

# ENC USB Network Dongle User Manual

Version 5.x, updated 2021-06-18, Causal Systems Pty. Ltd

**This manual is only for those who have ENC with a USB Network Dongle.**

## 1. ENC USB Network Dongle Quick Setup

### Note:

- 1. Please do not attach the ENC USB Network dongle to the computer before and while you are installing ENC Server.**
- 2. Read the whole documentation before installation.**
- 3. ENC responses quite slow during the search for the dongle if you don't have a USB dongle and/or network connected.**

### ENC Server Installation

- Step 1. Install ENC5.X software by running setup.exe on the ENC server computer
- Step 2. Install the USB driver by running InstDrv\_32bit.exe (for the 32 bit system) or InstDrv\_64bit.exe (for the 64 bit system) under the ENC5.X/tools directory, and then tick "install USB driver".
- Step 3. Setup the configuration files *svrcfg.ini* and *clifg.ini* under the ENC5.X/tools directory with a text editor or by running ENCCConfig.exe (only for the 32 bit system) under ENC5.X/tools. If using the TCPIP protocol, the critical item to fill in here is the IP address of the **server** (by clicking the Client Tab and filling in the Search list under the TCP /UDP panel). This can be found by running the system program, **cmd.exe** and typing in **ipconfig**.
- Step 4. Plug the ENC USB Network Dongle into the USB port of the ENC server machine.
- Step 5. Start the ENC server by running ENCSvr.exe under ENC5.X/tools. When you do this the only indication that the program has run will be the appearance of a small icon, which looks like a server, at the right bottom of screen, where you can click the "find key" to see whether the dongle can be found.
- Step 6. Copy the new configured *clifg.ini* under the ENC5.X/tools to the ENC5.X folder of the ENC server.
- Step 7. Now ENC5.exe on the ENC server can be run.

### NC Client Installation

- Step 1. Install the ENC5.X software by running setup.exe on the ENC Client computer.
- Step 2. Copy the new configured *clifg.ini* under the ENC5.X/tools folder from the **ENC Server** to the ENC5.X folder of the current ENC Client.
- Step 3. Now ENC5.exe on the ENC Client can be run.

If you have problems, the information on the following pages may help.

## 2. ENC USB Network Dongle Basic Concepts

### 2.1 ENC Server

The ENC server is the computer on which the ENC USB Network dongle is mounted, and usually it can be one of any of the computers on the LAN (Local Area Network) or WAN and needn't to be the physical server of the LAN and WAN.

The operating System should be Windows 2000 SP4 or above. If the ENC server is a computer outside the LAN, the windows Firewall on this machine must be turned off so that the ENC client can access the dongle on the ENC server machine.

Check the “Local Area Connection” protocols on the ENC server machine. This can be done by: right click “My Network Places” on the desktop and select “Properties” item; right click on the “Local Area Connection” and select the “Properties” to open the Local Area Connection Properties interface. Install TCP/UDP protocol, and/or IPX protocol and/or NETBIOS if they are not installed. At least one protocol must be used for ENC communications.

The computer name and group name of the computer for the ENC server can be obtained by: right click “My Computer” on the desktop and select “Properties” item; click Tab item “Computer Name”. Note the computer name and group name down for later use. The IP address and MAC address of the ENC Server machine can be obtained with command “ipconfig /all” under CMD box.

Please note, for Windows 7 and above, ENC server (running ENCSvr.exe) can only be installed with the true administrator account which can be opened by right clicking the ‘My computer’ on the desktop and managing the properties of user accounts.

### 2.2 ENC Client

The ENC client is a computer on which the ENC software (network version) is running. The operating system should be Windows 2000 SP4 or above, and this computer must be physically connected to the **ENC Server** via a network with NETBIOS and/or IPX and/or TCP/UDP protocols.

### 2.3 Configuration Files

There are two configuration files, one for the ENC Server called *svrcfg.ini*, and one for the ENC Client, called *clifg.ini*, which provide the network settings for the ENC server and clients. These configuration files must be set by the ENC customers with a text editor or ENCConfig.exe under ENC4.X/tools directory after your installation. The *clifg.ini* file under ENC4.X/tools must be copied to the ENC4.X directory of the ENC Server or the ENC Client computer if some changes have been made in *clifg.ini*.

### 2.4 Log Files

*svrlog.txt* records the running status of the service program. It can be helpful if you encounter a problem with the service program. The path and name of the log file may be configured in the *svrcfg.ini* file, the default is under ENC4.X/tools sub directory.

### 2.5 Port and Group Information

The UDP/TCP and IPX protocols require the specification of a port number. Port numbers range from 0 to 65535. The default port number for **ENC USB Network Dongle** is 3152. 3152 is registered with IASA and should be available on most networks.

If it is occupied by other software, another port number can be setup in the *svrcfg.ini* file. The NetBIOS protocol does not use a port number. It uses a group name. The group name is a character string that may be a maximum of 16 characters in length. Each server in a NetBIOS network has both a computer name and a group name. The group name for the service program may be setup in the *svrcfg.ini* file and the group name for the clients in the *clifg.ini* file. All clients and servers that need to communicate in a NetBIOS network need to have the same group name.

## 2.6 Network Address

Each computer in network has a unique address. A UDP /TCP network (IPv4) uses IP addresses like xxx.xxx.xxx.xxx (such as 192.168.0.1). An IPX network uses a 6-byte MAC address that may look like: 00-35-4f-20-00-32. A NetBIOS network uses a computer name (16 characters). You can find the IP address of your computer by running the system file "cmd.exe" and typing in "ipconfig".

## 2.7 Search Mode

ENC software (network version) on the ENC client computer will search for the address of the ENC server at start-up together with the protocol type and port in the configuration file. ENC software will read the *clifg.ini* file for the search "mode". There are three search modes that may be set in the client configuration file: Automatic, Custom and Semi-automatic. Automatic mode means that the client will broadcast to locate all the service programs on the network. Custom mode requires that you enter a search list of the service addresses in the *clifg.ini* file. The client program will not issue a broadcast message but will use the search list to find the service programs. Automatic mode has the advantage of being easy to configure, but the drawbacks of slow response and added network overhead. Custom mode is faster than automatic but requires that you know the addresses of the service programs. Semi-automatic mode attempts to overcome the drawbacks of both the custom and automatic modes. In semi-automatic mode, the client will first go to its search list. If it finds one or more service programs it will quit searching. If it does not find a service program, it will broadcast to find the service program. It is strongly recommended that you use the Custom mode, otherwise searching might take long time.

## 2.8 Time Out

ENC client automatically sends an "idle" message to the service program on the ENC Server once each 1.5 minutes. Each time ENC client sends data to ENC server it will wait a time period defined by the "time out" parameter. If ENC client does not receive a response after the time out period, it will quit and return an error prompt. The unit of time for the time out parameter is seconds and the default is 10 seconds. In automatic search mode, the time out is also the period that ENC client will wait for a response to its broadcast message. The time out parameter can be setup or changed in the *clifg.ini* file. The same applies to the time out parameter of ENC server.

## 2.9 Client Time to Live (TTL)

This parameter is set in the *svrcfg.ini*. The time unit is minutes and the default is 3 minutes. ENC client automatically sends an "idle" message to the service program once

each 1.5 minutes. If the service program does not receive an idle message from a client for the TTL period, it will delete the client handle, terminating the connection. Thus in the event the client is shutdown abnormally or the network connection is lost one client cannot be considered as two or more users by the service program.

### 3. ENC Server Configuration File (*svrcfg.ini*) - Template

[Header]

Sign=RockeySvrHeader  
; Service program configuration file.

[Common]

Timeout=10  
; Time out value. Unit: seconds. Default: 10.

IdleTime=3  
; Time To Live (TTL) value. Unit: minutes. Default: 3.  
; Client program sends idle message to service program every 1.5 minutes. The service  
; program will kill a client if it does not receive an idle message from the client a time  
; interval set here. This parameter applies to a situation in which the client shuts down his  
; computer or quits before closing ENC Net Dongle.

LogFile=*svrlog.txt*  
; Name and path for the log file.  
; The log file records information output by the service program.

[TCPUDP]

bUsed=1  
; Enable TCP/UDP protocol. 1=Yes, 0=No.

TCPPort=3152  
; TCP port. Default is 3152. 3152 is a registered port address.  
; If this port is already used in your network, you may change it here.

UDPPort=3152  
; UDP port. Default is 3152. 3152 is a registered port address.  
; If this port is already used in your network, you may change it here.

[IPX]

bUsed=0  
; Enable IPX protocol. 1=Yes, 0=No.

IPXPort=3152  
; IPX port. Default setting is 3152.  
; If this port is already used in your network, you may change it here.

[NetBios]

bUsed=0  
; Enable NetBIOS protocol. 1=Yes, 0=No.

RegName=ENCNetServer  
; Register server name. Default: ENCNetServer001. You may enter a new name. If the server  
; name already exists in your network, you may increment the number at the end of the name,  
; for example: ENCNetServer002, ENCNetServer003...

RegGrpName=ENCNetServer  
; Group name for servers. Default: ENCNetServer. You may change the group name here.  
; The service configuration file and client configuration file must be consistent.

### 4. ENC Client Configuration File (*clicfg.ini*) - Template

[Header]

Sign = RockyClientHeader  
; Client configuration file.

[Common]  
Timeout =10  
; Time out value. Unit: seconds. Default: 10.

SearchFlag =1  
; Search mode. 0=Automatic mode, 1=Custom mode, 2=Semi-automatic mode. Default: 1.  
; If you set Custom mode, you must enter a search list for each protocol.

[TCPUDP]  
bUseTCP =1  
bUseUDP =1  
; Enable TCP/ UDP protocol. 1=Yes, 0=No.

TCPPort =3152  
; TCP port. Must be the same as the server.  
; 3152 is a registered TCP port for ENC Net Dongle.

UDPPort =3152  
; UDP port. Must be the same as the server.  
; 3152 is a registered UDP port for ENC Net Dongle.

SearchList =192.168.0.16, 192.168.0.1, chansen  
; Search list. Used in custom or semi-automatic mode.  
; IP addresses and server names need to be separated by a “,”.

[IPX]  
bUsed =0  
; Enable IPX protocol. 1=Yes, 0=No.

IPXPort =3152  
; IPX port. Must be the same as the server.

SearchList =00-A0-0C-13-0E-D2, 00-00-B4-B2-ED-7B  
; Search list. Used in custom or semi-automatic mode.  
; MAC addresses need to be separated by a “,”.  
; MAC address can be obtained with the command “nbtstat -a pc name”.  
; You may use our configuration program (*ENCConfig.exe*) to change the computer name to  
; MAC address.

[NetBios]  
bUsed =0  
; Enable NetBIOS protocol. 1=Yes, 0=No.

RegGrpName =ENCNetServer  
; Group name of servers. Default setting is ENCNetServer.  
; It must be the same as the name in the *svrcfg.ini* file.

SearchList=enc,chansen  
; Search list. Used in custom or semi-automatic mode.  
; Server names need to be separated by a “,”.  
; The server name may be the computer name from the operating system or the name entered  
; in the *svrcfg.ini* file.

## 5. ENC USB Network Dongle Service Program

The service program (*ENCSvc.exe*) under directory ENC4.X/tools in the ENC server **must be started manually** the first time ENC software (network version) is installed. After the service program is run for the first time it will automatically register itself as the service program. It will run automatically every time the computer is started unless it is uninstalled. After it is started the service program will look in the current directory for the service configuration file (*svrcfg.ini*) and take the configuration information. If it can not

find the configuration file it will use the default configuration. The status of the Service program will be recorded in a log file specified in the *svrcfg.ini* file. An icon will appear in the system tray when the service program is started. Double click or right click the Service program icon to open the service control interface, which may be used to stop, start or uninstall the Service program. The Service program running on the ENC server requires a driver and an **ENC USB Network Dongle** but the ENC client program does not.

## **6. ENC USB Network Dongle Monitor**

The monitor program (*ENCMon.exe*) under directory ENC4.X/tools in the ENC server can be used to monitor the activities of all ENC clients and to start and stop the Service functions or Remove (kill) an ENC client. *ENCMon.exe* automatically takes the port information of *svrcfg.ini* or *clifcg.ini* to connect the network. The search results will be displayed, and the server names appear on the left portion of the window. The ENC Net Dongle hardware ID (HID) will appear if users are logged into the server. Server information, including server platforms and opened protocols, appears in the right portion of the screen.

## **7. The Led on ENC USB Network Dongle**

If the LED indicator on ENC USB Network Dongle is on all the time, this indicates the dongle is working properly.

If it blinks once every second, the drivers are not installed or something wrong with the USB port. Otherwise the dongle is defective.

If the indicator is not on and the system prompts “Found USB Device”, it indicates the dongle is defective. Otherwise there is a bad connection or something is wrong with the USB port.

<b>This is the end of ENC USB Network Dongle User Manual</b>
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