

# **NetDCU-ADP/TX09**

## **NetDCUx**

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## 1 LCD- Display Adapter

### 1.1 Overview

Display adapters make the connection between NetDCUx and commonly used LCD – Displays as easy as possible. Usual in trade display connectors could be simply added to complete the connection.

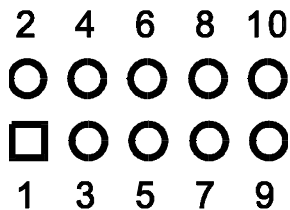
Note that the list of displays named for each adapter is not complete.

### 1.2 Counting of the Connector Pins

For One-Row-Connectors pin 1 is especially marked in the concerning front view figure and the counting of connectors is continuous.

All connections on the adapters, which prepared for Two-Row Connectors are treated as follow: a square pad marks pin 1 and the row with pin 1 contains all odd-numbered pins (1, 3, 5, 7, etc.), corresponding to this, the row without pin 1 contains all even-numbered pins (2, 4, 6, 8, etc.).

Figure 1.1: Example for counting of connector pins



## 2 Hitachi TFT Display Adapter

### 2.1 Adapter NetDCU- ADP/TX09

Figure 2.1 shows the assembly of the NetDCU- ADP/TX09 adapter. The size is 50mm x 25 mm. Table 2.1 shows function and design of the components listed.

Figure 2.1: Front view of NetDCU- ADP/TX09

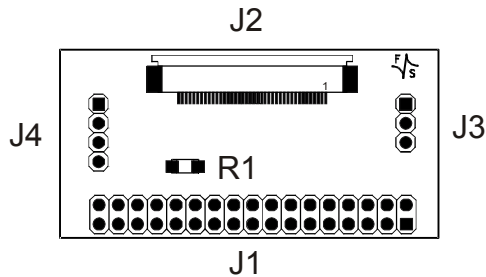


Table 2.1: Connector description

Description	Remarks
Input Connector J1	Spacing 2.54 mm
Output Connector J2 *	Pitch 0.50 mm
Backlight Adjust Connector J3	Spacing 2.54 mm
Touchpanel Connector J4	Spacing 2.54 mm
Configuration Jumper R1	Type 1206

\* Bottom contact type

### 2.1.1 Connecting Table

The input connector J1 of adapter NetDCU-ADP/TX09 can be directly plugged into the LCD interface connector of NetDCUx. The LCD voltage  $V_{LCD}$  **must be set to 3.3V** for the TX09 display. The reference for the output connector J2 is shown in Table 2.2. The touch panel signals from the display are available on connector J4.

Table 2.2: Connecting table

NetDCU-ADP/TX09		
PIN	Function	
	Input	Output
	J1	J2
1	GND	$V_{LCD}$
2	R1	$V_{LCD}$
3	R0	$V_{LCD}$
4	G5	CLP
5	G4	GND
6	G3	LIP
7	G2	VSS
8	GND	M
9	B3	GND
10	B2	NC
11	B1	GND
12	B0	R5
13	G1	R4

NetDCU-ADP/TX09		
PIN	Function	
	Input	Output
	J1	J2
14	G0	R3
15	B5	GND
16	B4	R2
17	GND	R1
18	V <sub>EEK</sub>	R0
19	CLP	GND
20	NC	G5
21	M	G4
22	LIP	G3
23	DEN	GND
24	GND	G2
25	V <sub>LCD</sub>	G1
26	NC	G0
27	NC	GND
28	GND	B5
29	NC	B4
30	NC	B3
31	R2	GND
32	R3	B2
33	R4	B1



NetDCU-ADP/TX09		
PIN	Function	
	Input	Output
	J1	J2
34	R5	B0
35	-	DEN
36	-	V <sub>CTRL</sub>
37	-	X1
38	-	Y1
39	-	X2
40	-	Y2

Table 2.3: Connector J3

J3	
PIN	Function
1	V <sub>LCD</sub>
2	V <sub>CTRL</sub>
3	GND

Table 2.4: Connector J4

J4	
PIN	Function
1	Y2
2	X2
3	Y1
4	X1

### 2.1.2 Configuration

The control voltage  $V_{CTRL}$  for the LED-Backlight can be supplied from a NetDCU with  $V_{EEK}$ -Output (check NetDCU documentation) or from an external source on connector J3.

For use with the NetDCU  $V_{EEK}$ -Output jumper R1 has to be set.

If an external voltage is applied jumper R1 **must not** be set.

Table 2.5 shows the possible configurations for  $V_{CTRL}$ .

Table 2.5:  $V_{CTRL}$  Configuration

$V_{CTRL}$	Jumpers
NetDCU	R1
external	-