Instruction of Network Setting

Version: Reviewing Author: Alvin Liu Revised date:

Version Update Record

No.	Description	Date	Author	Version
01	Reviewing		Alvin Liu	1.0
02				
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1. Preface

When controller connects to network, it needs a PC to provide and share the resource file, and let controller access that resource file. This PC is called as a file server. This PC needs set up a related network protocol, and also creates an account to access data, so controller can link to the PC correctly.

2. PC Setting

2.1 XP OS

A. Guest account setting

"Start" => "Setting" => "Network connections"



B. Click on "Local Area connection" =>right click on "Properties"



C. Click on "Internet Protocol [TCP/IP]"

🕂 Local Area Connection Properties 🛛 🔹 🛛
General Authentication Advanced
Connect using:
Intel(R) GD82559ER PCI Adapter
This connection uses the following items:
 Client for Microsoft Networks File and Printer Sharing for Microsoft Networks QoS Packet Scheduler Internet Protocol (TCP/IP)
I <u>n</u> stall Uninstall Properties
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
 Show icon in notification area when connected Notify me when this connection has limited or no connectivity
OK Cancel

D. Select "Use the following IP address" and fill in "IP Address" and "Subnet mask", for example, input "IP Address" such as 210.20.98.20, "Subnet mask" such as 255.255.255.0.

Internet Protocol (TCP/IP) Prope	rties 🛛 🛛 🔀
General	
You can get IP settings assigned autor this capability. Otherwise, you need to a the appropriate IP settings.	natically if your network supports ask your network administrator for
O Dbtain an IP address automatically	y
O Use the following IP address: —	
<u>I</u> P address:	210 . 20 . 98 . 20
S <u>u</u> bnet mask:	255.255.255.0
Default gateway:	· · ·
O D <u>b</u> tain DNS server address autom	atically
Ouse the following DNS server add ■	resses:
Preferred DNS server:	
Alternate DNS server:	· · ·
	Ad <u>v</u> anced
	OK Cancel

E. Right click the folder you want to share and select "Sharing and security"



F. Click "If you understand security risks but want to share files without running the wizard, click here".



G. Click "OK" to confirm sharing setting

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 (Recommended) Just enable file sharing
	OK Cancel

H. Select "Share this folder on the network", key in folder name and click "OK".



2.2 VISTA OS setting

A. Create a sharing folder, and change this folder's setting to offer controller to use, as the below figure.

Network File and Folder Sharing public Shared Network Path: \\TRUONGTHO-PC\Users\TRUONGTHO\Desktop\public Share Advanced Sharing Set custom permissions, create multiple shares, and set other advanced sharing options. Advanced Sharing Password Protection People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the <u>Network and Sharing Center</u> .		Security	Previous Versions	Customize
public Shared Network Path: \\TRUONGTHO-PC\Users\TRUONGTHO\Desktop\public Share Advanced Sharing Set custom permissions, create multiple shares, and set other advanced sharing options. Image: Advanced Sharing Password Protection People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the Network and Sharing Center.	Network File and	d Folder Sh	naring	
Network Path: \\TRUONGTHO-PC\Users\TRUONGTHO\Desktop\public Share Advanced Sharing Set custom permissions, create multiple shares, and set other advanced sharing options. Advanced Sharing Password Protection People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the <u>Network and Sharing Center</u> .	public Share	d		
\\TRUONGTHO-PC\Users\TRUONGTHO\Desktop\public Share Advanced Sharing Set custom permissions, create multiple shares, and set other advanced sharing options. Advanced Sharing Password Protection People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the <u>Network and Sharing Center</u> .	Network Path:			
Share Advanced Sharing Set custom permissions, create multiple shares, and set other advanced sharing options. Advanced Sharing Password Protection People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the <u>Network and Sharing Center</u> .	\\TRUONGTH	0-PC\User	s\TRUONGTHO\De	sktop/public
Advanced Sharing Set custom permissions, create multiple shares, and set other advanced sharing options. Advanced Sharing Password Protection People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the <u>Network and Sharing Center</u> .	Share			
Password Protection People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the <u>Network and Sharing Center</u> .	advanced shari	ng options. d Sharing.		
People without a user account and password for this computer can access folders shared with everyone. To change this setting, use the <u>Network and Sharing Center</u> .	States and s			
To change this setting, use the <u>Network and Sharing Center</u> .	Password Prote	ction		
	Password Protect People without can access fold	ction a user acc lers shared	ount and password fo with everyone.	or this computer
	Password Protect People without can access fold To change this	ction a user acc lers shared setting, use	ount and password fo with everyone. e the <u>Network and S</u>	or this computer haring Center.

bridi e fidirie				
public	1	7		
l imit the our	mber of simul	Laneous users	to: ~	
	noer of sinus		20. 20	
Comments:				

B. TCP/IP Setting, click "STAR" => "Setting" => "Network and Dial-up connections" => double click "Local Area connection" => "Properties"

Connection —		
IPv4 Connec	tivity:	Internet
IPv6 Connec	tivity:	No Internet access
Media State:		Enabled
Duration:		01:16:41
Speed:		100.0 Mbps
Details		
Details		0.000
Details	Sent —	Received
Details	Sent — 136,695	Received 224,982

C. Double click "(TCP/IPv4)" and setting "IP address" and "Subnet mask", For example: IP: 10.10.1.121. Subnet mask: 255.255.255.0

eneral								
You can get IP settings assigned a this capability. Otherwise, you ne for the appropriate IP settings.	automatically ed to ask yo	y i bui	f yo r ne	ur tw	net ork	ad	ork su Iminisi	pport trator
🔘 Obtain an IP address autom	atically							
() Use the following IP address								
IP address:	10		10	4	1	÷	121	
Subnet mask:	255		0	•	0	•	0	
Default gateway:		•		Q.		×		
Obtain DNS server address a	automatically	1						
• Use the following DNS serve	r addresses:	-						
Preferred DNS server:								
Alternate DNS server:		•		•		3		
Validata pottingo unos quit					ſ	1	duan	red

2.3 Win7 OS

A. Resource file sharing setting, click "Start" => "Control Panel"



B. Click "Network and Internet" => "Network and Sharing Center"



C. Click "Change adapter settings"

🚱 🕤 🧟 📽 🕺 Network and Int	ernet 🔸 Network and Sharing Center	✓ 49 Search Control Panel
Control Panel Home Manage wireless networks Change adapter settings Change advanced sharing settings	View your basic network information ALVIN-PC (This computer) View your active networks Syntec_2F Work network Change your networking settings Set up a new connection or network Set up a new connection or network	and set up connections See full map
See also HomeGroup Internet Options Windows Firewall	 Connect to a network Connect or reconnect to a wireless, wi Choose homegroup and sharing option Access files and printers located on other Troubleshoot problems Diagnose and repair network problems 	ired, dial-up, or VPN network connection. ons ther network computers, or change sharing settings. is, or get troubleshooting information.

D. Right click "Local Area connection" and select "Properties"

						×
🚱 🔾 🗢 🖳 « Netw	vork and Internet 🕨 Network	Connections 🕨	▼ 4 7	Search Network	Connections	٩
Organize 🔻 Disab	le this network device Di	agnose this connection	Rename this con	nection »		0
區域連線 Network cab Atheros AF	Disable Status Diagnose Bridge Connections Create Shortcut Delete Rename Properties	無線網路連線 Syntec_2F Intel(R) WiFi Link 10	10 BGN			

E. Double click "Internet Protocol Version 4 (TCP/IPv4)"

connect using:		
Atheros AR813	31 PCI-E Gigabit Etherne	t Controller (NDIS (
		Configure
This connection uses	the following items:	
Client for Mic	rosoft Networks	
Virtual PC N	etwork Filter Driver	
QoS Packet	Scheduler	
File and Print	ter Sharing for Microsoft	Networks
Internet Prot	ocol Version 6 (TCP/IP)	(6)
🗹 斗 Internet Prot	ocol Version 4 (TCP/IP)	(4)
and the second sec	opology Discovery Map	per I/O Driver
🗹 📥 Link-Layer T		ander
 ✓ Link-Layer T ✓ Link-Layer T 	opology Discovery Resp	bonder
Link-Layer T	opology Discovery Resp Uninstall	Properties
 ✓ ▲ Link-Layer T ✓ ▲ Link-Layer T Install 	opology Discovery Resp Uninstall	Properties
 ✓ ▲ Link-Layer T ✓ ▲ Link-Layer T Install Description Transmission Contr 	Opology Discovery Resp Uninstall	Properties
Link-Layer T Link-Layer T Install Description Transmission Contr wide area network	opology Discovery Resp Uninstall of Protocol/Internet Prot protocol that provides c	Properties
Link-Layer T Link-Layer T Install Description Transmission Contr wide area network across diverse inte	opology Discovery Resp Uninstall of Protocol/Internet Prot protocol that provides of rconnected networks.	Properties

F. Setting the IP address, Subnet mask and then click "OK"

eneral				
'ou can get IP settings assigne his capability. Otherwise, you or the appropriate IP settings	ed automatically if need to ask your	your ne networ	etwork sup k administ	oports rator
Obtain an IP address auto	omatically			
Ose the following IP address	ess:			
IP address:	10 .	10 . 1	. 20	
Subnet mask:	255.2	55 . 25	5.0	
Default gateway:		818	8	
Obtain DNS server addres	ss automatically			
Our of the second se	ver addresses:			
Preferred DNS server:	1.			
Alternate DNS server:			8	
m validata anti-	at		Advan	ced

G. Create a sharing folder, right click on the folder and select "Share with" => "Specific people"

H. Change the Setting for sharing this folder for everyone, and then click "Share" as follows.

Choose people to share v	with			
Tune a name and then click Add	or click the arrow to t	find comeone		
Type a name and then click Add,	, of click the arrow to	lind someone.		
				Add
Alvin			Le	vel
Evervone			1	
Create a new user				
and everyone			cou	

I. Sharing option setting, click "Start" => "Control Panel" => "Network and Internet"

J. Click "Choose homegroup and sharing options"

K. Click "Change advanced sharing settings..."

				-	X
Control Panel Network and Internet Home	iroup 👻	49	Search Control Panel		9
Share with other home computers runni	ng Windows 7 , puter's network location ith other computers ru d with a password, and	n must nning you'll	: be set to Home. Windows 7. You can also always be able to choose		
	Creat	e a ho	megroup OK		

L. Select "Turn off password protected sharing" and "Use user account and passwords to connect to other computers"

F	ile sharing connectio	ns				
	Windows 7 uses 1 support 128-bit e	L28-bit encryption to help ncryption and must use 4	protect file sharing 0- or 56-bit encrypt	connectio on.	ons. Some devices don't	
	⊚ Use 128-b ⊙ Enable fil	oit encryption to help prot e sharing for devices that	tect file sharing con use 40- or 56-bit en	nections (i cryption	recommended)	
Р	assword protected sł	naring				2
	When password p computer can ac other people acco	protected sharing is on, or cess shared files, printers ess, you must turn off pas	nly people who have attached to this con sword protected sha	e a user ac nputer, an aring.	count and password on this d the Public folders. To give	
	🔘 Turn on p	bassword protected sharin	g			
	Turn off p	password protected sharir	ng			
н	lomeGroup connecti	ons				
	Typically, Windo same user accour account instead.	ws manages the connections and passwords on all on <u>Help me decide</u>	ons to other homeg of your computers, y	roup com rou can ha	puters. But if you have the ave HomeGroup use your	
	🔘 Allow Wii 💿 Use user a	ndows to manage homeg accounts and passwords t	roup connections (r connect to other o	ecommer computer:	nded) s	
Public	-				🕑	0

3. Controller setting

3.1 DOS system setting

- A. On the interface screen, press **"F6 Param."** => **"F10 Next page"** => **"F3** Network setting" => **"F1 Net Dir setting"**
- B. **CNC Name:** Key-in the controller name, if you have more than two controllers, key-in different names for each.
- C. **IP address:** Key-in the IP address that has not been used.
- D. Net Mask: Key-in the Net mask (the same value with your computer subnet mask).
- E. **PC Name:** Key-in the full computer name (must match your PC name)
- F. **Dir Name:** Key-in the name in sharing folder (the same with your computer).

Network setting								
CNC setting								
CNC Name CNC-1								
IP Address	10	10	1	21				
Net Mask	255	255	255	0				
Remote PC setting								
PC Name YOUNG								
Dir name	PUBL	Adv						

Network setting								
CNC setting	CNC setting							
Workgroup	Horkgroup SYNTECCLUB							
Disable DHCP 1 0:0pen, 1:Close								
ResetPassword 1:Reset								
Remote PC setting								
CNC User GUEST								
PC Password								
Fail retry	0			Std				

- G. Press "Page Down" to login the second page
- H. Workgroup: type the PC you want to connect (must match setting in the PC)
- I. **Disable DHCP**: Select "close" if select "specify an IP address" and "open" if select "Obtain an IP Address via DHCP"
- J. CNC user: key-in "GUEST"
- K. Press **"F1 OK"** and reboot the controller to finish installation.

3.2 CE system setting

- A. On the interface screen, press down "F6 Parameter" => "F10 Next Page"
 => "F3 Network Setting" to access IP address setting.
- B. **IP Address Setting**: select "Specify an IP Address" when the PC connects with controller directly. And select "Obtain an IP Address via DHCP" if using network connection via Dynamic Host Configuration Protocol
- C. **IP Address**: if you select "Specify an IP Address", key in the IP address which matches your PC IP.

Network Setting							
IP Address Parameter							
IP Address Setting		V					
IP Address Specify an Obtain an I	IP Address Specify an IP Address Obtain an IP Address via DHCP						
Subnet Mask	Primary DNS						
Default Gateway	Primary WINS						
Network D	iskRemote Host Path						
PC Name	Dir Name						
User Name	Password						
Net Status Code : -1							
Resource Shared							
Shared Folder Path							

- D. **Subnet mask**: key-in the IP address for subnet mask (the same with PC subnet mask).
- E. **PC Name**: key-in the full computer name of your PC.
- F. **Dir Name**: key-in the sharing folder name(the same name with PC sharing folder)
- G. Press **F1 OK**, and then reboot controller to finish installation.

Network Setting							
IP Address Parameter							
IP Address Setting			Specify an IP Addr	ess 🔻	r		
IP Address	10.	0.10.1.35 Name Server Parameter					
Subnet Mask	255.2	255.255.0	Primary DNS		-		
Default Gateway			Primary WINS		-		
		Network Dis	skRemote Host Path				
PC Name		ABC	Dir Name	CNC			
User Name			Password		-		
Net Status	Net Status Code : -1						
	Resource Shared						
Shared Folder Pa	Shared Folder Path						

4. UTP cable (RJ45 port) Production Method

4.1 General network cable (with HUB)

From the front view of RJ45 port, the arrangement of eight lines from left to right is orange and white, orange, green and white, blue, blue and white, green, brown and white, brown. The sending and receiving ports are the same.

4.2 Jumper Cable (without HUB)

From the front view of RJ45 port, the arrangement of eight lines from left to right of sending port is orange and white, orange, green and white, blue, blue and white, green, brown and white, brown. The order in the receiving port is green and white, green, orange and white, blue, blue and white, orange, brown and white, brown.

5. Solve network connection problems

- Error 52: A duplicate workgroup or computer name exists on the network
- \checkmark There are two controllers with a same name in a same network domain.
- Error 53: The computer name specified in the network path cannot be located.
- \checkmark The computer you want to connect does not boot.
- \checkmark The computer name or share directory setting is incompatible with the controller.
- ✓ Computer's IP address and subnet mask are not conformity with the content of the above sections.
- ✓ If the PC connection uses the domain, please change it to a workgroup, and after the connection is successful, it needs to change back to the domain.
- ✓ If these above possibilities have been excluded, please use the emergency stop condition (shutting down driver behind extreme power supply) and try again to check whether interference is reason.
- Error 7361: IPX or NetBIOS must be running in order to load the network.

- \checkmark The IP address of the controller is the same with the other controllers.
- 6. How to manually modify the networking batch file
- I The computer connection name and sharing directory C:\cncnet.bat

Example	Illustration
<pre>@C:\NET\net initialize</pre>	Computer connection name: young
@path=%PATH%;C:\NET;	Sharing directory: public
	Computer connection password: cnc
<pre>@C:\NET\net start</pre>	
<pre>@C:\NET\net use n: \\young\public cnc</pre>	

II Computer connection name TCP/IP setting C:\NET\PROTOCOL.INI

Example	Example
	IP address: 10.10.1.21
[TCPIP]	Subnet mask: 255.255.255.0
NBSessions =6	DHCP function
SubNetMask0 =255 255 255 0	: 0 open ; 1 close
IPAddress0 =10 10 1 21	
DisableDHCP =1	
DriverName =TCPIP\$	
BINDINGS =A\$E100B	
LANABASE =0	

III The setting of controller name and workgroup C:\NET\SYSTEM.INI

Example	Explanation
[network]	Controller name: CNC
filesharing =no	Users: GUEST
printsharing =no	Workgroup: SYNTECCLUB
autologon =yes	
computername =CNC	
lanroot =C:\NET	
username =GUEST	
workgroup =SYNTECCLUB	
reconnect =yes	
dospophotkey =N	
lmlogon =0	
logondomain =SYNTECCLUB	
preferredredir =basic	

autostart =basic	
maxconnections =8	