Application Notes How to use FTP Server Function

FTP Server Function

FTP (File Transfer Protocol) is a method for exchanging files over a TCP-based network.

FTP communications allows users to transfer files between the HMI and a PC without having to load the IDEC HMI software on the PC.



Below are the steps on how to use the FTP function by using FileZilla along with the WindOI-NV4.

1) In WindOI-NV4, click on "Configuration" and "Project"

			9 (*) Ŧ			-		
•	Home	Confi	iguration	Online \	/iew Format				
Project	Alarm Log	123 Data Log	Operatio n Log	Data Storage Area	Preventive Maintenance	Recipe	S Global Script	User Accounts	
			2	System Setup				Protect	
Project						1 v			



2) In the Project Settings, select "Communication Interface" tab and enter your HMI IP address along with the Subnet Mask.

torface Configuration		Interface Settings	
Interface	Function	© <u>O</u> btain an IP address au	itomatically (DHCP)
SERIAL1(RS232C)	External Device Communication 1	Use the following IP additional equipation of the second secon	dress:
SERIAL1(R5422/485)	N/A	ID Address:	192 168 104 36
Ethernet	N/A	IF Address.	152.100.101.00
Protocol1	N/A	<u>S</u> ubnet Mask:	255.255.255.0
Protocol2	N/A	Default Catavar	
Protocol3	N/A	Default Gateway:	0.0.0.
Protocol4	N/A	Forbid Maintenance Cor	mmunication
Protocol5	N/A		
Protocol6	N/A		
Protocol7	N/A	When Protocol is N/A, those	e settings are for Maintenance communication.
USB2(USB-A)	N/A		
USB(USB-B)	N/A		

3) Then, select "FTP Server" tab. Enable the checkbox "Enable FTP Server Function". The default port number is 21. Select either "Value" or "Device Address" for a timeout period in "Inactivity Timeout", is the time to automatically disconnect the connection when there is no communication between the FTP client and HMI after login to the HMI. Click OK to continue.

System Communication Interface Communication Driver Communication Driver Network (Autorun Compatible (Web Server) FTP Server (External Memory Device 4) Port Number: 21 Inactivity Imeout: Specify Target: USB Flash Drive Location:	Project Settings	2	X
Port Number: 21 Port Number: 21 Inactivity Timeout: Image: The second s	System Communication Int	erface Communication Driver Communication Driver Network (Autorun Compatible Web Server F IP Server (External Memory Device	4 ▶
Port Number: 21 Inactivity Timeout: Image: Specify Target: Location: USB Flash Drive	Enable <u>F</u> TP Server functi	ion	
Inactivity <u>Timeout</u> ◎ <u>Value</u> 15 minutes © <u>Device Address</u> Specify Target: Location:	Port Number:		
© <u>D</u> evice Address	Inactivity <u>T</u> imeout:	● Value 15 💭 minutes	
Location:		© Device Address	
	Specify Target:	USB FlashDrive	
	<u>L</u> ocation:		
OK Cancel		OK Can	cel



4) As an option to monitor the ftp connection, create a Pilot Lamp on the base screen and assign LSM58 as shown below. The LSM 58 is a special internal relay bit to store the connection status for the FTP connection. It will turn on if the connection is made.

Properties of Pilot Lamp		8 ×
General View Registration Te	t Trigger Condition Comment	
Lightning		
Trigger Type: Device Address:	While ON Data Type: UBIN16(W) [LSM 58]	
<u>C</u> omment:		

5) Download the entire project by selecting "Online" \rightarrow "Download"

Download		2 ×
Communication Settings Communication with: Port:	MICRO/I USB	Change
Download Data ⓐ <u>A</u> ll ⓒ <u>M</u> odified Data Only		
 Download Runtime system Download Standard Fonts Clear Keep Devices Download following files to Experises 	and <u>O</u> ptional Fonts eternal Memory Device	
Dicture Files		ownload Cancel

- 6) Visit <u>https://filezilla-project.org</u> to download a free FTP client software package and install this on your PC.
 - Open FileZilla
 - Go to File \rightarrow Site Manager ...



File	Edit View Transfer Server Bookmarks	Help Nev	w versio
	Site Manager	Ctrl+S	
	Copy current connection to Site Manager		sword
	New tab	Ctrl+T	
	Close tab	Ctrl+W	
	Export		
	Import		
	Show files currently being edited	Ctrl+E	
	Exit	Ctrl+Q	

7) In "Site Manager" dialog box, click on "New Site" to create a new item.

Select "General" tab, enter the following information as shown below. Make sure to enter the HMI IP address in "Host" area and the port #. In this case, the default port # is 21. The User and Password depends on what is set in Administrator or Operator group of Security Function in WindOI-NV4. If the Security Function was not enabled, then enter "User" for User and for the "Password" leave it blank.



Site Manager			B Dati same	X			
Select Entry:		General Ad	vanced Transfer Settings Charset				
		Host:	192.168.104.36	Port: 21			
New site	2	Protocol:	Protocol: FTP - File Transfer Protocol 🔹				
		Encryption:	Only use plain FTP (insecure)	•			
		Logon Type:	Normal	_			
		User:	User				
		Password:					
		Background Comments:	color: None 🔻				
New Site	New Folder			*			
New Bookmark	Rename						
Delete	Duplicate			T			
			Connect OK	Cancel			

Select "Advanced" tab, and enable the checkbox "Bypass proxy"

Select Entry:	
Wy Sites	General Advanced Transfer Settings Charset Server Type: Default (Autodetect) Ø Bypass proxy Default local directory: Ø Default remote directory: Ø Use synchronized browsing Ø Directory comparison
New Site New Fold New Bookmark Rename	Adjust server timezone offset:
Delete	Connect OK Cancel



belect Entry:	General Advanced Transfer Settings Charret
New Site	General Advanced Transfer Settings Charset Transfer mode: Default Active Passive Limit number of simultaneous connections Maximum number of connections: T T
New Deelwared Demande	
New bookmark Rename	

Select "Transfer Settings" tab, enable the checkbox "Limit number of simultaneous Connections"

8) Click the "Connect" button to connect to the FTP server. If the connection between the client and server is made, the successful status messages will be shown as below.

🔁 New site -	FW lance functions					
File Edit	View Transfer Server Bookmark	s Help New version available!				
1 - I Field - Contraction - Co						
Host:	Username:	Password:	Port: Qui	ckconnect 💌		
Status:	Connecting to 192.168.104.36:21					
Status:	Connection established, waiting f	or welcome message				
Status:	Server does not support non-ASC	II characters.				
Status:	Logged in					
Status:	Retrieving directory listing					
Status:	Directory listing of "/" successful					

Note: In the FTP server, the A drive is the SD card, and the B drive is the USB flash drive.

Local site: C:\HGDATA01\NVDATA\	Remote site: /
WINDATA WINDATATA WINDATATA WINDATATATATATATATATATATATATATATATATATATAT	8- 3 /
Filename Filesize Filetype Last modified	Filename Filesize Filetype Last modified Permissions Owner/Gro
	A File folder 10/22/2016 1:3 B File folder 10/22/2016 1:3 File folder 10/22/2016 1:3

9) To transfer the file from the local site (PC) to the remote site (HMI) or vice versa, simply left-click and drag the file from the local site to the Remote site or vice versa. The file transfer will begin.



When the file transfer is completed, the successful status messages will be shown in FileZilla's information window as below.

Rew site -	User@192.168.104.36 - FileZilla			17 Jan 1	and an international state			- 0 ×
File Edit V	iew Transfer Server Bookmarks H	elp New version availabl	el					
1 - 1		R 7 N						
Host:	Username:	Password:	Port:	Quickconnect 💌				
Status: Status: Status: Status: Status: Status:	Retrieving directory listing Directory listing of */" successful Retrieving directory listing of */A" Directory listing of */A" successful Starting download of /A/aaa.ZNV File transfer successful, transferred 2,60	82,232 bytes in 1 second						^
Local site: C	HGDATA01\NVDATA\				Remote site: /A			•
Ð	MVDATA Picture CURE SOUND USRDAT Intel MATS							
Filename	Filesize Filetype	Last modified			Filename	Filesize Filetype	Last modified Permission	ns Owner/Gro
)	2,582,232 ZNV File	10/18/2016 13127_			Da Tadoni HODATadi P P0 Interestation project01.ald	File folder File folder File folder 2,652,222 z2WFile 1,368 ZLD File	4/18/2013 7:44 2/8/2012 12:58 2/2/2012 12:58 7/18/2012 4:25 7/18/2012 4:25	
Selected 1 file.	Total size: 2,682,232 bytes				Selected 1 file. Total size: 2,682,232 bytes			
Server/Local 1 C:\HGDA C:\HGDA C:\HGDA C:\HGDA	Direction Remote ft TA01\NVDATA\L <<	ile ATA01/DATALOG/LO ATA01/DATALOG/LO CH 256 COLOR TFT.ppt NV Sefere (4)	Size Priority 1,215,189 Normal 1,215,189 Normal 249,344 Normal 2,682,232 Normal	Time 10/18/2016 12:38:57 PM 10/18/2016 12:45:00 PM 10/18/2016 12:45:48 PM 10/18/2016 1:31:27 PM				-
Queueu files	successful transiers – Successful tra	(4)						E Bell Queuer empty
@	5 📔 🙆 🔼	(<u>s o</u> m.	💺 🚻 🔁 🔕 🔍	New JA	EN 🔺 🛛	Queue enpty 3 0 5

For detailed information on the FTP function, please refer to the user's manual.

Specifications of the FTP Server

Command	Function
User name	The user name configured in the running project. (Default: User)
Password	The alphanumeric password of 4 to 15 characters long configured in the running project. If a password is not set, leave the password blank.
Port No.	20, 21
Number of simultaneously connectable clients	1



HMI Special Data Registers and Special Internal Relays

LSD 248	The bit changes to 1 when transferring file from FTP client (PC) to USB Flash Drive on HMI with FTP. The bit automatically changes to 0 when the transfer is finished. Bit 2 : CSV file(Recipe data) Bit 4 : ZNV file(Project file) Bit 5 : JPG file, JPEG file, JPE file, JFIF file or BMP file (Picture file) Bit 8 : WAV file (Sound file) Bit 9 : ZLD file (PLC program file) Bit 10 : MP4 file (Movie File) Bit 15 : Other file
LSD 249	The bit changes to 1 when transferring file from FTP client (PC) to SD Memory Card on HMI with FTP. The bit automatically changes to 0 when the transfer is finished. Bit 2 : CSV file(Recipe data) Bit 4 : ZNV file(Project file) Bit 5 : JPG file, JPEG file, JPE file, JFIF file or BMP file (Picture file) Bit 8 : WAV file (Sound file) Bit 9 : ZLD file (PLC program file) Bit 10 : MP4 file (Movie File) Bit 15 : Other file
LSM 58	Stores the connection status for FTP client (PC) and the FTP server (HMI) set to the Ethernet interface.
LSM 59	When this bit is turned from 0 to 1, the connections for the FTP client (PC) and the FTP server (HMI) set to the Ethernet interface are forcibly disconnected.

