



# AKD4183 AK4183 Rev.A Evaluation Board

## Abstract

AKD4183 is the board for evaluation of the touch screen controller AK4183 which adopted the TMSOP small package suitable for the cellular phone, the handheld game machine, etc. Since AKD4183 has a touch-panel I/F and a digital I/O power supply input terminal, it is easily connectable with a target system of low power/voltage drive.

## Function

- AK4183 (TMSOP 10 package)
- I<sup>2</sup>C I/F for uP
- Touch-panel I/F
- Digital I/O power supply terminal

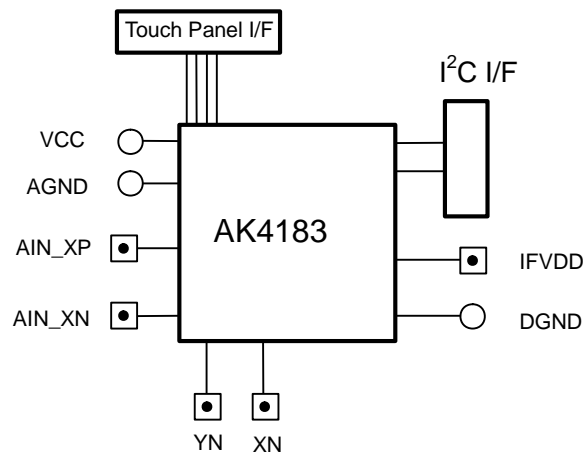


Figure 1 AKD4183 Block Diagram

### ■ Operation procedure

1. Wiring of a power supply
  - VCC (Red) = 2.5V~3.6V
  - AGND (Black) = 0V
  - DGND (Black) = 0V
  - IFVDD (Orange) = VCC
  - JP1-short (default: CAD0pin = "L"), JP2-short
2. A setup of I<sup>2</sup>C address J1 (short: CAD0pin = "L", open: CAD0pin = "H")
3. Connect I<sup>2</sup>C I/F (SCL, SDA) to uP.
4. A setup of evaluation mode, jumper
5. Power supply ON
6. Run the control soft

### ■ Evaluation mode selection

- 1) Position, Pen Pressure
  - 4 wire touch-panel (X+, X-, Y+, and Y-) is connected to J1 connector.
  - Jumper setup
    - JP3 (XPSEL) -----select XP
    - JP4 (YPSEL) -----select YP
    - JP5 (XNSEL) -----select XN
    - JP6 (YNSEL) -----select YN

### ■ Power supply injection, Evaluation

- 1) Digital serial data input

When the control command data indicated by specification from digital I/F (P1 or PORT1) was inputted the AD conversion is carried out and is outputted from a SDA.

### ■ Parallel Port Driver install

Attached software is the application software which checks the function of the AK4183. Windows(R) Win98, Win2K, and WinXP are supported. However, to make it operate on Win2K and XP, it is necessary to install driver in advance. Please follow a procedure with reference to DriverSetupe.pdf. Installation of a driver is unnecessary to use it by the Windows 98 system.

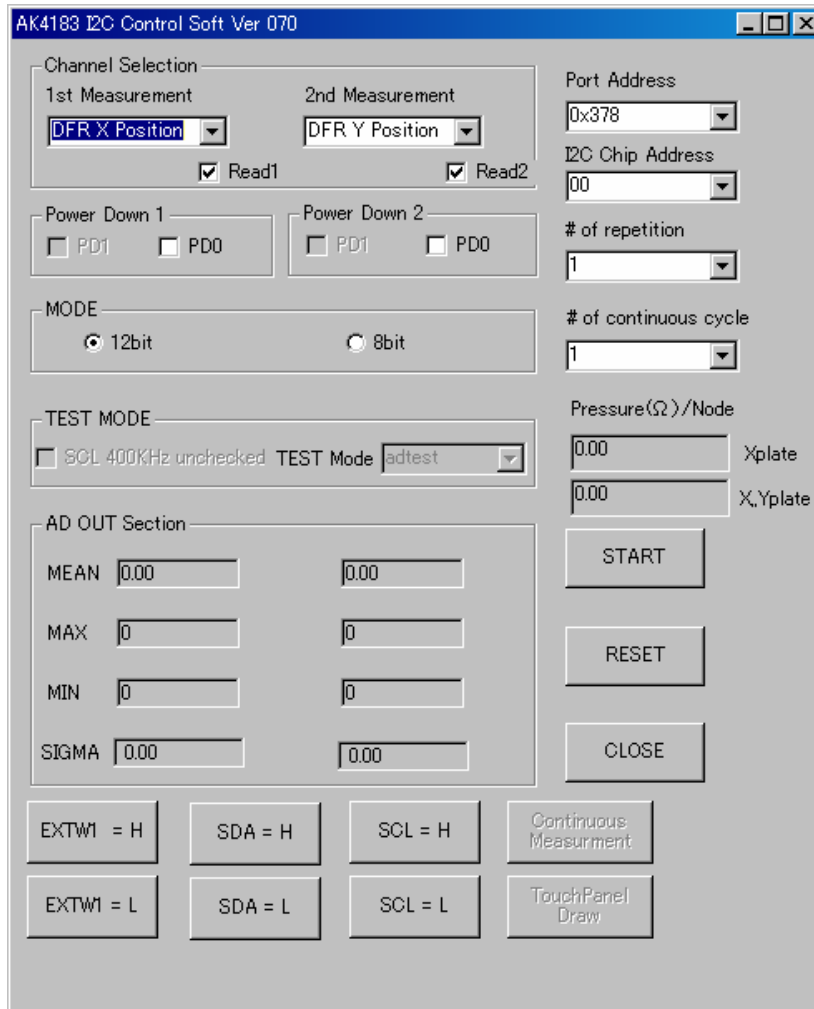
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■ Run the software (AK4183\_070.exe)

First match Port Address of your PC environment. Measurements are started when the start button is clicked after select Channel Selection, MODE, and Power Down 0. A result will be displayed on AD OUT Section. When carrying out position detection, the position where pen clicked on the touch panel is measured.

Operation can set up two control commands. Continuation operation can be performed. Each data (mean, max, and min) is also displayed at the same time. PENIRQN can be seen by the break of a command.



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**■ Trouble Shooting**

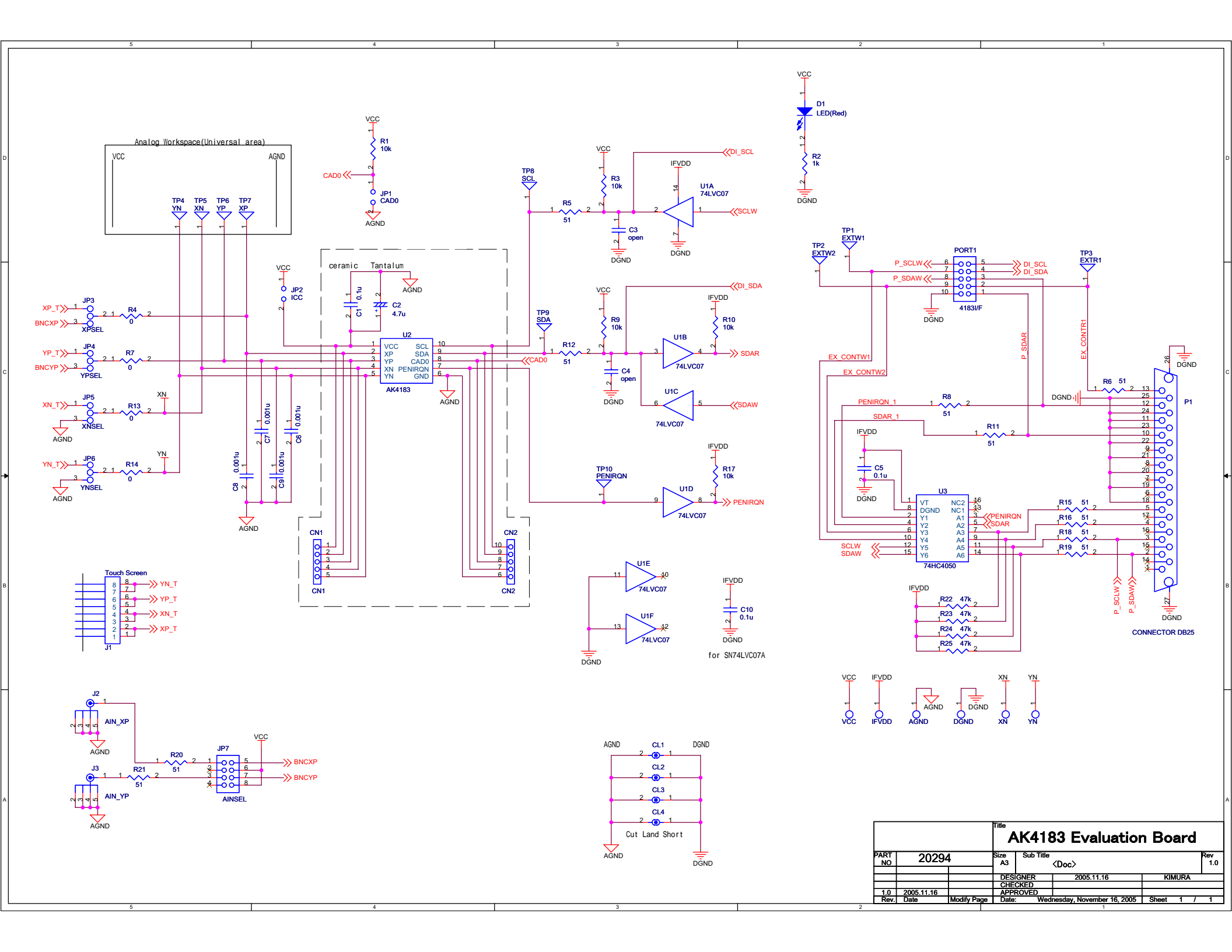
1. Application error is occurred and doesn't start up  
If the operating system is Window2000/X, Please install AKMport driver in advance of run the AK4183\_070.exe.
2. MEAN value in AD OUT section does not change when click start button (cannot write control command to AK4183)  
Please set the port address to your PC platform environment.
3. The mean, max, min value doesn't change wherever the pen pushes down on the panel.  
There is a possibility of the trouble of the contact of the relay connector (plat 8pin-8-wire female dip converter) that connects the touch panel. Please open JP3, 4, 5, and 6 on the evaluation board, measure panel seat resistance (XP-XN, YP-YN), and check the resistance. Generally, the panel seat resistance is hundreds of  $\Omega$ . There is a possibility that the touch panel is not correctly connected if the resistance is over thousands of  $k\Omega$ . Please connect the relay connector and check the resistance value again.

<b>Revision History</b>
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Date (YY/MM/DD)	Manual Revision	Board Revision	Reason	Contents
06/09/22	KM085700	0	First edition	

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