Advantech Equipment

AMC-5810 Ethernet to Serial Converter

Installation Guide

XD

485-2w

121

DIP Switch

TITLE

RS-232/422/485

Reset Ethernet

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Ethernet to Serial Converter

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CHAPTER 1 INTRODUCTION

The AMC-5810 is an Ethernet to serial RS-232/422/485 converter. The device provides Ethernet communication with 10/100Mbps, the serial interface RS-232/422/485 configuration with webpage management and the DIP switch for position terminator or biasing resistor on the RS-485/422 communication network, the digital input (DI) and digital output (DO) channels for logic control or event trigger.

TYPICAL APPLICATIONS

Most of the enterprise and government use access control plate and Mifare or RFID to authorize the entrance identity. With traditional deploy, access control machine use RS-232 or RS-485 serial interface and cables connect to login server. With connection to AMC-5810 Ethernet to Serial Converter, the access control can be set and monitored over the internet.



AMC-5810 **Ethernet to Serial Converter**

ADVANCED APPLICATIONS

To monitor, configure and manage the Robot conveyer including other machines in a manufacturing, PLC (Programmable Logical Control) is required. The PLC is used to drive above the manufacturing machines process. AMC-5810 can be set to TCP Server mode and connect the PLC. The administrator can configure and set command settings through Fast Ethernet intranet to control the PLC, the administrator and workstation. There is no need to be always sets by the side of the I/O machine.



Using AMC-5810 Ethernet to Serial Converter can oversee and scanner to the control keyboard/joystick which is installed in the remote monitor center.



CHAPTER 2 SPECIFICATIONS

FORM FACTOR







- 1. Main power input, 12~48 Vdc
- 2. Dip switch(set terminator and biasing resister)
- 3. DB9 Male RS/232/422/485 Port
- 4. Wall-mount or Din-Rail kits fixed position
- 5. 3 channel Digital Output (DO), 3 channel Digital Input (DI)
- 6. Reset button
- 7. Ethernet RJ45 10/100M socket

Status LED indicators

<u>LED</u>	<u>Color</u>	<u>Indicates</u>
ACT	Blinking	Ethernet Network operating
TxD/RxD	Green	Communication Data Transferring
	Red	Communication Data Reciving
RS-232	Green	Select the RS-232 communication interface
RS-422	Green	Select the RS-422 communication interface
RS-485-4w	Green	Select the RS-485-4w communication interface
RS-485-2w	Green	Select the RS-485-2w communication interface

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DB9 Pin Define

DB9-PIN	<u>RS-232</u>	<u>RS-422/485 4W</u>	<u>RS-485 2W</u>
1	DCD	TX-	-
2	RxD	TX+	-
3	TxD	RX+	Data+
4	DTR	RX-	Data-
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-
9	-	-	-

RS-232/422/485



RS-232:



RS-485 2 Wire:

PCIPLO	2	CMC-581
)	
00	Data+	Data+
0	Data-	Data-
ં	Gnd	GND 🖉 🔍
0	J	0

RS-485 4W/RS-422



Ethernet to Serial Converter

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Ver. 1.00

DIP Switch Define

DIP Switch	<u>Status</u>	Description
SW-1	ON	RS-485 4W TX+/- Terminal Resistor 120 ohm
SW-2	ON	RS-485 4W RX+/- Terminal Resistor 120 ohm
		RS-485 2W Data+/- Terminal Resistor 120 ohm
SW-3*	ON*	RS-485 4W RX+/- Biasing Resistor 1K ohm
		RS-485 2W Data+/- Biasing Resistor 1K ohm
SW-4*	ON*	RS-485 4W RX+/- Biasing Resistor 1K ohm
		RS-485 2W Data+/- Biasing Resistor 1K ohm
SW-5	ON	RS-232 Echo (TX>RX)

Dohm Dohm n



*SW-3 and SW-4 must be all ON or all OFF.

Reset button

Press button time	Description
Shortly	Reboot
15 second	Reset to default



DI/DO Pin Define

<u>DI/DO Pin</u>	Description
1	DI_0
2	DI_1
3	DI_2
4	DI_GND
5	DO_0
6	DO_0_GND
7	DO_1
8	DO_1_GND
9	DO_2
10	DO_2_GND





FEATURE LIST

Model Name	AMC-5810		
Ethernet Interface			
Number of Ports	1	Compliance	IEEE 802.3/3u compliant
Connector	RJ45	Speed	10/100Mbps
Magnetic Protection	1.5 KV	Indicator	Act
Webpage and Protocol S	Support		
Protocol	ARP,ICMP,TCP/IP,HTTP,UDP,DHCP, Telnet, and SMTP	Webpage	Serial mode configuration, Firmware upgrade, DI/DO setting
DI/DO Interface			
DI	3-channel digital input	DO	3channel,150mA sink-type and overcurrent protection
Connector	Terminal block 5.0mm	Isolation	2.5KV between system and DI/DO
Connector: DB9 male			-
Interface selection	setting by internal jumpers	Terminator and Biasing functions	setting by internal jumpers
RS-232 signals	DCD, RxD, TxD, DTR, GND, DSR, RTS, CTS, RI	RS-422 signals	TxD+, TxD-, RxD+, RxD-, GND
RS-485 4-wire signals	TxD+, TxD-, RxD+, RxD-, GND	RS-485 2-wire	Data+, Data-, GND
Indicator	Green for TxD, Red for RxD	Definition of pin-out	DB-9
Connection Distance			
SW-1	A terminator between TxD+ and TxD-	SW-2	A terminator between RxD+(Data+) and RxD-(Data-)
SW-3, SW-4	2 biasing resistors for RS-485 network communication	SW-5	RS-232 Loop back test
Connections			
Ethernet	200 meters	RS-232	15 meters (50 feet)
RS-422	1200 meters (4000 feet)	RS-485 2w/4w	1200 meters (4000 feet),Max.32 nodes
ESD Protection and Iso	lation		
ESD Protection	ESD Contact 8KV, Air 15KV embedded Isolation 2.5KV between system and RS-232/422/485		2.5KV between system and RS-232/422/485
Performance			
Baud rate	300 to 230400bps		
Serial Parameters			
Data bits	5, 6, 7, 8	Stop bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark	Flow control	RTS/CTS, XON/XOFF
Physical Characteristics	;		
Housing	SECC sheet metal (1mm), IP30 protection	Dimension	74 x 24.7 x 99 mm (W x H x D)
Weight	275 g		
Environment Operating			
Operating Temperature	0 ~ 70°C (32°F ~ 158°F)	Operating Humidity	20 ~ 85% @40°C, non-condensing
Storage Temperature	-20 ~ 85°C (-4°F ~ 185°F)	Storage Humidity	10 ~ 90% @40°C, non-condensing
Power Requirements	Power Requirements		
Power Input	12 ~48Vdc	Consumption	110mA@24Vdc

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CHAPTER 3 INSTALLATION

INSTALL THE CONVERTER

How to install your AMC-5810. The hardware installation of AMC-5810 Ethernet Serial Converter does not need software configuration. Please follow the below steps to install your AMC-5810 on a desktop or wall:

Step 1: Turn off the device power /station in a network to which the AMC-5810 will be attached.

Step 2: Ensure that there is no activity in the network.

Step 3: Attach RJ-45 cable from the AMC-5810 to the network.

Step 4: Attach RS-232/RS-485 cable from the AMC-5810 to the want to connect devices.

Step 5: Connect the DC power to the AMC-5810 and verify that the interface lights up.

Step 6: Turn on the device power/station; the interface LED (Green) should be light if all cables are attached.

(Default is RS-232).



CHAPTER 4 MANAGEMENT

How to manage the AMC-5810:

- Overview
- Management methods
- Assigning an IP address to the AMC-5810
- Logging on to the AMC-5810

OVERVIEW

This chapter gives an overview of converter management. The AMC-5810 provides a simply **WEB browser** interface.

Using this interface, you can perform various converter configuration and management activities, including:

- Administrator
- TCP Mode
- UDP Mode
- UART
- SMTP
- DIDO
- Reset Device

Please refer to the following Chapter 5 for more details.

REQUIREMENTS

- Hardware Installation detail refer to the Chapter 3
- Network cables.

For AMC-5810: Use standard network (UTP) cables with RJ45 connectors.

- Subscriber PC installed with Ethernet NIC (Network Card)
- Workstations of subscribers running Windows 98/ME, NT4.0, 2000/2003/XP, MAC OS X or later, Linux, UNIX or

other platform compatible with TCP/IP protocols.

Above PC installed with WEB Browser, such as Microsoft Internet Explore or Google Chrome

LOGIN THE MEDIA CONVERTER

The way to manage the AMC-5810:

Web Management access through a network or dial-up connection. Before using the AMC-5810 web interface to manage setting operation, please make sure AMC-5810 is installed on network correctly, and each PC or Device on this network can access AMC-5810 via the web browser.

Setup note:

- 1. Ensure that your network interface card (NIC) is operational
- 2. Supports the TCP/IP protocol. (Which part)
- 3. Confirm AMC-5810 interface LED power on (Default is RS-232).
- 4. Ethernet Cable connects AMC-5810 to computer or device.
- 5. The AMC-5810 default IP address is "192.168.2.1".
- 6. Change your computer or device IP address to 192.168.2.x. (x from 1 to 254, except 127)
- 7. Use web browser to access AMC-5810 Web Management.

Follow as bellow step to access management page of AMC-5810.

Step1 Set IP address of network adapter on PC



Network Connections

IPv4 Properties



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Step2 Open web browser and set IP address at URL to enter login page. Default IP is **"192.168.2.1"**. Enter Name & Password to access AMC-5810 web page. Default ID/Password is admin/system.

P 102169.21				×
	▲ 19216821		÷ 0	:
	± 152.100.2.1		×	•
	Site: ID: Password:	11X 192.168.2.1 admin 		
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	× 2			×)
Administrator TCP Mode	System Statu	\$		
UDP Mode	Kernel Version	V1.44.11 2016/10/18		
UART	MAC Address	C4:7C:8D:70:00:0B		-
<u>SMTP</u>	Nickname	AMC-5810 Update		
Reset Device	Note: Comment name o	only can use "0-9","a-z","A-Z","_","-"		

AMC-5810

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CHAPTER 5 WEB CONFIGURATION

MAIN MENU

After login successful, the main screen displays the converter System Status page as below:

192.168.2.1 >>			-	
← → C ① 不安全 19	92.168.2.1			┦☆ 21 :
Administrator <u>TCP Mode</u>	System Status			
UDP Mode	Kernel Version	V1.44.11 2016/10/18	3	
UART SNITE	MAC Address	C4:7C:8D:70:00:0B		
DIDO	Nickname	AMC-5810	Update	
	Note: Comment name only c	an use "0-9", "a-z", "A-Z", "_", "-		

As listed at the left of the main screen, the configurable smart functions are shown as below:

Administrator –	Check the hardware, software version and System MAC address and IP address	
	of the converter. And the password changed firmware upgrade.	
TCP Mode –	Setup the TCP mode of the converter.	
UDP Mode –	Setup the UDP mode of the converter.	
UART –	Setup the serial port value of the converter.	
SMTP –	Setup the SMTP value of the converter.	
DIDO –	Setup the DI/DO status of the converter.	
Reset Device –	System reboot.	

				Ethernet to S	AMC-5810 Serial Converter
ADMINISTRATOR-	AUTHENTICATION (CONFIGURAT	ION		
The Authentication Cor	nfiguration page provide	es administrator	to secure W	eb login.	
← → C ① 不安全 192	2.168.2.1/login.htm				₽☆ 🗷 :
Administrator	Authentication Con	figuration			
Configuration System IP	Ethernet to Serial Convert Ethernet to Serial Convert NISTRATOR-AUTHENTICATION CONFIGURATION thernet to Serial Convert INTEREST Configuration configuration Configuration Configuration Value Setting Value Value </td <td></td>				
Configuration System Status Load default setting	Username Password Confirm	admin	max:15 max:15		
Firmware update Boot Loader upgrade			Update		
TCP Mode UDP Mode UART SMTP DIDO Reset Device	Note: Comment name only can us	e "0-9", "a-z", "A-Z"			
192.168.2.1/setPASS.htm					
The page includes the t	following configurable d	ata:			

• **Password:** Specifies the new password. The password is not displayed. As it entered an "•" corresponding to each character is displayed in the field.

(The maximum length is 15 characters)

Confirm This confirms the new password. The password entered into this field must be exactly the same as the password entered in the Password field.

ADMINISTRATOR-SYSTEM IP CONFIGURATION

The System IP Configuration page provides information for the current device. System Info page helps a network manager to identify IP setting etc.

192.168.2.1/login.htm ×		
← → C ① 不安全 192	2.168.2.1/login.htm	9☆ 🗷 :
Administrator	System IP Con	figuration
Authentication Configuration	Setting	Value
<u>Configuration</u>	IP Address	192 . 168 .2 .1
192168.21/login.htm ×	255 .255 .255 .0	
Load default setting Firmware update	Gateway	192 .168 . 2 .254
Boot Loader upgrade	DNS	0.0.0
TCP Mode	IP Configure	Image: Second state Image: Second state<
UART	VLAN Tag	Disable Enable : VLAN ID 0001 (Hex:0x01~0x0FFE)
● 192168.21/login.htm × ← → C ① 不安全 192.168.2.1/login.htm		
DIDO		
<u>Reset Device</u>		
192.168.2.1/setIP.htm		

The page includes the following configurable data:

•	IP Address:	The current IP Address of the device. The IP Address could be manual
		assigned. The factory default value is 192.168.2.1.
Ð	Subnet Mask:	The current IP Subnet Mask setting on the device. The factory default value is 255.255.255.0.
•	Gateway:	The default gateway for the IP interface. The factory default value is 192.168.2.254.
Ð	DNS:	The DNS for the device. The factory default value is 0.0.0.0.
	IP Configure:	The IP type for the device. The factory default value is Static.
	VLAN Tag:	Setup the VLAN Tag for the device. The factory default is Disable.

ADMINISTRATOR-SYSTEM STATUS

The System Status page provides information for the current device. System Info page helps a network manager to identify the versions, mac address and model name.

192.168.2.1/login.htm ×				
← → C ③ 不安全 192	2.168.2.1/login.htm			¶☆ 团 :
Administrator	histrator system Status infiguration MAC Address vad default setting MAC Address rmware update MAC-5810 vot Loader upgrade Note: Comment name only can use "0-9", "a-z", "A-Z", "_,"-" Vote: Comment name only can use "0-9", "a-z", "A-Z", "_,"-" Do Update			
Authentication Configuration System IP	Kernel Version	V1.44.11 2016/10/18		
Configuration System Status	Nickname	AMC-5810	Update	
Load default setting Firmware update Boot Loader upgrade TCP Mode UDP Mode UART SMTP DIDO Reset Device	Note: Comment name only ca	n use "0-9", "a-z", "A-Z", "_", "-"		

The page includes the following fields:

- Kernel Version: The current kernel version on the device.
- MAC Address: Specifies the device MAC address.
- Nickname: Specifies the device Model Name. The factory default is AMC-5810.

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May 26, 2019

Ether	AMC-5810 net to Serial Converter
DAD DEFAULT SETTING TO EEPROM	
can reset the AMC-5810 back to the factory default mode.	
Ioad factory default setting to AMC-5810 EEPROM	
168.2.1/login.htm	
Reset	
	AD DEFAULT SETTING TO EEPROM can reset the AMC-5810 back to the factory default mode. Loss 21/login.htm Code factory default setting to AMC-5810 EEPROM. Loss 21/login.htm Code factory default setting to AMC-5810 EEPROM. Loss 21/login.htm



Reset button to save setting saved reset

192.168.2.1 ×	
← → C ① 不安全 192.168.2.1	१☆ 🗵 🗄
Administrator Authentication Configuration System IP Configuration System Status Load default setting Firmware update Boot Loader upgrade TCP Mode UDP Mode UART SMTP DIDO Reset Device	Back to login ok

Press ok to return to the login screen.

192.168.2.1/	login.htm ×		×
	不安全 192.168.2.1/login.htm	☆ ⊿	:
	USER LOG IN Site: 192.168.2.1 ID: Password: OK		
AMC-5810	Ethernet to Serial Converter		19
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ADMINISTRATOR-FIRMWARE UPDATE

The Firmware Update page contains fields for downloading system image files from the Local File browser to the device.

192.168.2.1/login.htm ×		
← → C ① 不安全 192.168.2.1/login.htm		₽☆
Administrator	Firmware update	
Authentication Configuration	Load	
System IP Configuration		
System Status		
<u>Firmware update</u>		
Boot Loader upgrade		
TCP Mode		
UART		
SMTP		
DIDO Reset Device		
192.168.2.1/fw_up.htm		

Press Load button to start firmware update.

192.168.2.1/login.htm ×	
← → C ③ 不安全 192	.168.2.1/login.htm 🕈 🖈 🗵 :
Administrator	Processing update now, please wait
Authentication Configuration	
<u>System IP</u> Configuration	
System Status	
Load default setting Firmware update	
Boot Loader upgrade	
TCP Mode	
UDP Mode	
UART	
<u>SMTP</u>	
DIDO	
Reset Device	
*	

When the button **Load** is pressed, flash will be erased .The Firmware update screen is shown below.

P Firmware Update ×	
← → C ① 192.168.2.1/index.htm	☆ 🗾
rase Flash (93/128) f this webpage doesn't refresh smoothly, please connect to <u>http://192.168.2.1</u> to continue.	

After erasing the flash, go to the select the image file update page.

Konstantion F/W Select the image file: ####/################################	$\epsilon \rightarrow c \square 19$	92.168.2.1/index.htm		☆ 13	:
K-2510 Ethernet to Serial Converter 2					•
AC-5810 Ethernet to Serial Converter 22		F/W			
AC-5810 Ethernet to Serial Converter 2		Select the image file: 選擇檔案 未選擇任何檔案 UPDATE			
AC-5810 Ethernet to Serial Converter 2		http://122.106.2.1			
AC-5810 Ethernet to Serial Converter 2					
1C-5810 Ethernet to Serial Converter 22					
IC-5810 Ethernet to Serial Converter 22					
1C-5810 Ethernet to Serial Converter 2					
1C-5810 Ethernet to Serial Converter 2.					
IC-5810 Ethernet to Serial Converter 22					
IC-5810 Ethernet to Serial Converter 22					
IC-5810 Ethernet to Serial Converter 22					
IC-5810 Ethernet to Serial Converter 22					
IC-5810 Ethernet to Serial Converter 2					
1C-5810 Ethernet to Serial Converter 22					
IC-5810 Ethernet to Serial Converter 2					
IC-5810 Ethernet to Serial Converter 2					
IC-5810 Ethernet to Serial Converter 2					
AC-5810 Ethernet to Serial Converter 2					
IC-5810 Ethernet to Serial Converter 2	L				
IC-5810 Ethernet to Serial Converter 2					
IC-5810 Ethernet to Serial Converter 2					
IC-5810 Ethernet to Serial Converter 2					
IC-5810 Ethernet to Serial Converter 2 reduct specifications are subject to change without notices Nav 26, 2010 Vor 1					
1C-5810 Ethernet to Serial Converter 2					
1C-5810 Ethernet to Serial Converter 2					
IC-5810 Ethernet to Serial Converter 2					
oduct specifications are subject to change without notices May 26, 2010 Vor, 1	IC-5810 Et	hernet to Serial Converter			21
	roduct specifications	are subject to change without notices	i i i i i i i i i i i i i i i i i i i	May 26, 2019	Ver 1

Click the 選擇檔案 button (Select file) of the main page, the system would pop up the file selection menu to choose firmware.

組合管理 ▼ 新増資	科夾				H · E	
★ 我的最爱		修改日期	類型	大小		and B
🚺 下載	AMC-5810-FW-APP-V1.2	2017/3/20下午 0	BIN 榴案	512 KB		
■ 桌面 3 最近的位置	AMC-5810-FW-V1.2	2017/3/20 下午 0	BIN 檔案	512 KB		
○ 煤題種 ③ 文件 ● 音樂 ■ 視訊 ■ 周片	=					
▲ 電腦 ▲ 本機磁碟 (C:) → 機磁碟 (D:) → 抽取式磁碟 (F:)						
	-					

Select on the firmware then click "Upgrade" . The firmware update may take 60 seconds.

Firmware Update	×	 	-	. 0	
\leftrightarrow \rightarrow C 🛈 192.16	8.2.1/index.htm				☆ 🖪 :
Uploading>>>>>					
上傅中 (49%)					
					The second se



The update end screen is as follows

Firmware Update ×	
← → C ① 192.168.2.1/index.htm	☆ 2. :
OK!	
Continue	

Press Continue button return to the login screen.

Note



Do not power off the converter until the update progress is complete.



Do not quit the Firmware Upgrade page without press the "Upgrade" button - after the image is loaded. Or the system won't apply the new firmware. Users have to repeat the firmware upgrade processes again.

ADMINISTRATOR-UPGRADE THE BOOT LOADER

The Upgrade the Boot Loader page contains fields for downloading Boot Loader image files from the Local File browser to the device.



Press Load button to start Boot Loader upgrade.

192.168.2.1/login.htm ×	
← → C ① 不安全 192	2.168.2.1/login.htm 🕈 🖈 🗵 :
Administrator	Processing update now, please wait
Authentication Configuration	
<u>System IP</u> <u>Configuration</u>	
System Status Load default setting	
Firmware update Boot Loader upgrade	
<u>TCP Mode</u> <u>UDP Mode</u>	
<u>UART</u> <u>SMTP</u>	
DIDO Reset Device	

When the button **Load** is pressed, flash will be erased .The Boot Loader upgrade screen is shown below.

Firmware Update ×	
← → C ③ 192.168.2.1/index.htm	☆ 🔼
Erase Flash (93/128) If this webpage doesn't refresh smoothly, please connect to <u>http://192.168.2.1</u> to continue.	

After erasing the flash, go to the select the image file update page.

🕒 Boot Loader Upgrade 🗙		
← → C (i) 192.168.2.1/	index.htm	■ ☆ 区 :
	Boot Loader Upgrade by Web browser	
	Select the image file: 選擇檔案 未選擇任何檔案	
	Click "Update" to upload file: Update	
	Boot Loader Upgrade by TFTP	
	 There are two method to do the Boot Loader Upgrade: 1. (By Web)Please browse to or type in the target image file in the upper input field, and then press update button to continue. 2. (By TFTP client)Use MS Windows' Command Prompt window to run tftp client program. Syntax: c:\tftp -i 192.168.2.1 put FILE_DIRECTORY\FILENAME.bin 3. If the update process somehow goes wrong(like power failure), please connect to http://192.168.2.1 to restart.(If possible, reset device first.) 4. It takes about 30 seconds to complete the Boot Loader Upgrade. You'd better carefully read the document regarding the update procedure, preventing the unexpected problem form occurring. 	

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Click the 選擇檔案 button of the main page, the system would pop up the file selection menu to choose

Boot Loader file.

組合管理 ▼ 新増資料	科英				855 -	[]
☆ 我的最爱	名稱	修改日期	類型	大小		
100 下載	AMC-5810-FW-APP-V1.2	2017/3/20下午 0	BIN 榴案	512 KB		
■ 桌面 最近的位置	AMC-5810-FW-V1.2	2017/3/20 下午 0	BIN 檔案	512 KB		
○ 煤證櫃 文件 ● 音樂 ■ 視訊 ■ 岡片						
■ 電照 ▲ 本機磁碟 (C:) □ 本機磁碟 (D:) はたまだする (C)						
■ 抽取式磁碟 (F:)						

Select on the Boot Loader file then click "Upgrade". The Boot Loader upgrade may take 60 seconds. The update end screen is as follows.

Complete	×	8 - 0	x
\leftarrow \rightarrow C \bigcirc 1	92.168.2.1/cgi/firmwareUpdate.cgi	☆ 🛛	1 :
Update completed.	Please wait for its Restart.		
MC-5810 - F	thernet to Serial Convertor		2
		Mar. 26, 2012	2
oduct specifications are subject to change without notices May 26, 2019 Ve			

Return to the login screen.

192.168.2.1/login.htm ×		
← → C ① 不安全 192.168.2.1/login	htm	☆ <u>></u> :
	USER LOG IN	
	Site: 192.168.2.1 ID:	

• Note



Do not power off the converter until the update progress is complete.



Do not quit the Boot Loader Upgrade page without press the "Upgrade" button - after the image is loaded. Or the system won't apply the new Boot Loader file. Users have to repeat the Boot Loader upgrade processes again.

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TCP MODE

The TCP Mode page provides TCP Configuration for the current device. System Info page helps a network manager to setup Telnet, Data port number, Control protocol etc.

192.168.2.1/login.htm ×		
← → C ① 不安全 192	2.168.2.1/login.htm	₽☆ <u></u>
Administrator <u>TCP Mode</u> UDP Mode	TCP Control	
UART	Item	Value
<u>SMTP</u>	Telnet Server/Client	Server O Client Disable
<u>DIDO</u>	Reverse Telnet	○ On ● Off
Reset Device	CLI Mode	Enable
	Data Port Number	23
	Control Protocol	© RFC2217
	Remote Server IP Address	IP 210 . 200 . 181 . 102 Domain Name 0 .
	Client mode inactive timeout	20 minute (1~99,0=Disable)
	Server mode protect timeout	60 minute (1~98,0=Disable,99=Can't replace)
		Update

The page includes the following configurable data:

Telnet Server/Client:

Server mode

When the AMC-5810 is configured to TCP Server mode, it allows Serial device that connected to serial port of AMC-5810 to establish TCP communication over Intranet or Internet network between: It opens the TCP port of AMC-5810 to wait for serial application to establish a TCP connection. After the connection is established, data can be transmitted in both directions.

Client mode

When the AMC-5810 is configured to TCP Client mode, it allows Serial device that connected to serial port of AMC-5810 to establish TCP communication actively over Intranet or Internet network between. After the data has been transferred, the AMC-5810 can disconnect automatically from the Remote Host depends on the TCP Inactive timeout settings.

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Reverse Telnet

Reverse telnet. The factory default value is OFF.

CLI Mode

CLI Mode is the way that the user or client issues commands to the program in the form of successive lines of text (command lines). (The example will explain this feature)

Data Port Number

The TCP port that AMC-5810 uses to listen to connections and that other device must use to contact AMC-5810. To avoid conflicts with well-known TCP ports, the default is set to "23".

Control Protocol

Control protocol. The factory default value is Port Number: 6000.

Remote Server IP Address

Allow the AMC-5810 to connect actively to the remote host whose IP address is set by this parameter.

• Client mode inactive timeout

Use the parameter to set an inactive timeout. The unit drops the connection if there is no activity on the serial line before the set time expires.

• Server mode protect timeout

Use the parameter to set a protect timeout. The unit closes the connection if there is no activity on the serial line before the set time expires.

UDP MODE

When the AMC-5810 is configured to UDP Client mode, it allows Serial device that connected to serial port of AMC-5810 to quickly transmit data to multiple Remote Hosts over Intranet or Internet network by unicast or multicast. It also makes the Serial device to receive data from more than one Remote Hosts. The parameter defines the maintenance status for listen for the UDP connection. In UDP Client mode, you need to define the remote IP Address and Local listen port number.

192.168.2.1/login.htm ×				
← → C ① 不安全 192	2.168.2.1/login.htm		루☆ ↗	:
Administrator <u>TCP Mode</u>	UDP			•
<u>UDP Mode</u> <u>UART</u>	Item	Value		
<u>SMTP</u> DIDO	Mode Local Port	⊂ Listen ⊂ Normal ⊕ Disable		
<u>Reset Device</u>		IP	Port 0	
			0	
			0	
		• 0 . 0 . 0 . D IP Domain Name	0	
	Remote Address		0	
		• 0 . 0 . 0 IP	0	-

The page includes the following configurable data:

• Mode:

Setup the UDP mode. The factory default value is "disable" .

• Local Port:

Enter the local port number.

Remote Address:

Enter the IP address of the remote device.

• Remote Address Port:

Enter the remote port number of the remote device.

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UART

The page shows the converter serial Port configuration.

192.168.2.1/login.htm X				
← → C ① 不安全 192.168.2.1/login.htm				
Administrator <u>TCP Mode</u> UDP Mode	UART Control			
UART	Item	Setting		
<u>SMTP</u>	Mode	RS232 •		
DIDO	Baudrate	57600 🔻		
<u>Reset Device</u>	Character Bits	8 🔻		
	Parity Type	none v		
	Stop Bit	1 •		
	Hardware Flow Control	none 🔻		
	Flush Receive Buffer	🗆 Enable		
	Uart Memory Overflow count	0M,0K,0Byte		
	Uart FIFO Overflow count	Otimes		
		Character 1: 00, Character 2: FF		
	Delimiter	Silent time: 5 (1~255)*200ms		
		Drop Character		
		Update		

The page includes the following configurable data:

• Mode:

From the drop-down menu, select the serial port mode:

- RS-232
- RS-422
- RS-485
- RS-485_4W
- Baud rate:

The unit and attached serial device, such as a modem, must agree on a speed or baud rate to use for the serial connection, valid baud rates.

• Character Bits:

Indicate the number of the bits in a transmitted data package. The allowed value is 5,6,7,8

The default is "8".

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• Parity Type:

Check for the parity type. The default value is "none" .

• Stop Bit:

The stop bit follows the data and parity bits in serial communication. It indicates the end of transmission. The default is "1".

• Hardware Flow Control:

Flow control manages data flow between devices in a network to ensure it is processed efficiently. Too much data arriving before a device is prepared to manage it causes lost or retransmitted data.

XON/XOFF, RTS/CTS, DTR/DSR

The default value is "none" .

• Delimiter:

Character The **Character 1** and **Character 2** allow the use to enter two ASCII character (in hex format) that delimit the beginning and end of a message. When a message with both there delimiters is received at the serial port, the data contained in the serial buffer is paced in an Ethernet packet and sent out the Ethernet port.

Silent Time: For the defined period of time passed, the serial port stops data transmission and close the connection to remote host.

Drop Character: If the incoming data contain character 1 or character 2, the packet will be dropped

The default value is "disable"

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SMTP

SMTP is part of the application layer of the TCP/IP protocol. Using a process called "store and forward," SMTP moves your email on and across networks.

192.168.2.1/login.htm ×		
← → C ③ 不安全 192	2.168.2.1/login.htm	₽☆ 团 :
Administrator <u>TCP Mode</u>	SMTP setup	A
<u>UDP Mode</u> UART	Enable SMTP	Enable,Port: 25
SMTP	SMTP server address	umail.hinet.net
<u>DIDO</u> <u>Reset Device</u>	SMTP Login Information	Enable Username ,Password:
	Mail to	person1@awiselink.com;person2@awiselink.com;person 3@awiselink.com;cmc581@awiselink.com
	Mail from	cmc581@awiselink.com
	GPIO 01 Warning Subject Message Body GPIO 10 Warning	20 00 00 body 20 20 20 20 20 20 20 20 20 20 20 20 20
	Subject	01

The page includes the following configurable data:

• Enable SMTP:

Setup SMTP Enable or disable. The factory default is "disable" .

• SMTP server address:

Setup SMTP server address.

• SMTP Login Information:

SMTP login information.

• Mail to:

Setup the mail recipient.

• Mail from:

Setup the mail sender.

• GPIO Warning:

Set GPIO status to send with SMTP.

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DIDO

AMC-5810 provides DI/DO to user. The following page is DI/DO status. 🔺 🗖 🗖 📈 🗅 192.168.2.1/login.htm 🗙 ← → C ① 不安全 | 192.168.2.1/login.htm 🍷 🕁 📃 : DIDO Administrator TCP Mode UDP Mode 5000 Submit Port <u>UART</u> PIN Name Value(0 or 1) Direction **SMTP** DI_0 IN 1 1 **DIDO** IN 2 DI_1 1 Reset Device 3 DI_2 IN 1 4 DO_0 OUT 1 5 DO_1 OUT 1 6 DO_2 1 OUT Update Reflash

The page includes the following configurable data:

• Port:

AMC-5810 uses the TCP port to listen DI/DO Configuration. The factory default value is 5000.

• DI:

Show Current DI status of the device.

• DO:

Set DO status of the device.





RESET DEVICE

This page is a reboot page.

192168.21/login.htm	192.168.2.1/	/login.htm ×				
Read Device Read Read reboot device. After reboot back to login page.	\leftrightarrow \Rightarrow C ()) 不安全 192	2.168.2.1/login.htm			የ 🕁 🗷
o reboot device. After reboot back to login page.	Administrator <u>TCP Mode</u> <u>UDP Mode</u> <u>UART</u> <u>SMTP</u> <u>DIDO</u> <u>Reset Device</u>				Reset Device Reset	
o reboot device. After reboot back to login page.						
Back to login ok						
	Reset b	Jutton to r	reboot device. Aft	er reboot back	to login page.	
	Reset b 192.168.2.1/4 $\leftarrow \rightarrow C$ (1) Administrator TCP Mode UDP Mode UDP Mode UART SMTP DIDO Reset Device	Dutton to r /login.htm ×) 不安全 192	reboot device. Aft	er reboot back	to login page. Back to login ok	
	s Reset b 192.168.21/4 $\leftarrow \rightarrow C$ (1) Administrator <u>TCP Mode</u> <u>UDP Mode</u> <u>UART</u> <u>SMTP</u> <u>DIDO</u> <u>Reset Device</u>	Dutton to r /login.htm x) 不安全 192	reboot device. Aft	er reboot back	to login page. Back to login ok	

SOFTWARE VCOM UTILITY

The AMC-5810 Ethernet to Serial Converter provides software for Converter smart function configuration when the Converter operation mode on "Virtual COM". - They can be configured through the Console. Two function groups are provide to easy used, can search device and create virtual COM to view as the console port.

This program can search AMC-5810 Series devices; it will show information of the device. And user can use VCOM function creates virtual com port for user using. Users can send data by virtual com port, and virtual com port will transfer data to Ethernet by windows socket. While VCOM got data from Ethernet, it will transfer data to virtual com port by virtual com component.

The VCOM is an integrated software suite that bundles Device Server Administrator and IP Serial Library, and provides something you need to monitor your AMC-5810 from a remote location.

Installing the VCOM Utility

1. Once the Setup program starts running, click "**Next**" when the Welcome window opens to proceed with the installation.



2. Click Finish to complete.



3. To run the VCOM utility on the computer.

💸 VCOM3.6.7				- 0 ×
Main Exit Search by IP Cor	nfigure Web			
Utilities		Device Info-	1 Device(s)	
□ 22 VCOM	No	Device ID	Device Name	Project Na
COM Mapping	1	0001	AMC-5810	NetUART
Message Log- Device Info Message	ge Log- VCOM Info			
上午 10:59:48 1 d	evice(s) searched.			
Now: 2017/10/26 上午 11:00:39				

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Search the Device

Click the Search Device button to find the AMC-5810. It will show the AMC-5810 device name, project name, MAC address, IP address, Sub Mask, Gateway and the connect port number.

1. Click the shortcut of VCOM on the desktop to run the VCOM program.

2. Click "Search" button in Search Device tab. If any AMC-5810 series device is on the LAN, it will show the device name in the tree report. While user clicks the device name, it will show device information in the list report.

→ VCOM3.6.7					
Main Exit Search by Sea	urching				
Utilities	Searchin Find 1 (g for Devices Device(s); Pleas	e wait a few seconds.	Stop	Project Na NetUART
	No	Device Name	MAC Address	IP Address	
	1	AMC-5810	C4-7C-8D-70-00-08	192.168.2.1	
	14	m	1		-
Message Log- Device Info Me	ssage Log- V	COM Info			
上午 11:14:49 上午 11:17:37 上午 11:17:44	1 device(s) 1 device(s) 1 device(s)	searched. searched.			^ ^
Now: 2017/10/26 上午 11:24	4:40				

Virtual COM

This function should be set the AMC-5810 operation mode to "Virtual COM" on the Web.

Choose to create port like below:

- 1. Click "COM Mapping".
- 2. Press "Add" button go to Add VCOM page.
- 3. Select device.
- 4. Setup configuration of "Virtual COM".
- 5. Click "OK" button to create new virtual com port and establish telnet connection.

₩ VCOM3.6.7	dd VCOM				
Main	du reem				
				Rescan	
	No	Device Name	MAC Address	Search IP Address	_
Utilities	1	AMC-5810	C4-7C-8D-70-00	192.168.2.1	
VCOM					Server/Cli
		m	1	•	
Message Log- Device Info	Server/Client IP Address COM	С Server (Ф 192.168.2.1 СОМ (З) — — — — — — — — — — — — — — — — — — —	Client Local Port Remote Port	23	, ,
上午 11:14:49 上午 11:17:37 上午 11:17:44 Now: 2017/10/26 上午 11	1	second(s) for reconr	nection interval.	X Cancel	

6. Once the Virtual COM Port- COM3 connection is established, from the Windows Device Manager, a COM Port is added to the device list.



Note

AMC-5810 Supported VCOM 3.6 utility for Windows2000/XP/2003/2008/Vista/Windows 7 (X86 /X64) (using Eltima VSP Component)

EXAMPLE: USE PUTTY TO CONNECTION TCP/IP

Putty is a program that you can use to connect to other computers, Telnet sites, online services, and host computers, using your modem, a null modem cable, a Console cable or Ethernet connection.



The users want to use the TCP Server mode to connect to a Ethernet Switch via Putty, Winsock mode

1. Setup TCP Mode and UART Mode of AMC-5810

2. Putty set up a new connection with the TCP/IP Winsock

Setup TCP Mode and UART Mode of AMC-5810

1. Login to AMC-5810 WEB.

Site: 192.168.2.1 ID: admin Password:	

2. From the WEB interface, set the TCP mode of AMC-5810 to "TCP Server", CLI Mode to "Enable" and set the TCP Port Number to "23".

192.168.2.1/login.htm	×			
← → C ① 不安全	192.168.2.1/login.htm	१☆ 🛃 :		
Administrator <u>TCP Mode</u>	TCP Control			
UDP Mode UART	Item	Value		
SMTP	Telnet Server/Client	Server ○ Client ○ Disable		
DIDO Barret Daniar	Reverse Telnet	○ On [®] Off		
<u>Reset Device</u>	CLI Mode	✓ Enable		
	Data Port Number	23		
	Control Protocol	© RFC2217		
	Remote Server IP Address	● IP 210 . 200 . 181 . 102 ● Domain Name		
	Client mode inactive timeout	20 minute (1~99,0=Disable)		
	Server mode protect timeout	60 minute (1~98,0=Disable,99=Can't replace)		
		Update		

3. Set the UART Configuration of AMC-5810 as below:

192.168.2.1/login.htm ×		2-728-8878	
← → C ① 不安全 192	2.168.2.1/login.htm		₽☆ M :
Administrator	UART Control		A
TCP Mode			
UART	Item	Setting	
<u>SMTP</u>	Mode	RS232 V	
DIDO Dest Design	Baudrate	9600 🔻	
<u>Reset Device</u>	Character Bits	8 🔻	
	Parity Type	none 🔻	
	Stop Bit	1 •	
	Hardware Flow Control	none 🔻	
	Flush Receive Buffer	🗆 Enable	
	Uart Memory Overflow count	0M,0K,0Byte	
	Uart FIFO Overflow count	Otimes	
		Character 1: 00, Character 2: FF	
	Delimiter	Silent time: 5 (1~255)*200ms	
		Drop Character	•

Putty set up a new connection with the TCP/IP Winsock

- 1. Open Putty.
- 2. Enter the AMC-5810 IP address (192.168.2.1) Port (23).
- 3. Click Open to open Putty connect AMC-5810.

Category:		
Session	Basic options for your PuT	TY session
⊡ ·· Terminal ⊡ ·· Terminal Keyboard	Specify the destination you want to o Host Name (or IP address)	connect to Port
Bell Features ⊟ Window	192.168.2.1 Connection type: ◯ Raw	SSH Serial
Appearance Behaviour Translation Selection	Load, save or delete a stored session Saved Sessions	n
Colours ⊡ Connection □ Data □ Proxy □ Telnet □ Rlogin □ SSH	Default Settings	Load Save Delete
Serial	Close window on exit: Always Never Only	y on clean exit
About	Open	Cancel

4. Then go to Putty telnet screen.

P 192.168.2.1 - PuTTY	
	*
	· · · · · · · · · · · · · · · · · · ·





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CHAPTER 6 CLI (COMMAND LINE)MODE

Users can use api commands to remote the AMC-5810. The following introduce how to use.

GET AND SET DIO

1. Open terminal program telnet 192.168.2.1 port 5000 (default)

Administrator	DIDO			
TCP Mode				
UDF Mode	Port		5000	Submit
SMTP	PIN	Name	Value(0 or 1)	Direction
DIDO	1	DI_0	1	IN
Reset Device	2	DI_1	1	IN
	3	DI_2	1	IN
	4	DO_0	1	OUT
	5	DO_1	1	OUT
	6	DO_2	0	OUT

AMC-5810

Property
Communication Parameter Terminal File Transfer Capturing
Protocol: TCP TCP Parameters
Type: 💿 Client 🔿 Server
IP version: IPv4
Host name/Dest. IP: 192.168.2.1
Dest. port: 5000
Local port: 0
(O for any)
Default

AMC-5810' s DI0~DI2 \rightarrow Pin1~3

AMC-5810′ s DO0~DO2 → Pin4~6

Pro <u>f</u> ile <u>E</u> dit	Port Manager Window Help		
CP Client 01:1 02:1 03:1 04:0 05:0 06:0	(192.168.2.1:5000) Dumb Terminal		
Status: Connect	Ready	ΤΧ:0	RX:36

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GET DIO COMMAND

Send Pattern Data Pattern Start Send ● ASCII st ▼ Cancel ○ HEX 73740D C Range (Hex) Start: To: ○ File Count C Send until user break Repeat count: 1 Interval time: 1000 (100ms ~ 60000ms) 🔽 Set all ports to send pattern simultaneously 🙀 PComm Terminal Emulator - TCP Client (192.168.2.1:5000) Dumb Terminal Pro<u>f</u>ile <u>E</u>dit <u>P</u>ort Manager <u>W</u>indow <u>H</u>elp 🛃 🖬 🕅 🚰 🍃 🗺 🐺 Brk 🛛 🔊 28 HEX 📸 TCP Client (192.168.2.1:5000) Dumb Terminal 01:1 Â 02:1 03:1 04:0 05:0 06:0 RX:36 Status: Connect Ready TX:3

•	Functions:	Get DIO
•	Command:	'st' +0x0d → HEX: 73740D
•	Return:	Pin= 1~6 →AMC-5810 DI0~2, DO0~2
		Status = 1: high, 0: low

AMC-5810 Ethernet to Serial Converter

SET DO COMMAND

Send Pattern			
Data Pattern O ASCII + 0 4 0 * • HEX 773034300D	Start Send Cancel		
C Range (Hex) Start: To:			
O File			
Count			
Send until user break			
O Repeat count: 1			
☐ Interval time: 1000 (100ms ~ 60000ms)			
🗖 Set all ports to send pattern simultaneously			

•	Functions:	Set DO
•	Command:	'w0' +Pin+State+0x0d → HEX: 773034300D
•	Example:	AMC-5810' s DO0=Low \rightarrow Pin 4 low \rightarrow HEX: 773034300D
		AMC-5810′s DO0=High →Pin 4 high → HEX: 773034310D
		AMC-5810' s DO1=Low \rightarrow Pin 5 low \rightarrow HEX: 773035300D
		AMC-5810′s DO1=High →Pin 5 high → HEX: 773035310D
		AMC-5810' s DO2=Low \rightarrow Pin 6 low \rightarrow HEX: 773036300D
		AMC-5810′s DO2=High →Pin 6 high → HEX: 773036310D
	Return:	
•		Pin= 1~6 →AMC-5810 DI0~2, DO0~2
		Status = 1: high, 0: low

APPENDIX

AMC-5810

Ethernet to Serial Converter

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