

Title : Network function description

Contents :

- 1. Structure
 - 1.1 This function works for Windows XP/ 7 / 8.1 / 10.
 - **1.2** The network function only supports WORKGROUP network, it does not support Domain network.
 - **1.3** Here is the structure relation of a computer and a laser machine.

Solution #1



PS. The RJ45 cable in solution #2 may need to be a crossover type. It depends on your computer.

1.4 RJ45 connector is at the main-control board. If you don't find it, you can contact with LTT.





2. Function description.

- 2.1. We use TCP/IP to communicate between a computer and a laser machine.
- 2.2. The computer works like a server, and laser machine is a client end.
- 2.3. The computer have to share a folder.
- 2.4. User can use any application software (i.e CorelDraw or AutoCAD or others) to print out drawing to a file and save these files to the shared folder. The extension name of these files are prn or plt.
- 2.5. Laser machine will read these files in the shared folder. User can select the file in the machine and run it.
- 2.6. Laser machine only has the right to read the files in the shared folder. Files can't be deleted from machine.
- 2.7. Laser machine can write a log file to the shared folder. The name of log file is <lttlog.txt>. The log file will records real working parameters after file is finished. If the file is not finished, it will not be recorded.(Some firmware version does not support this log function, you can contact with LTT for further help)

3. Available firmware version

Machine Model	Firmware Version
ILS-3NM	7.09 or later
V2000, V3000, ILS-3V	8.14 or later
i.Laser servo 3000, 4000	8.17 or later
SLC series	8.33 or later

If your laser machine firmware version is older, you can check with LTT to learn the version can be upgraded or not.

4. Advantage

- 4.1. This network function can replace the LPT to USB cable.
- 4.2. User can use one computer works as a server computer to share a folder to a machine. Other computers can send files to the shared folder in the server computer.
- 4.3. User can share the same folder in one computer to more than one laser machine.
- 4.4. User can save time to transfer the file to machine, especially for some big drawings.
- 4.5. User can save all prn or plt files in the computer, even the laser machine is power off.

5. How to setup the network function

- 5.1. Setup a shared folder in the computer.
 - A. Find the name of your computer. (Here is for Windows 7, you can find other Windows setup differences at section 6)

Go to <Start> and right click <Computer> , and click <Properties>.





It will show a window and you can see the name of your computer. If you want to change it, you can click <Change settings> and follow the steps to change the name.

Control Panel 🕨	System and Security System		Control Panel	
Control Panel Home	View basic information	about your computer		
Device Manager	Windows edition			
Remote settings	Windows 7 Home Premiur	-		
System protection	Copyright © 2009 Microso			
Advanced system settings	Service Pack1			
	Get more features with a n	ew edition of Windows 7		
	System			
	Manufacturer:	ASUSTeK Computer Inc.		
	Model:	ASUS Notebook Series		
	Rating:	4.2 Windows Experience Index	/ISUS	
	Processor:	Intel(R) Core(TM)2 Duo CPU T6600 @ 2.20GHz 2.20 GHz	Inspiring Innovation Paralatent Parlation	
	Installed memory (RAM):	4.00 GB		
	System type:	64-bit Operating System		
	Pen and Touch:	No Pen or Touch Input is available for this Display		
	ASUSTeK Computer Inc. suppo	ort		
	Website:	Online support		
	Computer name, domain, and	workgroup settings		
	Computer name:	PNB	🛞 Change settings	
	Full computer name:	PNB		
See also	Computer description:	PNR		
Action Center	Workgroup:	WORKGROUP		
Windows Update	Windows activation			
Performance Information and	Windows is activated			
1000	Product ID: 00350_OEM_80	007687_00007	genuine	

This network only supports WORKGROUP network, it does not support Domain network.

B. Setup the IP address for your computer.

Go to <Control Panel>, click <Network and Internet>, then click <Network and Sharing Center>.

page 3/13





🔾 🖓 - 😫 🔸 Control Panel 🔸	Network and Internet Network and Sharing Center		Search Control Panel
Control Panel Home Change adapter settings Change advanced sharing	View your basic network information and set up	connections	Pap
settings	(This computer) View your active networks View your active networks Unidentified network Public network Com	Connect or disconnect or disconnections:	rect
	Change your networking settings Set up a new connection or network Set up a wireless, broadband, dial-up, ad hoc, or VPN	connection; or set up a router or access poi	int.
	Connect to a network Connect or reconnect to a wireless, wired, dial-up, or	VPN network connection.	
	Choose homegroup and sharing options Access files and printers located on other network cor	nputers, or change sharing settings.	
See also HomeGroup Internet Options	Troubleshoot problems Diagnose and repair network problems, or get trouble	shooting information.	
Windows Firewall			

Click <Local Area Connection>, then click <Properties>.

Go to <Internet Protocol Version 4 (TCP/IPv4)>, click <Properties>.



Choose <Use the following IP address:>, and setup the IP as following. You can define your own IP for your computer, just make sure the last code is different for computer and laser machine.

Please pay attention, the <Subnet mask> must be 255.255.255.0.



Internet Protocol Version 4 (TCP/IPv4)	Properties ? X			
General				
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
Obtain an IP address automatical	ly			
O Use the following IP address:				
IP address:	192 . 168 . 0 . 105			
S <u>u</u> bnet mask:	255.255.255.0			
Default gateway:	· · ·			
Obtain DNS server address autom	natically			
• Use the following DNS server add	resses:			
Preferred DNS server:	· · ·			
Alternate DNS server:	· · ·			
Validate settings upon exit	Ad <u>v</u> anced			
	OK Cancel			

- C. Setup a shared folder.
 - Create a new folder <tmp>, right click the folder, click<Properties>.

Organize 🔻 🛛 🏹 Open	Include in library 🔻	Share with 🔻	Burn N	ew folder		800 -		
🔆 Favorites	Name		Date mo	dified	Туре	Size		
🧮 Desktop	\rm My Backups		12/2/201	2 8:23 AM	File folder			
鷆 Downloads	Test Version		12/12/20	12 7:11 PM	File folder			
📃 Recent Places	📕 Tools		6/18/201	4 10:06 AM	File folder			
	📕 Tools for work		12/12/20	12 6:36 PM	File folder			
词 Libraries	Log-screenshots		1/7/2015	2:14 PM	File folder			
Documents	🗼 tmp		1/7/2015	2.12 DM	File folder			
🚽 Music		Open		1			10	
E Pictures		Open in ne	w window					
Videos		Share with		•				
		Restore pre	vious version	.				
📜 Computer		Include in I	library	+				
🚢 OS (C:)		c . I.						
🕞 Data (D:)		Send to		•				
👝 Removable Disk (F:)		Cut						
		Сору						
👊 Network		Create sho	etcut					
		Delete	neur					
tmp Dates	nodified: 1/7/2015 2:12 DM	Delete		- 1				

Go to <Sharing> tab, click <Share...>





Click the drop box and choose <Everyone> and click <Add>.

Choose people to sha	are with			
ype a name and then click	Add, or click the arrow	to find someone.		
			-	Add
Administrator				
Guest			Lev	rel
venvone				
reate a new user			_	

Choose <Everyone>, click the <Permission Level> drop box and change <Read> to <Read/Write>. Then you can click <Share>.

3 File Sharing	Anna Anna Anna
Choose people to share with	
Type a name and then click Add, or click the a	arrow to find someone.
	▼
Name	Permission Level
& Administrator	Read/Write 🔫
Administrator	Owner
Reveryone	Read/Write 🔻
I'm having trouble sharing	
	Share Cancel

It will show another window like following. Please choose <Yes, turn on network discovery and file sharing for all public networks>. When you are back to <File Sharing> window, you can click <Done>. It will go back to <tmp Properties> window.

22	Do you want to turn on network discovery and file sharing for all public networks?
	What is network discovery?
	No, make the network that I am connected to a private network Network discovery and file sharing will be turned on for private networks, such as those in homes and workplaces.
	Yes, turn on network discovery and file sharing for all public networks
	Court



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our folder is situred.	
ou can <u>e-mail</u> someone links to these shared items, or <u>o</u>	copy and paste the links into another program.
Individual Items	
tmp	
Meno/mip	
Shared items aren't accessible when your computer i	is asleep.

You will be back to folder properties window. We have to turn off the <Password Protection>, click <Internet and Sharing Center>.

General Shar	ring Security	Previous Versions	Customize
Network File	e and Folder Sh	naring	
The second secon	ηp		
No.	ot Shared		
Network Pa	ath:		
Not Shared			
Share			
Advanced S	Sharing		
Set custom	permissions, ci	reate multiple shares.	and set other
			, and set outer
advanced s	haring options		
advanced s	sharing options anced Sharing.		
advanced s	sharing options anced Sharing.		
advanced s	sharing options anced Sharing. rotection		
Advanced s Adva Password P People with can access	sharing options anced Sharing. rotection out a user acc folders shared		or this computer
Advanced s	sharing options anced Sharing. rotection out a user acc folders shared this setting, us		or this computer
Advanced s	sharing options anced Sharing rotection iout a user acc folders shared this setting, us		or this computer
Advanced s	sharing options inceed Sharing, rotection out a user acc folders shared this setting, us	- ount and password fr with everyone. e the <u>Network and S</u>	or this computer
advanced s	sharing options anced Sharing, rotection iout a user acc i folders shared this setting, us	ount and password f with everyone. e th <u>Network and S</u>	or this computer

It will show <Network and Sharing Center / Advanced sharing settings> window, navigate to the last line to find <Password protected sharing> section, choose <Turn off password protected sharing>. Then you can click <Save changes>. Laser Tools & Technics Corp.

Correction of the state of the	- 🤣 Search Control Panel
 When Public folder sharing is on, people on the network, inc access files in the Public folders. What are the Public folders Turn on sharing so anyone with network access can Turn off Public folder sharing (people logged on to t folders) Media streaming When media streaming is on, people and devices on the net videos on this computer. This computer can also find media Choose media streaming options File sharing connections Windows 7 uses 128-bit encryption to help protect file sharing support 128-bit encryption and must use 40- or 56-bit encry Use 128-bit encryption to help protect file sharing co	cluding homegroup members, can it read and write files in the Public folders this computer can still access these twork can access pictures, music, and a on the network. ng connections. Some devices don't rption. onnections (recommended) encryption
When password protected sharing is on, only people who ha computer can access shared files, printers attached to this co other people access, you must turn off password protected s Turn on password protected sharing Turn off password protected sharing	ave a user account and password on this omputer, and the Public folders. To give sharing.
	Save changes Cancel

page 8/13

5.2. Setup the parameters in the main-controller.

You have to edit two cfg files in main-controller. Power off the laser machine and un-plug the CF card in the main-controller. Put it on a CF card reader to edit cfg files on your computer. You can use Notepad to edit it. Just be careful not to change the extension file name.

When you finish edition, put the CF card back to main-controller.

Please pay attention, when you put CF card back to main-controller. Make sure it is the same side up as default.

You can find a machine main configure file. This file name is different for each model of laser machine.

Machine Model	Main parameter extension CFG file
ILS-3NM	ILS-3NM.CFG
V2000	V2000.CFG
V3000	V3000.CFG
ILS-3V	ILS-3V.CFG
i3000adv	I3000ADV.CFG
i4000adv	I4000ADV.CFG
SLC-M	ILS-SLC.CFG
SLC-M+	SLC-MP.CFG
SLC-D2+	SLC-D2.CFG



Open the cfg file by Notepad and find a parameter named network=0, change it to network=1 and save the file. It will activate the network function. If you need the log function, you can add a line lttlog=1 to open the log function.

The second cfg file (LTTNET.cfg)which defines the name and IP for main-controller and the computer. Here is an example of <LTTNET.cfg> in the main-controller ..

LOCALcomputername=ILS-0001

LOCALIPAddress0=192.168.0.115

SERVERcomputername=PNB

SERVERIPAddress=192.168.0.105

SERVERShareDir=tmp

Local computer means the main-controller.

Server computer means the computer you will share folder to store prn/plt files and log file.

According to the above information, it means the computer name is <PNB>, and its IP is <192.168.0.105>, and the shared folder is <tmp>.

These settings will show at LCD menu <2.FILE MANAGER> / <Net Status>.

Please pay attention, the computer name, IP address and shared folder must be the same as your settings on the computer.



5.3. Connect and test

You can follow 1.3 and 1.4 to connect the laser machine and the computer. Before you boots the machine, please make sure all RJ45 cables are connected correctly.

You can put some prn/plt files in the shared folder.



Keep your computer is on and then boot the machine.

You can go to laser machine LCD menu <1. WORK DISPLAY>, left result is ok, right result is failed.



Sometime it will need more time to build the first time connection.

You can re-boot laser machine again.

Connect with a switch (solution #1) seems works easily.

This network only supports WORKGROUP network, it does not support Domain network.

6. Different settings in other Windows

6.1. Windows XP

There is a little different on change shared folder properties. Click the following item.





Enable File Sharing If you enable sharing on this computer without using the Network Setup Wizard, the computer could be vulnerable to attacks from the Internet. We strongly recommend that you run the Network Setup Wizard to protect your computer. Use the wizard to enable file sharing Use the diagram Use the diagram



There is no password protection for Windows XP.

6.2. Windows 8.1/10

The setting process is very similar. The only difference is <Password protected sharing> setting.

When you go to <Network and Sharing Center / Advanced sharing settings>. Pull down <All Networks>, navigate to the last line to find <Password protected sharing> section, choose <Turn off password protected sharing>. Then you can click <Save changes>.



page 12/13

**	Advanced sharing settings – 🗖 🗙
©	↑ 💐 « Network and Sharing Center → Advanced sharing settings v C Search Control Panel ρ
	Change sharing options for different network profiles
	Windows creates a separate network profile for each network you use. You can choose specific options for each profile.
	Private 🕢 🕥
	Guest or Public (current profile)
	Network discovery
	When network discovery is on, this computer can see other network computers and devices and is visible to other network computers.
	Ium on network discovery Turn off network discovery
	File and printer sharing
	When file and printer sharing is on, files and printers that you have shared from this computer can be accessed by people on the network.
	Turn on file and printer sharing
	O Turn off file and printer sharing
	All Networks
	🚱 Save changes Cancel



7. FAQ

- 7.1. Connection failure
 - A. Check all your cables connect properly.
 - B. Go to laser machine and navigate LCD menu to <2.FILE MANAGER> / <Net status>. Check the setting of network is mapping with laser machine and computer.



- C. Close your anti-Virus software of your computer, sometime it will stop the sharing.
- D. Make sure your computer is a WORKGROUP network, not Domain network.
- E. If you use a RJ45 cable to connect directly laser machine and computer (solution #2), please check the RJ45 cable is a crossover type. Or you can try solution #1.
- F. For some older laser machine firmware, you may need to change your subnet mask to 255.255.0.0 in your computer.
- 7.2. If the connection is failed during working, what will happen?When the connection is failed during working, the main-controller will hang without any action. You have to reconnect them again, and reboots machine again.
- 7.3. Can I use USB port to transfer file to laser machine again? When your laser machine is setup for network function, you still can use USB port to transfer file to machine. But you have to unplug the network connection, and then you can use USB port to transfer file to machine again.
- 7.4. I can run file successfully on network, but there is no log file showed in shared folder. Please check there is a line lttlog=1 in the machine cfg file. If you already add the line in it, and it still not work. The firmware version may not support this function, you can contact with LTT for further help.

CAYIN Tech | Connect a SMBv1Device via Windows 10 System