

**ZDI ADAPTER: AZ455-S1**

**Instruction Manual**

Yokogawa Digital Computer Corporation

AZ455-S1 (ZDI Adapter)  
INSTRUCTION MANUAL  
No. M2328JK-01

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## **1 Overview**

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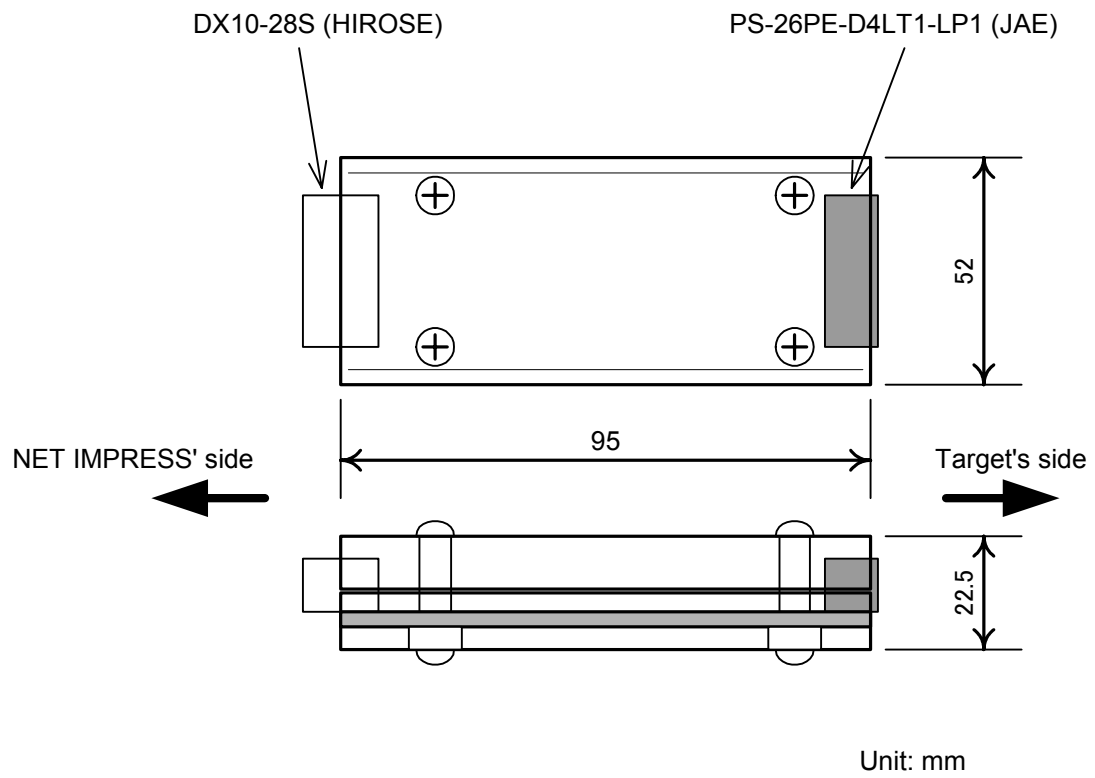
The AZ455-S1 is the ZDI adapter that converts the standard output signals of the NET IMPRESS to ZDI (Zilog Debug Interface) signals. This ZDI adapter supports programming a microcomputer which can program Flash ROM with the ZDI protocol.

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## 2 Outline Drawing

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The figure below is the outline drawing of the adapter portion of the AZ455-S1.



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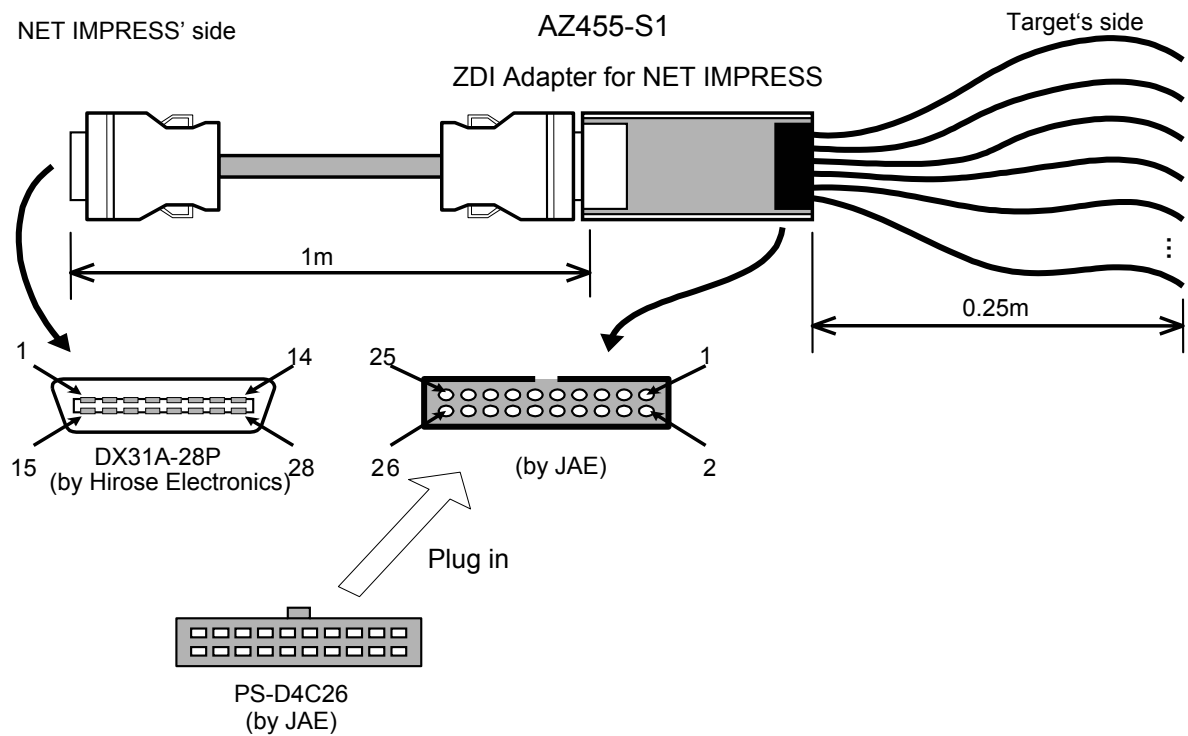
### 3 Target Probe

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The figure below shows the entire configuration of the AZ455-S1.

The AZ455-S1's signal line (22 lines in total) has a lead wire attached to it, but has no test clip at its tip. (The wire tip is not treated.)

Pin layout of each connector is numbered as viewed from the mating side.



### 3.1 Pin Assignment

The table below lists pin assignment of the AZ455-S1 at the side of the target system (PS-26PE-D4LT1-LP1, PS-D4C26 by JAE).

Pin No. PS-26PE-D4LT1-LP1	Lead Color	Signal Name	I/O	Type
1	Light-Blue	TVccd	I	A
2	Yellow-Green	TVpp1	O	S
3	Black	GND	—	—
4	White & Blue <sup>(See Note *1)</sup>	R_ZDICK	O	C
5	White & Blue	ZDICK	O	B
6	White & Green	WDT	O	S
7	White & Yellow	/TRES	O	D
8	White & Orange	TAUX3 (TVpp1C)	O	E
9	—	TCK	—	—
10	White & Brown	TAUX4 (TVpp2C)	O	C
11	White & Black	Reserved	O	C
12	White	TAUX	O	E
13	Gray	/TICS	O	C
14	White & Red	R_ZDID	I/O	C
15	White & Purple	Reserved	I/O	C
16	—	TVccs	—	—
17	—	TMODE	—	—
18	—	TI0	—	—
19	Yellow	Reserved	I/O	C
20	Brown	Reserved	I/O	C
21	Orange	ZDID	I/O	B
22	Purple	Reserved	I/O	B
23	Red	Reserved	I/O	B
24	Green	Reserved	I/O	B
25	Blue	TVcc5	I	—
26	Black	GND	—	—

Notes:

\*1: Black tube is provided at the both ends of the lead wire.

- “I” and “O” in the above table indicate input and output from the adapter to a target system.
- For the types of I/O circuit of the signals, see the following section. With the Type S, they are connected through the adaptor, with no processing inside the adaptor.
- The GND lines #3 and #26 are connected each other. For safety at the time of connecting the signal lines, try to connect as may GND lines as possible to a target system.

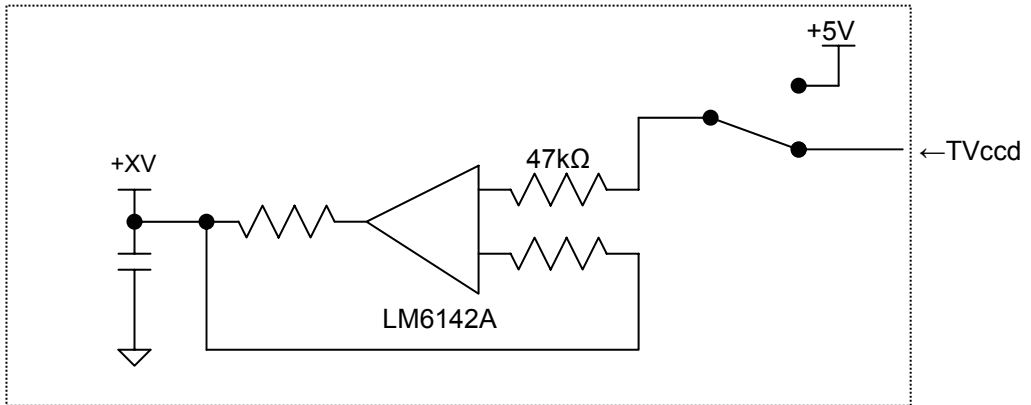
- In order to prevent short circuit of non-used signal lines at the side of the target system with other signal lines or metal area of test pins, you are required to treat them properly.
- ZDCLK and R\_ZDCLK are the same one signal, but their resistance values for output protection are different. Choose an appropriate value according to your target system and probe.
- ZDID and R\_ZDID are the same one signal, but their resistance values for output protection are different. Choose an appropriate value according to your target system and probe.

### 3.2 I/O Circuit of Signal Line

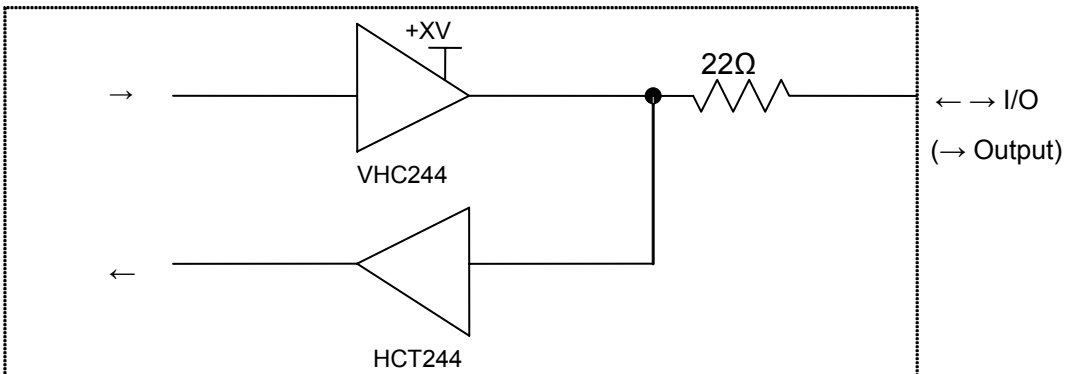
The figures below illustrate I/O circuit of each signal line of the AZ455-S1.



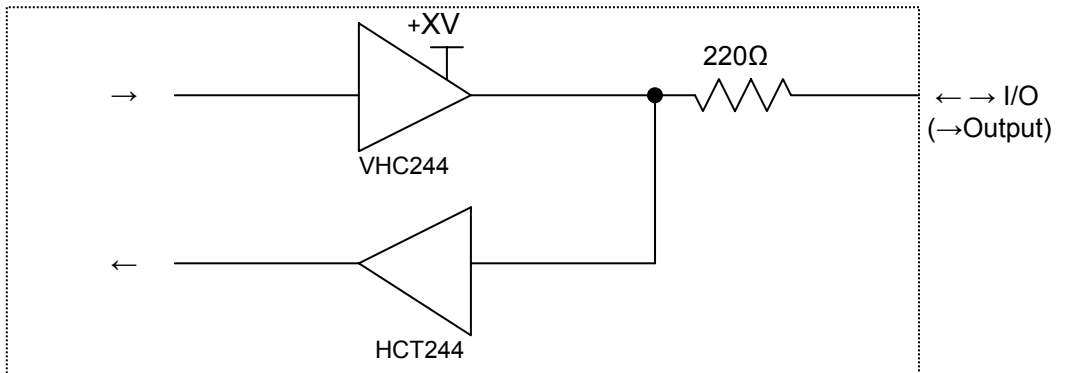
#### Type A



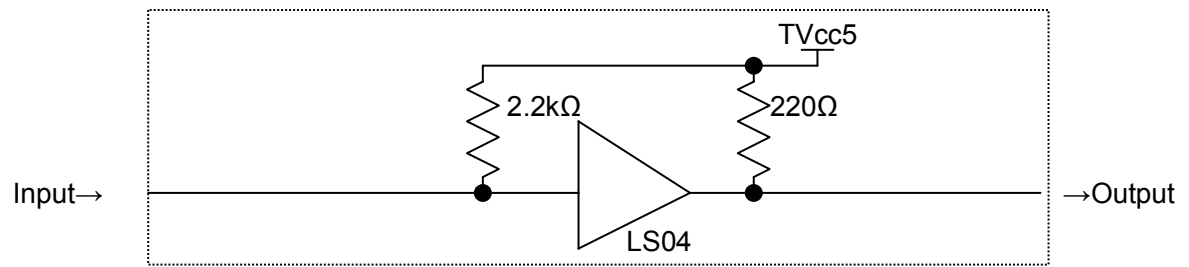
#### Type B



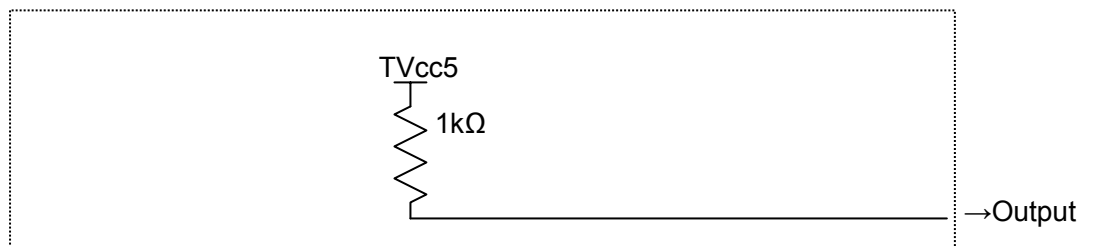
#### Type C



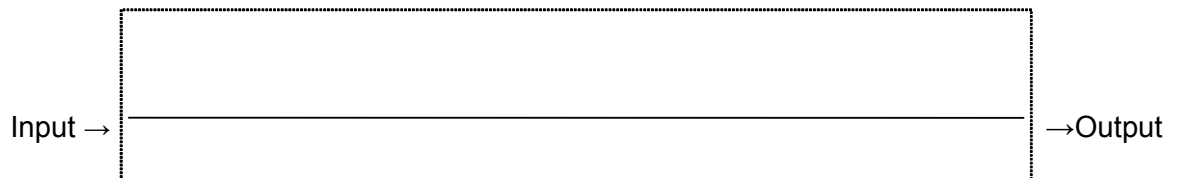
**Type D**



**Type E**



**Type F**



Take account of these I/O circuits and I/O circuit of the NET IMPRESS when designing a circuit board.

### 3.3 Signals

This section describes the AZ455-S1's I/O signals at the side of a target.

The table below lists the I/O signals and their function.

(Among the 26 signals, only those listed below are used for the ZDI adapter.)

Signal Name	Function
TVccd	Target interface (ZDI) power supply input *1
GND	GND
R_ZDICK, ZDICK	Serial clock output pin for ZDI
WDT	Watchdog timer output pin (open collector output)
/TRES	Reset output pin of negative logic (open collector output)
/TICS	Signal output pin for multiplexer
R_ZDID, ZDID	Data I/O pin for ZDI

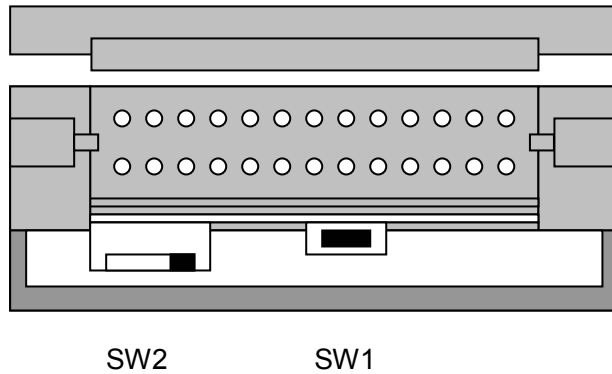
\*1: Voltage input of ZDI level. R\_ZDICK, ZDICK, R\_ZDID and ZDID signals are driven with this input level.

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## 4 Switches

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The AZ455-S1 has the two switches underneath the target connector CN20 as shown below.



- SW1: Hardware Reset Switch

Pressing this switch resets the AZ455-S1. This switch is not used normally.

- SW2: TVccd Input Switch

This switch is connected to the CN20 at the side of Pin #3 in the default setting and be sure to leave it in the default setting.

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## 5 Connecting AZ455-S1 to a Target System

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The figure below illustrates how the NET IMPRESS, AZ455-S1 and target system are connected.

