ADAM-5510 Series

PC Based Programmable Controller

Startup Manual

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1 System Requirements

1.1 Host Computer Requirements

- IBM PC compatible computer with 486 CPU (Pentium is recommended).
- Microsoft Windows 95/98/NT4.0 SP4/2000 or higher versions.
- Borland C++ 3.0 for DOS
- At least 32 MB RAM.
- 20 MB of hard disk space available
- VGA color monitor.
- CD-ROM.
- Mouse or other pointing devices.
- At least one standard RS-232 port (e.g. COM1, COM2).

1.2 ADAM-5510 Series Requirements

- One ADAM-5510 Series main unit, i.e., ADAM-5510M, ADAM-5510E, ADAM-5510/TCP or ADAM-5510E/TCP.
- One ADAM-5510 Series Startup Manual
- One core clamp for power supply connection.
- One ADAM Products Utilities CD.
- Power supply for ADAM-5510 Series (+10 to +30 VDC unregulated)
- One RS-232 straight through DB-9 cable
- One null modem adaptor or cable with DB-9 connectors

1.3 I/O Module Requirements

At least one I/O module is needed to use the system. A variety of I/O modules are available to meet different application requirements. Table 1.1 gives a current listing of these modules for your reference.

Table 1.1: I/O Module Support List						
Module	Name	Specification	Reference			
	ADAM-5013	3-ch. RTD input	Isolated			
	ADAM-5017	8-ch. Al	Isolated			
Analog I/O	ADAM-5017H	8-ch. High speed Al	Isolated			
	ADAM-5018	7-ch. Thermocouple input	Isolated			
	ADAM-5024	4-ch. AO	Isolated			
	ADAM-5050	7-ch. D I/O	Non-isolated			
	ADAM-5051	16-ch. DI	Non-isolated			
	ADAM-5051D	16-ch. DI w/LED	Non-isolated			
	ADAM-5051S	16-ch. Isolated DI w/LED	Isolated			
Digital I/O	ADAM-5052	8-ch. DI	Isolated			
	ADAM-5055S	16-ch. Isolated DI/O w/LED	Isolated			
	ADAM-5056	16-ch. DO	Non-isolated			
	ADAM-5056D	16-ch. DO w/LED	Non-isolated			
	ADAM-5056S	16-ch. Isolated DO w/LED	Isolated			
	ADAM-5056SO	16-ch. Iso. DO w/LED (source)	Isolated			
	ADAM-5060	6-ch. Relay output	Isolated			
Relay Output	ADAM-5068	8-ch. Relay output	Isolated			
	ADAM-5069	8-ch. Power Relay output	Isolated			
Counter/Frequence	<u>ADAM-5080</u>	4-ch. Counter/Frequency	Isolated			
Serial I/O	ADAM-5090	4-port RS232	Non-isolated			

2 Hardware Installation

2.1 Power Wiring



2.2 Programming Port Wiring





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2.3 Jumper Settings

DIP Switch of	of ID Address:
---------------	----------------

DIP	SW1	SW2	SW3	SW4	SW5
ON	1	2	4	8	16
OFF	0	0	0	0	0

ID Address = Value of (SW1+SW2+SW3+SW4+SW5)

COM Port Selection for Configuration Tool:

DIP	SW6
ON	COM1/RS-232
OFF	COM2/RS-485

SW7 and SW8 are reserved for future use.

3 I/O Module Configuration

3.1 Install ADAM-5510 Series Utility

- 1. Insert the ADAM Products CD and setup the ADAM-5510 Series Utility.
- After the ADAM-5510 Series Utility has been installed, you will find two directories under "C:\Program Files\Advantech\" directory. They are named "ADAM-5510M-5510E Utility" and "ADAM-5510TCP-5510ETCP".

If you are using ADAM-5510M or ADAM-5510E, you have to use the files under the "ADAM-5510M-5510E Utility" directory.

If you are using ADAM-5510/TCP or ADAM-5510E/TCP, you have to use the files under the "ADAM-5510TCP-5510ETCP Utility" directory.



The directory structure is shown below:.

3.2 Configure I/O Modules by ADAM-5510 Series Utility

The following steps will use ADAM-5510/TCP as an example to demonstrate how to configure the ADAM-5017 Analog Input Module.

1. Please click the "Program" directory under "ADAM-5510TCP-5510ETCP Utility" and run "ADAM5510.EXE", which is the ADAM-5510 Series Utility. You will see the following figure.

m ADAM-5510M Utility (Ver 1.21)		6	×
File Help			
Local System:		ADAM-5510 Series:	
<mark>6 🗈 🗠 🖭 🏢 🥦</mark>		🖻 🗠 🖭 🔠 🌃 📓 COM1 🖃	
My Computer	•		
Name Size Type Modified		Name Size Type Modified	
Local Disk (C:) Local Disk			
Document (D:) Local Disk			
Compact Disc (E:) Compact			
gublic on 'acl-oa' Network D			
ZTools on 'acl-oa' (Network D			
group on 'acl-oa' Network D			
Control Panel System Fol			
•		•	Þ
7 object(s) 0 byte(s)			

2. Click the refresh button to check if the drive D: of ADAM-5510TCP is detected correctly.

📶 ADAM-5510M Utility (¥er 1.21)								_ 8 ×
File Help								
Local System:				\sim	ADA	4-5510 Series:		
🔁 🖻 🗠 🏝 📰 🏢	1/2			E 🖓 🐁 🖫	# m	<u> 10 10 10 10 10 10 10 10 10 10 10 10 10 </u>	COM1	•
C:\Program Files\Advantech		•				•		
Name	Size Type	Modified		Name	Size	Туре	Modified	
ADAM-5510M-5510E Utility	File Folder	2004/07/0		CONF		File Folder	2004/04/1	5 3:05:00 AM
ADAM-5510TCP-5510ETCP Utility	File Folder	2004/07/0		AUTORUN.BAT	1KB	MS-DOS B	2004/04/1	5 3:05:00 AM
				AX8796.COM	13KB	MS-DOS A	2004/04/1	5 3:05:00 AM
				CFGIO.EXE	35K.B	Application	2004/04/1	5 3:05:00 AM
			-	SOCKETP.EXE	48KB	Application	2004/04/1	5 3:05:00 AM
								_
		<u> </u>						
2 object(s) 0 byte(s)				5 object(s)	95.4 KE	(816,128 bytes	s free)	

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3. Click the refresh button to check if the D drive of ADAM-5510TCP is detected correctly.

ADAM-5510M Utility (Ver 1.21)					_ _ 7 ×
Local Svs	stem:		AD/	M-5510 Series:	
🔁 🗈 🗠 🗁 📰 🔳	19	E	.~ = = =	i 🔞 🖬 🛛	COM1 -
C:\Program Files\Advantech					
Name	Size Type Modified	N	lame Size	Туре	Modified
ADAM-5510M-5510E Utility	File Folder 2004/07/C		CONF	File Folder	2004/04/15 3:05:00 AM
ADAM-5510TCP-5510ETCP Utility	File Folder 2004/07/C		AUTORUN.BAT 1KE	MS-DOS B	2004/04/15 3:05:00 AM
			JAX8796.COM 13KE	MS DOS A	2004/04/15 3:05:00 AM
			SOCKETPEVE ASK	Application	2004/04/15 3:05:00 AM
			19900KE11.EXE 40KE	Application	2004/04/10 3:03:00 /4/4
	ADAM-5510M Analo	g IO Config	uration		
	Node ID: 20 H	EΧ			
		SIMS			
	31000 31001 31002 .				
	Description: ADAM-5()178-channe	el analog input module		
	Input Hange: All	10 V	<u> </u>		
De f	4	~20 mA 10 V			
		5 V			<u> </u>
2 object(s) U byte(s)	*/·	- 1 V -500 mV			
@SLOT2 -1 -1 -1 @SLOT2 04 09 1	+/-	150 mV			<u> </u>
	<u></u>	20 mA			
1 08 -1 -1 2 09 -1 -1		OK	Cancel		
3 08 -1 -1					
4 08 -1 -1					
6 08 -1 -1					
7 08 -1 -1					
@ADAM5510MIOCFG-END -1	-1 -1				
					•

4. Download the I/O Module Configuration Tool "SIMU5KE.EXE" under the "Config" directory onto drive D: of ADAM-5510/TCP.

ADAM-5510M Utility (Ver 1.21)					
File Help					
Local System:			ADAM	-5510 Series:	
		🛍 🖓 🔒 🚰		M 🔤 🛛	COM1 -
C:\Program Files\Advantech\ADAM-5510TCP-5510ETCP Utilty\Config 💽		N .		•	
Name Size Type Modified		Name	Size	Туре	Modified
SIMU5KE.EXE 79KB Application 2004/05/0		CONF		File Folder	2004/04/15 3:05:00 AM
		AUTORUN.BAT	1KB	MS-DOS B	2004/04/15 3:05:00 AM
		AX8796.COM	13KB	MS-DOS A	2004/04/15 3:05:00 AM
		CFGIO.EXE	35KB	Application	2004/04/15 3:05:00 AM
		SOCKETP.EXE	48KB	Application	2004/04/15 3:05:00 AM
File transfer					
Transferring: C:\Program Fil	les\Advante	ech\ADAM-5510TCP-551	10ETCP		
File count: 1/1					
Branco					
Flogless.					
	r				•
1 object(s) 78.2 KB	Cancel			6,128 bytes	; free)
dir					<u>ـ</u>
Volume in drive D has no label					
Directory of D:N					
CONF (DIR) 04-15-2004 3	:54p				
AX8796 COM 13.312 04-15-2004 3	:55p :54p				
CFGIO EXE 35,328 04-15-2004 3	:55p				
SOCKETP EXE 48,896 04-15-2004 3: 5 file(s) 97 664 bytes	:55p				
816,128 bytes fre	е				
C:\transfer /R D:\SIMU5KE.EXE					
((IIIIIISICIIIIII FIIC))					

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5. Set DIP SW6 as ON.

COM Port Selection for Configuration Tool:

DIP	SW6
ON	COM1/RS-232

6. Set DIP SW1 to SW5 as OFF.

ID Address = 0

DIP	SW1	SW2	SW3	SW4	SW5
OFF	0	0	0	0	0

 Run "SIMU5KE.EXE" and check the Communication Tool does use COM1/RS-232 port.



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8. Connect the Host PC to COM1/RS-232 on ADAM-5510/TCP by a null modem cable.





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9. Insert the ADAM Products CD and setup the ADAM-4000-5000 Utility.

🚉 program				_ 8 ×
File Edit View Favorites Tools Help				*1
🖕 Back 🔹 🤿 👻 🔯 Search 🛛 隆 Folders	🎯 History 🛛 🐮 🧏 🗙 🖄 🗐 🎫 -			
Folders ×		Name 🛆	Size T	уре
🕂 🗋 Advantech		Adam40005000.exe	2,349 KB 🛛 A	pplication
E- ADAM-4000-5000 Utility		DN6000E.IMG	4 KB I	MG File
telp	program	DN6000H.IMG	4 KB I	MG File
	Colored on New York for the	B DOWNLOAD.IMG	21 KB 1	MG FIIE
E-C ADAM-5510TCP-5510ETCP L	description.		19KD V 7KD V	ideo Cip
Config		B history byt	2 KB T	ext Document
Program	See also:		210	one bocamone
🖻 🙆 Source	My Network Places			
⊡ Drive_D	My Computer			
- WebRoot				
Example				
🗀 httpEx				
🗀 mail				
ModbusRTU				
ModbustCP				
- Image				
ib				
🗀 5510_Lib				
🗀 http_Lib				
🖻 🛄 ModRTU_Lib				
sockets Lib				
		•	-	
7 object(s) (Disk free space: 3.74 GB)	1	2.34 MB	My Compute	er

10. Close the ADAM-5510 Series Utility and run ADAM-4000-5000 Utility "ADAM40005000.EXE".

🚭 ADAM-4000-5000 Ut	ility (Ver 3.10.06)	- O ×
File Tools Help		
- B		
	Host COM Setting Setial Post COM1 Baudrate 9600 bps ▼ DataBits 8 Stop Bits 1 Perity None Time Out 80 Search Installed Modules X Enter start address between 0 and 255 dicimal CAncel 0	
COM Port status		1

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11. Search the ADAM-5510/TCP Module and configure the input range of the ADAM-5017 Analog Input Module.

🔁 ADAM-4000-5000 Utility (Ver 3.10	.06)	
File Tools Help		
·		
□ -	ADAM.5017 Setting & Calibration Input Banges: +/-10/ Data Eromat: Engineering Units Integration Ime: 60 ms (50 Hz) Data Area Data Area	
- E (CH 1)	CH0 0.0004 V HI-Alram ⊙ Off L0-Alram ⊙ Off	
- Sector (CH 2)	CH1 +0.0004 V HI-Alram O Off LO-Alram O Off	
- CH 4)	CH2 Information	
- E (CH 6)	CH3 -0 Update Setting succeeded! ○ Off LO-Alram ○ Off	
(CH 7) COM3	CH4 ∓(O Off L0-Alram ⊙ Off	
	CH5 -	
	I CH6 +0.0001 V HI-Alram ⊙ Off LO-Alram ⊙ Off	
	CH7 -0.0006 V HI-Alram O Off LO-Alram O Off	
	<u>B</u> efresh <u>Update</u>	
Delline At data		
Poling At udia		

12. Close the ADAM-4000-5000 Utility and reset the ADAM-5510/ TCP.

4 Application Execution at Bootup

The following steps will demonstrate how to automatically execute an application after bootup. All that needs to be done is to update "AUTO-RUN.BAT" and run "DHCPSTAT.EXE" automatically after boot up.

1. Download the "DHCPSTAT.EXE" onto ADAM-5510/TCP.

ADAM-5510M Utility (Ver 1.21)						_ 8 ×	
File Help							
Local System:							
		🛍 🖓 🔤 🚼	ŧ (m)	M	COM1	•	
C:\Program Files\Advantech\ADAM-5510TCP-5510ETCP Utility\Source\				-			
Name Size Type Modified		Name	Size	Туре	Modified		
WebRoot File Folder 2004/07/06 1:11:42 AM		CONF		File Folder	2004/04/1	15 3:05:00 AM	
dhcpstat.exe 19KB Application 2004/04/12 4:10:00 PM		AUTORUN.BAT	1KB	MS-DOS B	2004/04/1	15 3:05:00 AM	
Thtpget.exe 39KB Application 2004/04/12 4:10:00 PM		AX8796.COM	13KB	MS-DOS A	2004/04/1	15 3:05:00 AM	
ifstat.exe 25KB Application 2004/04/12 4:10:00 PM		CFGIO.EXE	35K.B	Application	2004/04/1	5 3:05:00 AM	
ipstat.exe 22KB Application 2004/04/12 4:10:00 PM			19KB	Application	2004/04/1	5 4:00:00 AM	
MAKEMAIL.EXE 28KB Application 2004/04/12 4:10:00 PM		SIMU5KE.EXE	79KB	Application	2004/04/1	15 4:00:00 AM	
SENDMAIL.EXE 24KB Application 2004/04/12 4:10:00 PM		SOCKETP.EXE	48KB	Application	2004/04/1	15 3:05:00 AM	
xping.exe 20KB Application 2004/04/12 4:10:00 PM							
		4					
8 object(s) 175.0 KB		7 object(s)	192.5 K	B(716,288 byt	es free)		
d: cd b: dir volume in drive D has no label Volume Serial Number is 0F6A-170A Directory of D: SIMUSKE EXE 80,128 04-15-2004 4:07p CONF (DIR) 04-15-2004 3:55p AUTORUN BAT 128 04-15-2004 3:55p CFGIO EXE 35,328 04-15-2004 3:55p CFGIO EXE 35,328 04-15-2004 4:02p SOCKETP EXE 48,895 04-15-2004 4:02p SOCKETP EXE 48,895 04-15-2004 4:02p 7 file(s) 197,120 bytes 716,288 bytes free							

2. Edit "AUTORUN.BAT" under "Source\Drive_D\Default_Files" directory.

🜌 autorun.bat - Notepad	_ 🗆 🗙
File Edit Format Help	
AX8796 0x60 PATH C:\ SET FTPDIR=D:\webRoot SET HTTP_DIR=D:\webRoot SET SOCKETS=D:\CONF socketp	4
D:\DHCPSTAT.EXE	▼ ►

3. Update "AUTORUN.BAT" to ADAM-5510/TCP in the utility.

ADAM-5510M Utility (Ver 1.21)		- 8 ×	
File Help			
Local System:	ADAM-5510 Series:		
	🕒 여 🏊 눈표 🏢 🚮 🖬 COM1 🔽		
C:\Program Files\Advantech\ADAM-5510TCP-5510ETCP Utilty\Source\	<u> </u>		
Name Size Type Modified	Name Size Type Modified		
CONF File Folder 2004/07/06 1:11:42 AM autorun.bac 1KB MS-DOS B 2004/07/06 11:56:24 PM	4 CONF File Folder 2004/04/15 3:0 M CAUTORUN.BAD 1KB MS-DOS B 2004/04/15 4:0):00 AM):00 AM	
AX8796.COM 13KB MS-DOS A 2004/06/11 3:50:38 AM	4 AX8796.COM 13KB MS-DOS A 2004/04/15 3:0	:00 AM	
CFGIO.EXE 35KB Application 2004/04/22 7:20:18 PM	4 👝 🗂 CFGIO.EXE 35KB Application 2004/04/153:0	5:00 AM	
SOCKETP.EXE 48KB Application 2004/04/12 4:10:00 PM	4 🛃 🗂 DHCPSTAT.EXE 19KB Application 2004/04/154:0):00 AM	
	SIMU5KE.EXE 79KB Application 2004/04/15 4:0):00 AM	
	SOCKETP.EXE 48KB Application 2004/04/15 3:0	:00 AM	
I Transferring: ChProgram F Sobject(s) 95.1 KB Volume in drive D has no File count Volume Serial Number is Discourt of D: Discoury of D: 80.12 OMF AUTORUN BAT AUTORUN BAT 1.28 DUCPSTAT EXE 19.3218 DACKETP EXE 48.926 OKETP EXE 48.896 OKETP FXE 19.7.120 DickSTAT FXE 19.7.120 SOCKETP EXE 48.896 Od-15-2004 11.5.2004 SOCKETP EXE 48.896 Od-15-2004 11.5.2004 SOCKETP EXE 19.7.120 DickSTAT FXE 19.7.120 Sockettr FX N:>autorun. bat < <td><(Transferring File)</td> << < Citasferring File	<(Transferring File)	ram Files/Advantech/ADAM-5510TCP-5510ETCP 	-

4. Reset ADAM-5510/TCP and check if the "DHCPSTAT.EXE" has been executed correctly.

🖬 ADAM-5510M Utility (Ver 1.21)					8 ×	
File Help						
Local System:		ADAM-5510 Series:				
<u>6 E ~ 14 5 # # %</u>					COM1	
C:\Program Files\Advantech\ADAM-5510TCP-5510ETCP Utility\Source\		Y				
Name Size Type Modified		Name	Size	Туре	Modified	
CONF File Folder 2004/07/06 1:11:42 AM		CONF		File Folder	2004/04/15 3:05:0	MA 00
autorun.bat 1KB MS-DOS B 2004/07/06 11:56:24 PM		AUTORUN.BAT	1KB	MS-DOS B	2004/04/15 4:00:0	MA 00
AX8796.COM 13KB MS-DOS A 2004/06/11 3:50:38 AM		AX8796.COM	13KB	MS-DOS A	2004/04/15 3:05:0	IO AM
CFGIO.EXE 35KB Application 2004/04/22 7:20:18 PM		CFGIO.EXE	35KB	Application	2004/04/15 3:05:0	MA 00
SOCKETP.EXE 48KB Application 2004/04/12 4:10:00 PM		DHCPSTAT.EXE	19KB	Application	2004/04/15 4:00:0	MAD
		SIMU5KE.EXE	79KB	Application	2004/04/15 4:00:0	MA 00
		SUCKETP.EXE	48KB	Application	2004/04/15 3:05:0	MAU
X N		.				Þ
5 object(s) 95.1 KB		7 object(s)	192.5 K	B(716,288 byte	es free)	
Hostname: if0: 192 168 1 3 Net wask: 255 255 0 Datalight Sockets DHCPSTAT v6.22 (Revision 4.11.1525) Copyright (c) 1989-2003 Datalight, Inc. Portions copyright (c) GPVN0 2003						
Sockets build 1525						
Interface name: if0 IP address 192.160.1.3 Net bits 255.255.255.0 MCP state BOUND Retry 0 Timer running (330/21599905 ms) Lease 43200 s						
D: \>						

5. You are finished!

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