

E-I/O Box Quick User Guide

Introduction

With the E-I/O Box, you can integrate your E-I/O box with the AVer[™] NV/SA/XR/IWH DVR system. The E-I/O Box provides an extra connection of senor and relay devices.

Package Contents





Front Panel



Name	Description
(1) Power LED	Lights when the power is connected
(2) Light indicator	Sensor and relay indicators. Light when the sensor and relay is enabled.
(3) SW	To adjust unit switch appropriate for using condition.
	 In the figure, black pane represents as the switch position. After SW setting, please plug power connector again or press Reset key to initialize External I/O Box.

(3) SW

Using the DIP switch no.1 & 2 to set the baud-rate setting.



Using the DIP switch no. 3 & 4 to set the type of connection interface.



Using the DIP switch no. 5 ~ 7 to set the ID definition.



(4) RJ-45 port Ethernet connection

Name	Description
(5) Reset	To initialize External I/O Box

Rear Panel



Name	Description
(1) DC IN 5V	Connect the power adapter into this port
(2) RS-232 to DVR	Connect to the COM port of NV/SA/XR/IWH DVR
(3) RS-485	Connect to the COM port of NV/SA/XR/IWH DVR via RS-485 to RS- 232 converter
RS-485 interf directly.	ace doesn't support to connect with RS-485 interface of SA RACK series
(4) Relay Out	Connect to the relay device
(5) Sensor In	Connect to the sensor device

Sensor pinhole allocation

Pin #	Definition	Pin #	Definition
1	Sensor 1 signal	0	Sensor 9 signal
•	Sensor G Ground signal	9	Sensor G Ground signal
2	Sensor 2 signal	10	Sensor 10 signal
2	Sensor G Ground signal	10	Sensor G Ground signal
2	Sensor 3 signal	44	Sensor 11 signal
3	Sensor G Ground signal		Sensor G Ground signal
	Sensor 4 signal	40	Sensor 12 signal
4	Sensor G Ground signal	12	Sensor G Ground signal
F	Sensor 5 signal	40	Sensor 13 signal
5	Sensor G Ground signal	15	Sensor G Ground signal
6	Sensor 6 signal	44	Sensor 14 signal
0	Sensor G Ground signal	14	Sensor G Ground signal
-	Sensor 7 signal	45	Sensor 15 signal
	Sensor G Ground signal	15	Sensor G Ground signal
	Sensor 8 signal	46	Sensor 16 signal
0	Sensor G Ground signal	10	Sensor G Ground signal

Relay pinhole allocation

Pin #	Definition	Pin #	Definition
1	Relay Common 1	•	Relay Common 9
•	Relay Normal Open 1	9	Relay Normal Open 9
2	Relay Common 2	10	Relay Common 10
2	Relay Normal Open 2	10	Relay Normal Open 10
2	Relay Common 3	44	Relay Common 11
3	Relay Normal Open 3	- 11	Relay Normal Open 11
4	Relay Common 4	40	Relay Common 12
4	Relay Normal Open 4	12	Relay Normal Open 12
E	Relay Common 5	12	Relay Common 13
5	Relay Normal Open 5	13	Relay Normal Open 13
6	Relay Common 6	14	Relay Common 14
0	Relay Normal Open 6	14	Relay Normal Open 14
7	Relay Common 7	45	Relay Common 15
· ·	Relay Normal Open 7	15	Relay Normal Open 15
0	Relay Common 8	16	Relay Common 16
o	Relay Normal Open 8	10	Relay Normal Open 16

Making the Connection

E-I/O Box supports serial port to connect to DVR system. If the distance between E-I/O Box and DVR system is more than 10 meter, we suggest connecting the DVR system through RS-485. Just follow the illustrated connection below:

Connecting to Surveillance System



Before connect E-I/O Box to DVR system, please remember to plug terminal block into RS-485, senor, and relay interface.

Make sure DIP switch no.3 is ON and no.4 is OFF.

	Connect	ing via RS-232	
	Sensor 1 Sensor 16		
	"" 011 JANV		WH series DVR System
· (EH series DVR System
	Alarm 16 Alarm 1		SA/XE BACK series DVB System
RS-232 C	able(male side)	RS-232 Cable(Female side)	
			NV series DVR System

Make sure DIP switch no.3 is OFF and no.4 is ON.



Make sure DIP switch no.3 is ON and no.4 is ON.



Connecting Multiple E-I/O Box

You may connect up to 8 E-I/O Box to DVR system at the same time.

- In multiple E-I/O Boxes connection, please set ID number to each E-I/O Box. The E-I/O Box connects to DVR system will be ID # 1.
 - Please set the interface type for multiple E-I/O Boxes connection, the one connected to DVR system is RS-232 and rest is RS-485.
 - How to set the ID number and interface type, please refer to the figure chart at the bottom of the E-I/O Box or refer to *Front Panel* section of this quick guide.



Setting E-I/O Box Configuration

To set the E-I/O Box setting:

- 1. Run the DVR program.
- 2. In the Preview/Advanced screen mode, click source.
- 3. When the DVR configuration setup selection appears, click Sensor or Relay.



4. In the Sensor or Relay Setting dialog box, click **External IO** button.

Relay Setting	Sensor Setting
Relay01	Sensor01
Name	Name
Content	Content
Card No. 1	Card No. 1
Input No. 1	Input No. 1
Description	Description
Test	Test
Test	Test
OK Cancel	OK Cancel
Sensor Setting UI	Relay Setting UI

In the External I/O Setup windows, click Add to set an E-I/O Box, Modify to change the E-I/O Box setting, and Delete to remove the selected E-I/O Box. Click Exit to save and close External I/O Setup windows.

Connectio	n BaudRate	DataBits	StopBits	Parity
L I	Add		1	

- 6. In the Add Connection windows, mark Enable box to enable this E-I/O Box.
- 7. Select the Brand of E-I/O Box from drag down list.
- 8. In **Port** Setting, use the default value.
- 9. Click OK to save the setting and Cancel to exit without saving the new setting
- 10. To add more than one E-I/O Box, click Add and follow the above step 5~9.

Add Connection	
🔽 Enable	
Brand:	•
C Ethernet	
_IP Setting	
IP Address:	
C DC 200 //05	
• RS-232/485	
Port Setting	
COM Port:	1
Baud Rate:	9600 💌
Data Bits:	8
Stop Bits:	1
Parity:	None
	OK Cancel

- In E-I/O Box setup dialog, it will list all added External I/O. Select added E-I/O box and click Add to enter Add Module window for scanning all connected sensors and relays.
- 12. In **Add Module** windows, click **Scan** to scan the connected relays and sensors on the E-I/O Box.

Add	Mod	ule																X
Ma	idule	Name:	Modu	ıle 1					_									
•	Enab	le																
	_ Mo	dule Setting																
	0	Connection:	CC	DM1					_									
		Jnit ID:	1						_									
																Sca	an	
s	lot	Module Type	0	1 2	3	4	5	6	7	8	9	A.	в	C.	D.	Е	F	
							L.		Γ		OK				(Can	cel	
							_	_					-	-				

 All connected relays and sensors will be listed. User can click radio button to change relays' status. And then, click OK to save the setting and click Cancel to exit and without saving.

Add M	odule																	Þ
Modu	le Name:	Mo	dule	91					_									
🔽 En	able																	
-1	Module Setting —																	
	Connection:	- [0		41					_									
									_									
	Unit ID:		1															
																Sc	an	
Slot	Module Type	0	1	2	3	4	5	6	7	8	9	Α.	в	C.	D.	E	F	_
0	AV-9090		-	-	-				-	-							_	
1	M-1800	o	o	•	o	•	o	•	o									
2	M-1800	0	o	o	۲	o	o	۲	۲									
3	M-2800	V	V	R	M	R	V	P	M									
4	M-2800	P		V	P	V		P	P									
1																		
							è				Ok	(Car	cel	

14. All connected E-I/O Box and their modules will be listed as tree topology in External I/O Setup windows.

-🔀 COM1	Connection	BaudRate	DataBits	StopBits	Parity
	COM1	9600	8	1	None
		1			· · · · ·
		Add	Edit	C	elete

15. To view the all I/O devices information, click I/O Map.

1/О Мар						
_	Sensor					
	No.	Connection	Slot	Input	~	
	1	COM1 : 1	1	0		
	2	COM1 : 1	1	1		
	3	COM1 : 1	1	2		
	4	COM1 : 1	1	3		
	5	COM1 : 1	1	4		
	6	COM1 : 1	1	5		
	7	COM1 : 1	1	6		
	0	COM1 + 1	1	7		
Г	Relay -	elay				
	No.	Connection	Slot	Output		
	1	COM1 : 1	3	0		
	2	COM1 : 1	3	1		
	3	COM1 : 1	3	2		
	4	COM1 : 1	3	3		
	5	COM1:1	3	4		
	6	COM1 : 1	3	5		
	7	COM1 : 1	3	6		
	0	COM1 + 1	0	7		
				OK		

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