

F&F Filipowski sp.j. ul. Konstantynowska 79/81 95-200 Pabianice POLAND phone/fax 42 -2152383) 215 23 2270971 e-mail: fif@fif.com.pl

RS-485->Ethernet [TCP/IP] converter

CN-ETH-485



USER MANUAL [device configuration for MeternetPRO]

version 190820PL

www.fif.com.pl



PURPOSE

The converter enables access to the RS-485 serial port from any computer in the local network, and when the IP is shared on the Internet also from any computer in the world connected to the Internet. It also acts as a serial port server. The communication carried out TCP, UDP, DHCP, and other is via protocols. The available software allows you to create a virtual serial port on your PC and access the serial interface of the ATC-1000 converter attached anywhere on the network just like the local COM port of that PC. This converter has a wide range of power supply options: 9-24 VDC.



OPERATING MODES

- Server
- Client

Server:

a. LAN Local Area Network



The MeternetPRO server initiates a connection to the converter with a static IP address.

b. Remote communication over the Internet





The MeternetPRO server initiates a connection to the converter to a public IP address for a location with the converter. Forwarding the request on the router to the designated communication port of the converter.

Client:

a. LAN Local Area Network



The converter initiates a connection to the MeternetPRO server with a static IP address.

b. Remote communication over the Internet



The converter initiates a connection to the MeternetPRO server to a public IP address for a location with the server. Forwarding the request on the router to the designated communication port of the MeternetPRO server.

FEATURES

- DB-9 socket, male from the RS-232 side
- 6-clamp terminal for RS-422/485 and power supply
- RJ-45 Ethernet socket
- 10/100TX network interface
- support for TCP/IP, UDP, DHCP protocols
- 9-24 V DC power supply (socket power supply included)



TECHNICAL DATA

```
Converter:
  RS-232/422/485 -> TCP/IP
Terminals:
  RS-232
                 DB9 male
  RS-422/485
                 1.0mm<sup>2</sup> screw terminals
                 RJ45
  Ethernet
LED indicators::
  Link
                  Ethernet connection indication [green LED]
  ACT
                 data exchange indication
  PWR
                 9-24 V DC [500-1000 mA] power supply
Dimensions:
   WxHxD [mm] 84x105x26
```



CONNECTION

Configuration 1 (Straight)

Connection to the local network via the switch.



Configuration 2 (Cross-Over) Direct connection to PC.



COMMUNICATION

1. Select the method of converter connection - configuration 1 or 2.

2. Configure network connection on PC.

Control panel -> Network and sharing center -> Local connection ->

💡 Stan: Połączenie lokalne 2	X	Właściwości: Połączenie lokalne 2	Właściwości: Protokół internetowy w wersji 4 (TCP/IPv4)	? X
Ogóine		Sieć Udostępnianie	Ogóine	
Połączenie Połączenia IPv4:	Internet	Połącz, używając: R Realtek PCIe GBE Family Controller #2	Przy odpowiedniej konfiguracji sieci możesz automatycznie uzysk niezbędne ustawienia protokołu IP. W przeciwnym wypadku mu uzyskać ustawienia protokołu IP od administratora sieci.	iać isz
Polączenia II-vici Stan nośnka: Czas trwania: Szybkość: Szczegóły	Brak dostępu do Internetu Wiączone 19:47:07 1,0 Gb/s	Konfguru_ To polączenie wykorzystuje następujące składnic: W Ment saci Microsoft Networks W Ment mach Microsoft Networks W Ment	Unyskay adres IP automatycznie Użyj następującego adresu IP: Adres IP: 192 , 168 , 168 , 1 Maska podsłeci: 255 , 255 , 255 , 0 Brama domyślna: .	
Wysłano — Bajty: 12 081 20 Właściwości Wyka	- Odebrano 05 51 656 380 cz Diagnozuj	(z) - response ou spyrel is toplogi visitivi (4c28 Zainstalu Odmitalu Odmitalu Wiladowości Obie Posości kontrol transmej /Protokó i retemetowy (TCP/IP), Domyśny potokóći da seci rożeglych, umoźwający komunikację polączonych seci różnych typów.	Utyrwa ores server DIS automatyczne Utyru atwork of the automatyczne Utyru atwork of the advantacy of the a	owane]
	Zamknij	-> OK>	ОК	Anuluj





PC settings:

IP address: 192.168.2.2 to 254

Subnet mask: 255.255.255.0

IP address of the converter: 192.168.2.1

3. Open your web browser and enter the converter address

http://192.168.2.1 Accept with ENTER.
4. The login window will open. Enter the default user name and password. User: admin Password: system

5. The converter configuration interface will open in the browser window.

CONFIGURATION

(for operation with MeternetPRO system)

Administration Setting – setting of network parameters

□ 192.168.0.14/login.htm	× 014/login.htm		
Administrator Setting TCP Mode	Administrator Setting		
<u>UART</u> <u>Reset Device</u>	Kernel Version	V1.43 2010/01/21	
	MAC Address	00:11:22:59:6E:93	
	Nickname	NetUART	
	IP Setting		
	IP Address	192 . 168 . 0 . 14	
	Subnet Mask	255 . 255 . 255 . 0	
	Gateway	192 . 168 . 0 . 1	
	IP Configure	Static DHCP	
	Password Setting		
	Username	admin max:15	
	Password Confirm	max:15	
	Update		
	Load Default Setting to EEPROM	Load	
	Note: Nickname only can use "0-9","a-z","A-Z","_","-"	·	

Nickname:	- name of the device.
IP address	- setting the IP address of the local network for the converter and the parameters of the network in which the converter will operate.
Subnet mask Gateway	After setting a new address and saving the changes, the connection to the converter will be terminated. New connection according to new network settings.
IP Configure	- network connection mode. Select Static.
Username	- user name.
Password	- access password.
Update	 confirmation of the changes made to the configuration.
Load Default	 return to factory settings – press Load.

Site:	192.168.0.14	
ID:	admin	
Passwo	rd:	



TCP mode – TCP protocol settings

() 192.168.0.14/login.htm	× +	- 🗆 X	
	192.168.0.14/login.htm	🕶 🚖 🧒 K 🗄	
Administrator Setting TCP Mode UDP Mode UABT	TCP Control		
Reset Device	Item	Value	
	Telnet Server/Client	● Server ○ Client ◎ Disable	
	Port Number	1000	
	Remote Server IP Address	37	
	Client mode inactive timeout	90 Second (1~6000,0=Disable)	
	Server mode protect timeout	90 Second (1~6000,0=Disable,9999=Can't replace)	
		Update	
Tolant Server	notwork connection	mode Select the appropriate communication option: SED//ED or CLIENT	
Port Number	- converter network	port number. Set an individual number in the given network.	
Remote Server IP	- for CLIENT operating mode: IP address of the master device with which the converter		
	establishes commun	cation.	
Client mode	 for the Client operating mode: setting the timeout interval [sec] for waiting for data, after which the connection to the Server device will be closed and a new connection to the Server device will be established. Set the timeout approximately 1.5 times greater than the quer interval of the Slave devices by the MeternetPRO system, for example query interval = 60 sec 1.5; timeout = 90sec. for the Server operating mode: setting the timeout interval [min] for waiting for data, after which the connection to the Client device will be closed and the waiting for a new request from the Client device will start. Set the timeout approximately 1.5 times greater than the quer interval of the Slave devices by the MeternetPRO system, for example query interval = 60 sec 1.5; timeout = 90sec. 		
Server mode			

Update

- confirmation of the changes made to the configuration



UDP mode – UDP protocol settings

192.168.0.14/login.htm ×			
← → C 🗋 192.168.0	0.14/login.htm		
Administrator Setting TCP Mode UDP Mode UART	UDP		
Reset Device	Item	Value	
	Status	Enable Disable	
	Local Port	0	
		IP	Port
		0.0.0.0	0
		0.0.0.0	0
		0.0.0.0	0
		0.0.0.0	0
	Remote Address	0.0.0.0	0
		0.0.0.0	0
Status	- set Disable		

Status Local Port Remote Address Update

- no settings

t Address

- no settings

- confirmation of the changes made to the configuration

UART – Modbus communication settings

S 192.168.0.14/login.htm	× +	- o x
← → ⊂ △ ○ N	iezabezpieczona 192.168.0.14/login.h	tm 💁 🛧 🤕 K 🗄
Administrator Setting TCP Mode UDP Mode UART Reset Device	UART Control	
	Item	Setting
	Mode	RS485 *
	Baudrate	9600 🔻
	Character Bits	8 •
	Parity Type	none 🔻
	Stop Bit	1 •
	Hardware Flow Control	none 🔻
	Delimiter	Character 1:00 , Character 2:FF Silent time:5 (1~255)*10ms Drop Character
		Update

Mode

Baudrate Character bits Parity Type Stop bits Hardware Flow... Delimiter Update - Modbus communication network type. Select RS485.

- Modbus transmission rate. ->
 data bits. ->
- parity control.
 stop bits.
- flow control. ->

Set the transmission parameters according to the device parameters of the given Modbus branch and the communication interface of the MeternetPRO Data Inputs.

- select Multi-Packet. Other settings unchanged.
- confirmation of the changes made to the configuration.

->



CHANGES

After entering the settings in a given tab, press the Update button.

Update

The following message will appear



Reset

Accept the changes by pressing the Reset button. The following message will appear



Press OK.

In case of changes outside the IP address, the login window will open again. If you change the IP address of the converter, enter a new one in the browser and call the login window.

RS-485 NETWORK CONNECTION

Terminal 1: A(+) Terminal 2: B(-)

RESET - RETURN TO FACTORY SETTINGS

- * turn off the power supply
- * unscrew the side screws and remove the housing
- * press the button next to the RJ45 connector
- * while holding the button, turn on the power supply and hold it above 5 seconds
- $\ensuremath{^*}\xspace$ turn off the power, put the housing back on and turn on the power again
- * the converter will be available at the default IP address