, and select *Properties*. The *Local Area Connections Properties* window opens.
3. Select *Internet Protocol TCP/IP* and click **Properties**. The *Internet Protocol TCP/IP Properties* window opens.

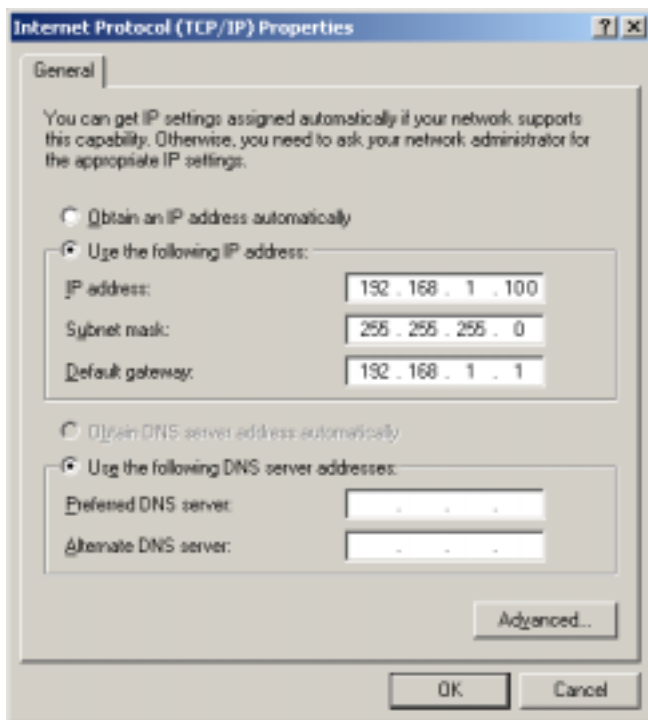


Figure 6. Windows XP/2000 Internet Protocol (TCP/IP) Properties window



Ensure that you record your PC's original IP settings. You may restore these settings once MemoCam GateWay configuration is completed.

4. Select *Use the following IP address*.
5. Enter the following information:
 - IP Address - 192.168.1.X
 - Subnet Mask - 255.255.255.0
6. Consult your network administrator to determine if you need Gateway or DNS settings.
7. Click **OK**. The *TCP/IP properties* window closes.



Do not use IP address 192.168.1.101. This address is factory-assigned to the MemoCam GateWay unit.

STEP 3: CONNECTING MEMOCAM GATEWAY TO YOUR PC

Once you have set up your PC, you are ready to configure the MemoCam GateWay network settings from your PC. Connect the MemoCam GateWay unit directly to your PC using the supplied cross-wired RJ-45 cable.

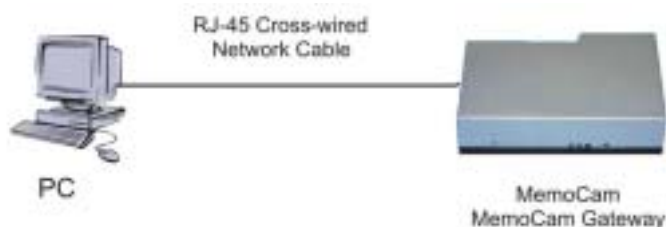


Figure 7. Connecting MemoCam GateWay to a PC

To connecting the MemoCam GateWay to your PC:

1. Plug one of the RJ-45 cross-wired network cable sides into the Ethernet port on the rear panel of the MemoCam GateWay unit.
2. Plug the other end of the cable into your PC.
3. Connect the MemoCam GateWay unit to its power adapter and turn the unit on.
 - The green MemoCam GateWay unit power LED should illuminate.
 - The ACT/LINK light on the Ethernet card should blink or illuminate.
 - The S1 and S2 LEDs should blink together for 3 seconds and turn off, followed by the S1 LED blinking 6 times.
 - The S1 and S2 LEDs should turn on and then turn off with a long beep when the unit is ready.

If the S1 and S2 LEDs do not turn off and two beeps are sounded, this indicates that a communication problem has occurred. Correct this by doing the following:

- ❑ Verify that the LAN port is active and working.
- ❑ Verify that your PC Ethernet card link LED is blinking.
- ❑ Verify that the MemoCam GateWay Ethernet card link LED is blinking.
- ❑ Verify that the RJ-45 network cable is connected properly.
- ❑ Reset the unit and turn the unit on again.
- ❑ After 30 seconds, verify that a long beep has sounded and that the S1 and S2 LEDs are off.

STEP 4: VERIFYING NETWORK CONNECTION

Once your MemoCam GateWay had been connected to your PC, use the PING diagnostic to verify your network connection and confirm your TCP/IP Settings.

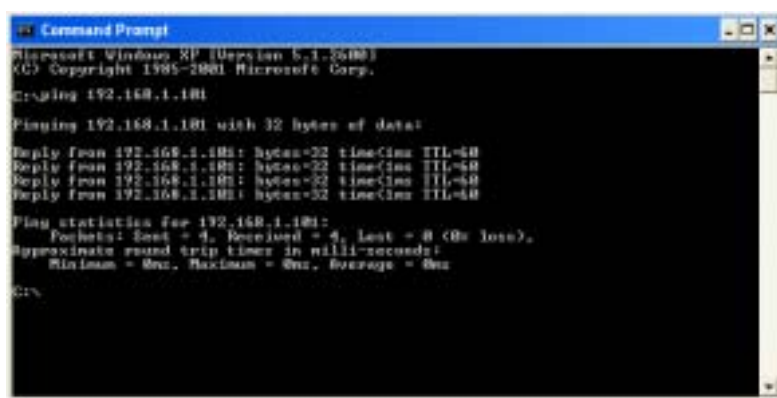
Each MemoCam GateWay unit is supplied with the following default IP settings:

- ❑ IP Address: 192.168.1.101
- ❑ Subnet Mask: 255.255.255.0

To verify your network connection:

1. Select *Start->Programs-> Accessories->Command Prompt* (Windows XP/2000) or *Start->Programs->Accessories->MS-DOS Prompt* (Windows 98/ME). The *Command Prompt* window opens.
2. Type `ping 192.168.1.101` and press *Enter*.

If both the PC and the unit are connected to the network and you have set your PC correctly, your computer will receive a response as shown below.



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1995-2001 Microsoft Corp.

C:\>ping 192.168.1.101

Pinging 192.168.1.101 with 32 bytes of data:

Reply from 192.168.1.101: bytes=32 time=1ms TTL=64
Reply from 192.168.1.101: bytes=32 time=1ms TTL=64
Reply from 192.168.1.101: bytes=32 time=1ms TTL=64
Reply from 192.168.1.101: bytes=32 time=1ms TTL=64

Ping statistics for 192.168.1.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milliseconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Figure 8. Correct PING response

If you do not obtain a reply, or if you obtain a request timed out message, verify the following:

- ❑ The S1 and S2 LEDs are off.
- ❑ The MemoCam GateWay Ethernet card link LED is blinking.
- ❑ The IP setting of the PC are configured as described above.
- ❑ The PC and the MemoCam GateWay are connected to the LAN or with a crossed cable.

STEP 5: CONNECTING TO YOUR MEMOCAM GATEWAY FROM YOUR PC

You can now connect from your PC to the MemoCam GateWay using an application such as HyperTerminal or Telnet.

Connecting from HyperTerminal

To open HyperTerminal:

1. From the Windows Start menu select Programs -> Accessories -> Communication -> HyperTerminal.
2. In the *Connection Description* window, enter a name and select an icon for the connection.
3. Click **OK**. The *Connect To* window opens.

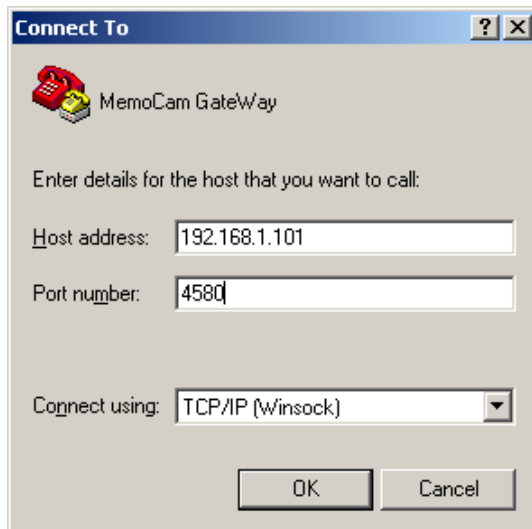


Figure 9. HyperTerminal Connect To Window

4. In the *Connect Using* field, select *TCP/IP (Winsock)*. The *Connect To* window refreshes.
5. In the *Host Address* field, enter *192.168.1.101*.



The host address 192.168.1.101 is factory assigned and must be used for the initial GateWay configuration.

6. In the *Port Number* field, enter *4580*.



Port 4580 enables local configuration of the MemoCam GateWay. For configuration of the MemoCam GateWay remotely through the router, this port must be made accessible through your NAT router settings.

7. Click **OK**. The *MemoCam GateWay HyperTerminal* configuration window opens.

You can now configure your MemoCam GateWay parameters.

Connecting from Telnet

You can connect to the MemoCam GateWay using any Telnet application.



Configure your Telnet application to send a <Carriage Return> when you press Enter, and not a <Carriage Return>, <Line Feed>



In Windows Telnet use the number-pad Enter key.

To open Telnet:

For Windows 2000 or Windows XP

1. From the Windows Start menu select *Programs -> Accessories -> Command Prompt*.

OR

For Windows 98 or Windows ME

1. From the Windows Start menu select *Programs -> Accessories -> MS-DOS Prompt*.

The *Command Prompt* window opens.

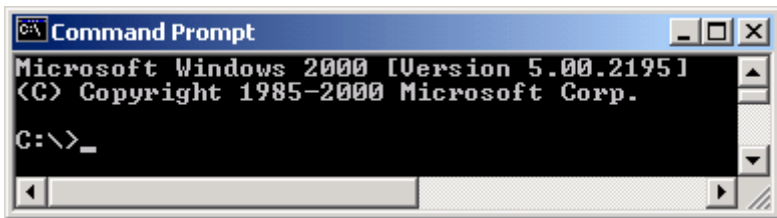


Figure 10. Telnet Command Prompt Window

2. In the *Command Prompt* window, type *Telnet* and press *Enter*.
3. The *Microsoft Telnet* prompt appears.
4. Type *open <destination ip> <4580>* and press *Enter*.

For example, *open 192.168.1.101 4580 -> Enter*.

5. The *Enter password* prompt appears.
6. Type *vc* (default password)
7. Press *Enter*.



In Windows Telnet use the number-pad Enter key.

The *Command Prompt - telnet* configuration window opens.
You can now configure your MemoCam GateWay parameters.



In the Command Prompt - telnet configuration window, the cursor appears to the right and one space down.

STEP 6: CONFIGURING MEMOCAM GATEWAY PARAMETERS

Once you have connected to the MemoCam GateWay configuration window from Hyperterminal or Telnet, you can configure the parameters that enable the MemoCam GateWay to communicate with your MemoCam units and your PC.



In Windows Telnet use the number-pad Enter key.

On opening, the *MemoCam GateWay* configuration window requests a password.

1. Type lowercase `vc` and press *Enter*. Text containing the MemoCam GateWay version and model type appears.
2. Press *Enter* for the MemoCam Gateway configuration menu. The MemoCam Gateway configuration menu appears:

```
Ilink>
Commands:
NET          Config network parameters sub-menu
UNIT         Config MemoCam(s) unit parameters sub-menu
REMOTE       Config Remote application parameters sub-menu
SERIAL       Config serial parameters sub-menu
VERSION      Show Ilink Version
ADVANCED     Ilink Management
DEBUG        Debug control
QUIT         Close telnet session
```

Figure 11. MemoCam GateWay Configuration Menu

From the MemoCam Gateway configuration menu, view and configure:

- ☐ Network parameters
- ☐ Unit parameters
- ☐ Remote application parameters
- ☐ Serial parameters
- ☐ Version parameters
- ☐ Advanced parameters



If no commands are entered for 5 minutes, the MemoCam GateWay automatically disconnects.

Submenus

Opening Submenus

To open MemoCam GateWay configuration submenus:

1. Type <menu category> and press *Enter*.
2. Press *Enter* again to list submenu commands. For example,
 - ❑ In the MemoCam Gateway configuration menu, type NET and press *Enter*.
 - ❑ Press *Enter* again to list the NET submenu commands.

The following list of submenu commands opens:


```
Ilink.Net>
Commands:
IP          Set iLink IP Address
PORT       Set iLink Listen port for incoming remote
SUBNET     Set iLink subnet mask
GW         Set Network Gateway Address
WAKE       Set WakeUp GateWay Address
LIST       Display current settings
EXIT       Save parameters and Exit to main menu
QUIT       Quit to main menu without saving changes
```

Figure 12. MemoCam GateWay Net Configuration Submenu

Submenu Commands

The MemoCam GateWay configuration window features the following submenu commands:

Table 1. Submenu Commands

Command	Description
Press <i>Enter</i>	Display list of commands and a brief command description for the selected submenu.
Type LIST and press <i>Enter</i>	Display current submenu settings.
Type <command name> < ><?> and press <i>Enter</i>	Display the command syntax.  For example, ADD ? -> <i>Enter</i> Ilink.Unit>add ? Add <rs485 address> <1=perform NOA if that unit is
Type QUIT and press <i>Enter</i>	Return to main menu without saving settings.
Type EXIT and press <i>Enter</i>	Save settings and return to main menu.

Verifying Settings

Type `LIST` and press *Enter* to confirm your configuration settings.

Saving Settings

Type `EXIT` and press *Enter* to save your new configuration settings. You are returned to the main menu.



*Type `QUIT` and press *Enter* to return to the main menu without saving your settings.*

Applying Settings

To apply your new configuration settings, you must reset the MemoCam GateWay unit. This reset can be done through the *Advanced* submenu (refer to page 33).

Alternatively, remove and reinsert the MemoCam GateWay power cable.



Following this reset, use your updated configuration settings for HyperTerminal connections to the MemoCam GateWay.

Network Settings

Network settings are used to locate the MemoCam GateWay unit(s) in your LAN.

Before configuring your LAN settings, ensure that your system administrator has provided you with:

- ❑ IP Address
- ❑ Subnet Mask
- ❑ Gateway IP Address
- ❑ Port numbers (for incoming connections)

To configure your network settings:


1. In the MemoCam Gateway configuration menu, type `NET` and press *Enter*.
2. Press *Enter* again to list the NET submenu commands.

```
Ilink.Net>
Commands:
IP          Set iLink IP Address
PORT       Set iLink Listen port for incoming remote
SUBNET     Set iLink subnet mask
GW         Set Network Gateway Address
WAKE       Set WakeUp GateWay Address
LIST       Display current settings
EXIT       Save parameters and Exit to main menu
QUIT      Quit to main menu without saving changes
```

Figure 13. MemoCam GateWay Net Configuration Submenu

3. Set your Net configuration settings as follows:

Table 2. NET Submenu Configuration Commands

Setting	Description	Command
Set IP Address	Set the IP address for the MemoCam GateWay unit.	Type IP <IP address> and press <i>Enter</i> .  For example, I link.Net>ip 192.168.1.210 - > <i>Enter</i>
Set Subnet Mask	Set the Subnet Mask for the MemoCam GateWay unit.	Type SUBNET <Subnet Mask> and press <i>Enter</i> .
Set Gateway	Set the network gateway address for the MemoCam GateWay unit.	Type GW <Gateway IP Address> and press <i>Enter</i> .
Set Wakeup	Set the IP address for the MemoCam GateWay unit to communicate with to maintain a constant ADSL/Cable connection.	Type WAKE <IP address> and press <i>Enter</i> .
Set Port	Set the port number for incoming calls.	Type PORT <port number> and press <i>Enter</i> .

Unit Settings

Unit settings are used to notify the MemoCam GateWay of connected MemoCam units.



To configure your unit settings:

1. In the MemoCam Gateway configuration menu, type `UNIT` and press *Enter*.
2. Press *Enter* again to list the UNIT submenu commands.

```
Ilink> unit
Ilink.Unit>
Commands:
  ADD      Add unit
  DETECT   Auto detect currently connected MemoCam /S units
  DELETE   Delete MemoCam unit
  LIST     Display current settings
  TEST     Check defined units
  EXIT     Save parameters and Exit to main menu
  QUIT     Quit to main menu without saving changes
Ilink.Unit>
```

Figure 14. MemoCam GateWay UNIT Configuration Submenu

Table 3. Unit Submenu Configuration Commands

Setting	Description	Command
Define unit	Add MemoCam unit descriptions so the MemoCam GateWay will recognize the MemoCam units.	Type <code>ADD <RS485 Address></code> <code><Alarm if unit is not available flag></code> and press <i>Enter</i> .  For example, <code>Add <rs485_address> <!perform NDR if that</code> <code>Ilink.Unit>add 0 1</code> For further details, see page 27.
Delete unit	Remove MemoCam unit from the list of MemoCam units recognized by the MemoCam GateWay.	Type <code>DELETE < RS485 Address ></code> and press <i>Enter</i> .
Detect units	Detect and provide details of MemoCam units that are physically connected in serial to the MemoCam GateWay.	Type <code>DETECT</code> and press <i>Enter</i> .  If you do not know the RS-485 addresses of your MemoCam units this command will require some time.
Test units	Tests communication and provide details for MemoCam units defined for the MemoCam GateWay.	Type <code>TEST</code> and press <i>Enter</i> .

Defining Unit Serial Addresses

MemoCam unit RS-485 serial addresses are defined using the jumpers on the MemoCam unit (see *MemoCam Hardware Installation Guide*) and range from 0-31.

The MemoCam GateWay must be notified of these addresses in order to communicate with the MemoCam units. The Unit submenu enables this process.

In the MemoCam GateWay configuration settings, MemoCam units appear as follows:

```
Ilink.Unit>add ?
Add <rs485 address> <1=perform NOA if that unit is not available>
Ilink.Unit>add 0 1
Ilink.Unit>add 1 1
Ilink.Unit>add 2 1
Ilink.Unit>add 3 1
Ilink.Unit>list
unit0      0 1
unit1      1 1
unit2      2 1
unit3      3 1
```

Figure 15. MemoCam GateWay MemoCam Units List.

Unit Notification Flags

The MemoCam GateWay can be configured to alert the remote PC if does not locate a specified MemoCam unit. The <alarm if unit is not available> flag can be 0 or 1.

❑ **Flag = 1**

The MemoCam GateWay will alert the defined destination if the unit is not available. It will continue to try to detect the unit every minute.

❑ **Flag = 0**

The MemoCam GateWay will not contact the defined destination if the unit is not available.

Adding MemoCam Units

To add a MemoCam unit:

1. Type `ADD <RS485 Address> <Alarm if unit is not available flag>`.
2. Press *Enter*.

For example,

```
Add <rs485 address> <1=perform NOA if that unit is not available>  
Ilink.Unit>add 0 1
```

3. Type `EXIT` and press *Enter*. The unit is added to the unit list.
4. Reset the MemoCam GateWay and turn it on again.



*MemoCam units must also be added in the MemoCam Application.
For details, refer to the MemoCam Software Manual.*

Remote Settings

Remote settings enable the MemoCam GateWay to communicate with the MemoCam Application on your PC.



The MemoCam GateWay remote settings include a factory-defined unit serial number (SN) that is used as the Connection ID in the MemoCam Application.

In addition, your MemoCam GateWay unit has a bottom sticker listing the unit's S/N number. The Connection ID corresponds to the right-hand half of this S/N number preceded by 5 zeros. Example: for bottom sticker S/N 34401-7C82E6B, the Connection ID is 000007C82E6B.





To configure your remote settings:

1. In the MemoCam Gateway configuration menu, type REMOTE and press *Enter*.
2. Press *Enter* again to list the REMOTE submenu commands.

```
IIlink.Remote>
Commands:
LOGIN      Set user login settings
PLOGIN     Set privilege user login settings
PHWD       Primary NDI address
SHWD       Secondary NDI address
DISP       Display current settings
EXIT      Save parameters and Exit to main menu
QUIT      Quit to main menu without saving changes
IIlink.Remote>
```

Figure 16. MemoCam GateWay Remote Configuration Submenu

Table 4. Remote Submenu Configuration Commands

Setting	Description	Command
Privileged user login	Login name and password for highest-priority users.	<p>Type <code>PLOGIN <user name> <password></code> and press <i>Enter</i>.</p> <p> For example,</p> <p><code>Ilink.Remote>login john 1234</code></p> <p> Privileged user name: Admin (default), Privileged password: vc</p> <p> The privileged user password is also used as the local configuration application password. After power reset, login to the local configuration application with the new password.</p>
User login	Login name and password for lower-priority users.	Type <code>LOGIN <user name> <password></code> and press <i>Enter</i> .
Primary notification on alarm destination	First destination address for the MemoCam GateWay to try to send notification on alarm.	Type <code>PNOA <Destination IP address> <Destination port number></code> and press <i>Enter</i> .
Secondary notification on alarm destination	Second destination address for the MemoCam GateWay to try to send notification on alarm if primary destination fails.	Type <code>SNOA <Destination IP address> <Destination port number></code> and press <i>Enter</i> .
List current settings		<p>Type <code>LIST</code> and press <i>Enter</i>.</p> <p>Current MemoCam GateWay settings are listed:</p> <ul style="list-style-type: none"> <input type="checkbox"/> user and privileged user login and password <input type="checkbox"/> primary and secondary dial on alarm addresses <input type="checkbox"/> Serial number (SN) <p> Serial number is used as the connection ID in the MemoCam Application.</p>

Serial Settings

Serial settings are used to set physical communication parameters for MemoCam GateWay communication with MemoCam units.



It is recommended not to adjust these serial settings in the MemoCam GateWay local configuration. Default settings have been selected for optimal unit performance.

You can configure several serial communication parameters:

- ☐ Baud rate
- ☐ RS485 packet size
- ☐ RS485 packet delay

To configure your serial settings:

1. In the MemoCam Gateway configuration menu, type `SERIAL` and press *Enter*.
2. Press *Enter* again to list the Serial submenu commands.

```
Ilink.Serial>
Commands:
BAUDRATE      Set serial port baud rate
PSIZE         Set packet size
PDELAY        Set packet delay
LIST          Display current settings
EXIT          Save parameters and Exit to main menu
QUIT         Quit to main menu without saving changes
Ilink.Serial>
```

Figure 17. MemoCam GateWay Serial Configuration Submenu

Table 5. Serial Submenu Configuration Commands

Setting	Description	Command
Baud rate	Bits per second rate between MemoCam units and the MemoCam GateWay (with RS485 protocol).	Type <code>BAUDRATE <baud rate></code> and press <i>Enter</i> .
Packet size	Size of data packets sent between MemoCam units and the MemoCam GateWay.	Type <code>PSIZE <packet size></code> and press <i>Enter</i> .
Packet delay	Delay between data packets sent between MemoCam units and the MemoCam GateWay.	Type <code>PDELAY <packet delay></code> and press <i>Enter</i> .

Version Details

View the MemoCam GateWay version and build number:

1. In the MemoCam Gateway configuration menu, type `VERSION` and press *Enter*.
2. Press *Enter* again.

The MemoCam GateWay version and build number are listed.

```
Ilink>version
01.00 Build 32
```

Figure 18. MemoCam GateWay Version Configuration Submenu

Advanced Settings

Advanced settings are primarily used for MemoCam GateWay firmware upgrade procedures. You can administer MemoCam GateWay advanced settings including upgrades and resets using the local configuration application.



It is recommended not to configure advanced settings unless upgrading firmware.



To configure advanced settings:

1. In the MemoCam Gateway configuration menu, type `ADVANCED` and press *Enter*.
2. Press *Enter* again to list the `ADVANCED` submenu commands.

```
Ilink.Advanced>
Commands:
  UPGRADE Upgrade iLink Application
  RESET   Reset MCIPGW
  BEEP    Enable/Disable beep sound
  LIST    Display current settings
  EXIT    Save parameters and Exit to main menu
  QUIT    Quit to main menu without saving changes
Ilink.Advanced>_
```

Figure 19. MemoCam GateWay Advanced Configuration Submenu

Table 6. Advanced Submenu Configuration Commands

Setting	Description	Command
Upgrade	Upgrade the MemoCam GateWay firmware.	<p>1. Type UPGRADE and press <i>Enter</i>. The UPGRADE submenu opens.</p> <p>2. Type UPGRADE again and press <i>Enter</i> again. The “Run remote application” string appears.</p> <p>3. Run the PC firmUpload.exe application with the following parameters: <privileged password> <ilink IP address:ilink Listen Port – 1> < file name></p> <p>For example, the MemoCam GateWay has the following configuration: Privileged password: vc ILink IP ADDRESS: X.X.X.X ILink Listen Port: 4599</p> <p>The command line for the PC upgrade application is “firmUpload.exe vc X.X.X.X:4598 upgrade.bin”</p> <p> The Upgrade.bin file must be in the same directory as firmUpload.exe.</p> <p> Upgrade allows you to upgrade the MemoCam GateWay firmware from a remote site such as your PC.</p>
Reset	Reset the MemoCam GateWay to factory default settings.	Type RESET <user name> <password> and press <i>Enter</i> .
Beep	Enable or disable Beep.	<p>Type BEEP 1 and press <i>Enter</i> to enable beeps.</p> <p>Type BEEP 0 and press <i>Enter</i> to disable beeps.</p>
List	Shows if beeps are enabled or disabled.	Type LIST

Debug Submenu



For technicians only.

Default Settings

MemoCam GateWay features the following default settings:

Table 7. MemoCam GateWay Default Settings

IP Address	192.168.1.101
Subnet mask	255.255.255.0
Listen Port (Application)	4599
Local Configuration Port	4580
Wake	Not defined
Beep	Enabled
Gateway	192.168.1.1
User Login	Not defined
Primary NOA destination	Not defined
Secondary NOA destination	Not defined
Privilege user name	Admin
Privilege password	vc
Units	Not defined
Baud rate	115200
Packet size	1000
Packet delay	600

STEP 7: COMPLETING MEMOCAM GATEWAY CONFIGURATION

Once you have configured your MemoCam GateWay:

1. For PC connections, disconnect the RJ-45 cross-wire network cable from the MemoCam GateWay unit.



LAN connections should be maintained. There is no requirement to disconnect the MemoCam GateWay from a LAN.

2. Power down the MemoCam GateWay unit.
3. Restore your original IP settings to your PC.
4. Restore your network connection to your PC.
5. Locate the MemoCam Plus IP Ready or MemoCam DVR IP Ready unit at your preferred site.
6. Connect the MemoCam GateWay unit to the network using a straight cable.
7. Power up the MemoCam GateWay unit.

Congratulations! You are now ready to manage your **MemoCam iP** system over LAN and Internet.

Connecting to ADSL/Cable Through a Router

You can connect your MemoCam GateWay unit to an ADSL/Cable modem through a router. This setup requires a Network Address Translation (NAT) enabled router or DMZ Host settings for your MemoCam GateWay unit.

A NAT enabled router located where the LAN meets the Internet makes all necessary IP address translations.

NAT Overview

- ❑ Provides a type of firewall by hiding internal IP addresses
- ❑ Enables a company to use more internal IP addresses. These addresses are used internally only so there is no possibility of conflict with IP addresses used by other companies and organizations.
- ❑ Allows a company to combine multiple ISDN connections into a single Internet connection.

Using NAT mapping, your router receives a single globally rerouteable IP addresses from the ISP. You should use a private network IP addresses defined by RFC-1918 to enable your MemoCam GateWay to communicate with the router. The router translates the private network addresses to a globally routable IP address that is then used to access the Internet.

Exposing the MemoCam GateWay to the Internet

Private or internal IP addresses are assigned to the MemoCam GateWay through the Port Redirection Table.

The Port Redirection Table is used to expose the MemoCam GateWay to the public domain, or to open a specific port number to the MemoCam GateWay.

Port forwarding can only be applied to external users, i.e. incoming traffic. Behind your LAN, your MemoCam GateWay cannot access your external public IP address and come back in; the MemoCam GateWay accesses the server on its local private IP address, or you can set up an alias in a Windows hosts file.

Redirect only the ports you know you have to forward rather than forward all ports. Otherwise, the intrinsic firewall type security of your NAT facility will be affected.

DMZ Host

DMZ host settings allow a MemoCam GateWay to be exposed to the Internet from behind a LAN through ADSL/Cable and a router.

Open Port

A number of port mapping variations for NAT or DMZ may be used:

- ❑ Port redirection - the packet is forwarded to the MemoCam GateWay if the port number matches that defined in the MemoCam GateWay local configuration. You can also translate the port to another port locally.
- ❑ Open ports - like port redirection (above), but enables you to define a range of ports.
- ❑ DMZ host - all inward packets will be forwarded to the MemoCam GateWay with the local IP address that you designate via the MemoCam GateWay local configuration. The only exceptions are packets received in response to outgoing requests from other local computers or incoming packets that match rules in the other two methods.

When using combinations of these three systems, there is a priority structure; i.e. if a rule in one method coincides with a rule in another method, then there is strict precedence, so that the result should be predictable. The precedence is as follows:

Port redirection -> Open ports -> DMZ

For example, the packet will be forwarded to the local address designated in Port Redirection if the port number of an incoming packet matches a rule in open ports.

ADSL/Cable Router Configuration for MemoCam GateWay

MemoCam GateWay unit(s) use private IP addresses to communicate with a router. The router translates the private network addresses to a globally reroutable IP address that is then used to access the Internet.

The router is connected at one end to the ADSL/Cable terminal and at the other to the LAN and/or the MemoCam GateWay.

To work effectively with the MemoCam GateWay, your router should support NAT, Always Connected and Static IP.

NAT Configuration

To connect to the MemoCam GateWay remotely, your router must support Network Address Translation (NAT). A NAT router obtains one or two globally re-routable static IP addresses from the Internet Services Provider (ISP). Ensure that your router supports NAT and is NAT enabled.

To configure your router as a NAT enabled router:

1. Connect MemoCam GateWay to the router.
2. Consult your router documentation to configure the NAT settings of the router. You can configure your router NAT settings as follows:
 - ❑ DMZ Host setup (for one MemoCam GateWay behind the router).
 - ❑ Port redirection (more than one MemoCam GateWay behind the router).



Consult your system administrator to determine which incoming ports are available for communication through your firewall.

Always Connected

The *Always Connected* router parameter ensures that the ADSL/Cable router is always connected to the Internet so incoming calls can reach the MemoCam GateWay.

- ❑ It is recommended that your router be *Always Connected* enabled.

Static IP

Ensure that your router supports Static IP.

GLOSSARY

Baud rate	Bits per second rate between MemoCam Plus units and the MemoCam GateWay (with RS485 protocol).
DMZ	<p>a computer or small subnetwork that sits between a trusted internal network, such as a corporate private LAN, and an untrusted external network, such as the public Internet.</p> <p>Typically, the DMZ contains devices accessible to Internet traffic, such as Web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.</p>
Fixed IP	An IP addresses assigned to the unit that cannot be changed dynamically (for example, using DHCP.)
Gateway	A gateway is a network point that acts as an entrance to another network.
ISP	Internet Services Provider.
LED	Light Emitting Diode. An electric component that lights up.
NAT	<p>Short for Network Address Translation, an Internet standard that enables a local-area network (LAN) to use one set of IP addresses for internal traffic and a second set of addresses for external traffic. A NAT box located where the LAN meets the Internet makes all necessary IP address translations.</p> <p>NAT serves three main purposes:</p> <ul style="list-style-type: none">❑ Provides a type of firewall by hiding internal IP addresses❑ Enables a company to use more internal IP addresses. Since they're used internally only, there's no possibility of conflict with IP addresses used by other companies and organizations.❑ Allows a company to combine multiple ISDN connections into a single Internet

connection.

Network Port	In programming, a port is a "logical connection place" and specifically, using the Internet's protocol, TCP/IP, the way a client program specifies a particular server program on a computer in a network. The MemoCam GateWay can be accessed over a network using TCP/IP ports.
Packet delay	Delay between data packets sent between MemoCam Plus units and the MemoCam GateWay.
Packet size	Size of data packets sent between MemoCam Plus units and the MemoCam GateWay.
Private IP	Non-valid Internet address, can be used only in a LAN and is not accessible from the Internet.
RFC-1918	Address allocation for private Internets protocol.
Serial Port	On computer and telecommunication devices, a port is generally a specific place for being physically connected to some other device, usually with a socket and plug of some kind. The MemoCam GateWay is provided with one serial port (DB-9).
Static IP	Valid Internet address
Subnet Mask	A subnet is an identifiably separate part of an organization's network. Typically, a subnet may represent all the machines at one geographic location, in one building, or on the same local area network (LAN). Having an organization's network divided into subnets allows it to be connected to the Internet with a single shared network address.

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