Register 0 and 1: Input port 0 and 1 registers (input-only port).
It reflects the incoming logic levels of the pins, regardless of whether the pin is defined as an input or an output. Writes to this register have no effect. The default value 'X' is determined by the externally applied logic level.

Bit	7	6	5	4	3	2	1	0
Input port 0 register	I0.7	I0.6	I0.5	I0.4	I0.3	I0.2	I0.1	I0.0
Input port 1 register	I1.7	I1.6	I1.5	I1.4	I1.3	I1.2	I1.1	I1.0
Default	X	X	X	X	X	X	X	X

Register 2 and 3: Output port 0 and 1 registers (output-only port).
It reflects the outgoing logic levels of the pins defined as outputs. Bit values in this register have no effect on pins defined as inputs.

Bit	7	6	5	4	3	2	1	0
Output port 0 register	O0.7	O0.6	O0.5	O0.4	O0.3	O0.2	O0.1	O0.0
Output port 1 register	O1.7	O1.6	O1.5	O1.4	O1.3	O1.2	O1.1	O1.0
Default	1	1	1	1	1	1	1	1

Register 4 and 5: Polarity inversion port 0 and 1 registers.
This register allows the user to invert the polarity of the Input port register data. If a bit in this register is written with '1', the Input port data polarity is inverted. If a bit in this register is written with '0', the Input port data polarity is retained.

Bit	7	6	5	4	3	2	1	0
Polarity inversion port 0	N0.7	N0.6	N0.5	N0.4	N0.3	N0.2	N0.1	N0.0
Polarity inversion port 1	N1.7	N1.6	N1.5	N1.4	N1.3	N1.2	N1.1	N1.0
Default	0	0	0	0	0	0	0	0

Register 6 and 7: Configuration port 0 and 1 registers.
This register configures the directions of the I/O pins. If a bit in this register is written with '1', the corresponding pin is enabled as an input. If a bit in this register is written with '0', the corresponding pin is enabled as an output. At reset, the device's ports are inputs.

Bit	7	6	5	4	3	2	1	0
Configuration port 0	C0.7	C0.6	C0.5	C0.4	C0.3	C0.2	C0.1	C0.0
Configuration port 1	C1.7	C1.6	C1.5	C1.4	C1.3	C1.2	C1.1	C1.0
Default	1	1	1	1	1	1	1	1

Note: ***Please contact your local vendors if any damaged or missing items. DO NOT apply power to the module if there is any damaged component.***

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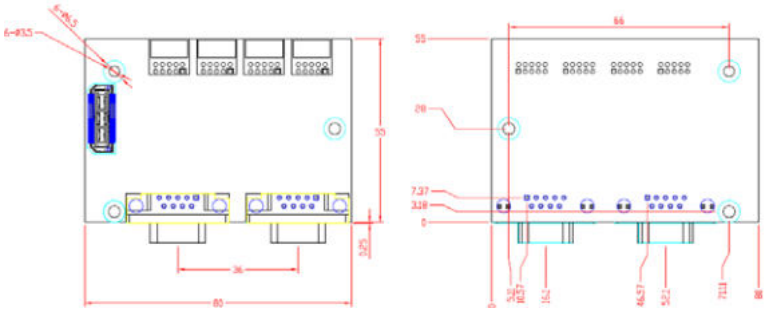
AX93285 ZIO Module Quick Installation Guide

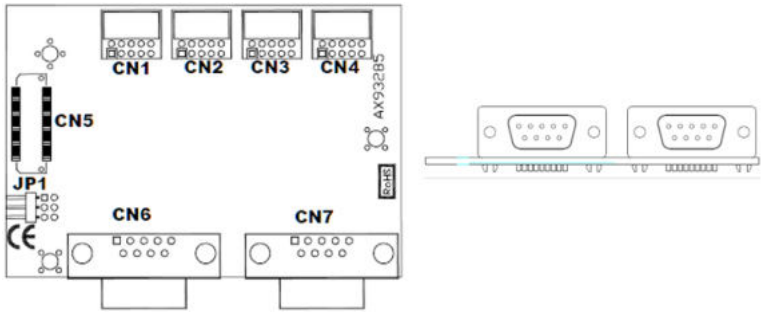
Checklist

✓ I/O board x1
✓ Screw pack x1
✓ Quick installation guide x1

Dimension and Fixing Holes



Module Layout



Connectors

Connector	Description
CN1~CN4	Digital I/O Connectors
CN5	ZIO Expansion Connector
CN6	COM1 Connector
CN7	COM2 Connector

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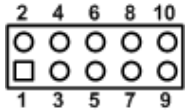
Digital I/O Connectors (CN1~CN4)
CN1~CN4 are JST B10B-PHD-S-S, 2x5-pin P=2.0mm Dip connectors for digital I/O interface that meet requirements for a system customary automation control. These digital I/O signals are from two 16-bit PCA9535 and controlled through SMBus:

- First group (CN1 and CN2), SMBus address: 0x40.
- Second group (CN3 and CN4), SMBus address: 0x44.

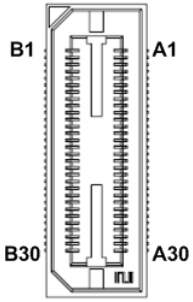
CN1/CN2/CN3/CN4:

Pin	Signal	Pin	Signal
1	GND	2	+5V level
3	DI4/12/20/28	4	DI3/11/19/27
5	DI5/13/21/29	6	DI2/10/18/26
7	DI6/14/22/30	8	DI1/9/17/25
9	DI7/15/23/31	10	DI0/8/16/24



ZIO Expansion Connector (CN5)
The CN5 is for connecting ZIO module to CPU board.

Pin	Signal	Pin	Signal
A1	+12V	B1	GND
A2	+5VSB	B2	GND
A3	+5VSB	B3	GND
A4	+3.3VSB	B4	GND
A5	+3.3VSB	B5	RSVD
A6	RSVD	B6	RSVD
A7	RSVD	B7	RSVD
A8	SMB_CLK	B8	RSVD
A9	SMB_DATA	B9	GND
A10	GND	B10	RSVD
A11	RSVD	B11	RSVD
A12	RSVD	B12	WAKE_N
A13	RSVD	B13	RSVD
A14	RSVD	B14	RSVD
A15	RSVD	B15	GND
A16	No Use	B16	CLK_33M
A17	No Use	B17	SERIRQ
A18	GND	B18	LAD0
A19	No Use	B19	LAD1
A20	No Use	B20	LAD2
A21	PLTRST_N	B21	LAD3
A22	No Use	B22	L_FRAME
A23	No Use	B23	GND
A24	GND	B24	No Use
A25	No Use	B25	No Use
A26	No Use	B26	No Use
A27	No Use	B27	No Use
A28	No Use	B28	GND
A29	GND	B29	No Use
A30	No Use	B30	No Use



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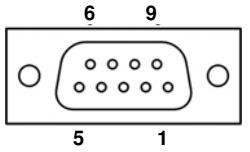
COM Connectors (CN6 and CN7)
Both CN6 and CN7 are standard DB-9 connectors for COM1 and COM2 interfaces, respectively. Only CN6 comes with power capability on DCD and RI pins by setting JP1.

Pin	Signal	Pin	Signal
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI
5	GND		



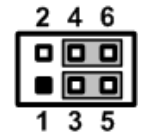
Jumper Settings

Before applying power to AX93285, please make sure all jumper(s) are in factory default positions.

Jumper	Description		Setting
JP1	COM1 Data/Power Selection Default: RS-232 Data	CN6 Pin 1: DCD	3-5 Close
		CN6 Pin 9: RI	4-6 Close

COM1 Data/Power Selection (JP1)
The COM1 port (CN6) has +5V level power capability on DCD and +12V level on RI by setting this jumper.

Description	Setting
Power: Set CN6 pin 1 to +5V level	1-3 close
Data: Set CN6 pin 1 to DCD (Default)	3-5 close
Power: Set CN6 pin 9 to +12V level	2-4 close
Data: Set CN6 pin 9 to RI (Default)	4-6 close



Digital I/O Software Programming

Command byte
The command byte is the first byte to follow the address byte during a write transmission.

Command	Register	Command	Register
0	Input port 0	4	Polarity Inversion port 0
1	Input port 1	5	Polarity Inversion port 1
2	Output port 0	6	Configuration port 0
3	Output port 1	7	Configuration port 1

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