# FCL Components Touch Panels

## Control Board & Control IC for 4-/5-/7-Wire Resistive Touch Panels

### Overview

Control board and control IC for analog resistive touch panels.
Conform to USB, RS232C, and I2C interfaces are available as standard products. Custom solutions based on these standard products are also available. With 4-wire touch panel, 2-point gesture operations such as zoom, rotate are available.

- Applications

  POS/ECR, operation panels for copier and fax, various terminal devices for FA and medical equipment, etc.

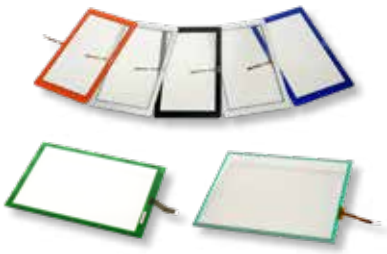
- About

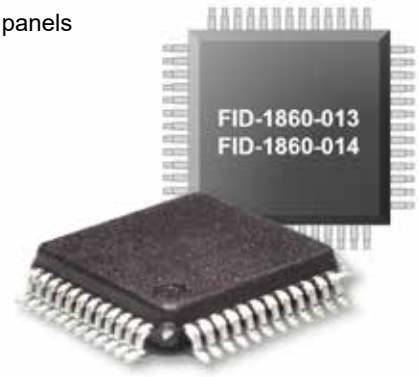
  Extensive experience in touch panel development and control technology has led to the creation of control boards and ICs that operate customer products under optimal conditions, tailored to the specific environment and characteristics of each touch panel.

- Features

**Corresponds to various resistive touch panels**

Corresponds to 4-, 5-, 7-wire resistive touch panels





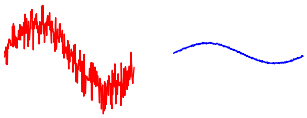

**Customization**

Software for Windows®, Linux and Android™ available.
Customization is available:

- Switch, buzzer of peripheral equipment, etc.
- Use a part of touch area as buttons
- Custom operation of touch panel
- Adding log function of touch operation

**Noise control**

Performs software processing to suppress noise and touch-signal when it measures input signal, only valid operations are recongnized.



**Easy setup**

The control ICs automatically optimize processes at startup, eliminating the need for initialization from the customer's system. When the touch panel is operated, coordinates are detected and transmitted to the host system automatically.

**Dual Touch**

Gesture operation is available with 4-wire touch panels

## ■ Control Board Specifications

| Item | | Specifications | | | | | |
|---|---|---|---|---|---|---|---|
| Part number | | FID-1850-150 | FID-1850-155 | FID-1850-160 | FID-1850-180 | FID-1850-170 | FID-1850-175 |
| | |  |  |  |  |  |  |
| Control IC | | FID-1860-014 | | | | FID-1860-013 | |
| Touch Panel | | 4-wire | 7-wire | 4-wire | 5-wire | 4-wire | 7-wire |
| Input type | | Single | Single | SIngle/dual (switchable) | Single | SIngle | Single |
| Gesture function | | None/flick (switchable) | Not available | SIngle: flick<br>Dual: flick, rotate, pinch in/out | Not available | Not available | |
| Output interface | | USB full speed<br>HID compliant | | | | Conforms to RS232C<br>9,600bps, 19,200bps | |
| Sampling speed | | 125 to 250pps | | | | 200pps (max) | |
| Resolution | | 16,383 x 16,383 | | | | 4,096 x 4,096<br>16,383 x 16,383 | |
| Power supply | | 5VDC ±10% | | | | | |
| Current consumption (including touch panel) | Operate (typ.) | 19mA | 14mA | 16mA | 19mA | 19mA | 19mA |
| | Suspend (typ.) | 17mA | 13mA | 13mA | 15mA | 12mA | 13mA |
| Operating temperature/ humidity | | -5°C to +60°C, 20%RH to 85%RH (no condensation) | | | | | |
| Storage temperature/ humidity | | -30°C to +70°C, 20%RH to 85%RH (no condensation) | | | | | |
| Dimensions (mm) | | 75 x 30 x 8.5 | 75 x 30 x 8.5 | 60 x 30 x 5.2 | 95 x 30 x 8.5 | 75 x 30 x 8.5 | 75 x 30 x 5.9 |

## ■ Control IC Specifications

| Part Number | Touch Panel (input type) | Gesture Function | Output Interface | Dimensions (mm) | Package |
|---|---|---|---|---|---|
| FID-1860-013 | 4-wire (single/dual)<br>5-, 7-wire (single) | Not available | Serial (asynchronous)<br>I2C | 7.0 x 7.0 x 1.7 (excluding terminals)<br>48 pin LFQFP | Tray |
| FID-1860-014 | 4-wire (single) | None/flick | USB (full speed) | 7.0 x 7.0 x 1.7 (excluding terminals)<br>48 pin LFQFP | Tray |
| | 4-wire (dual) | Flick, rotate, pinch in/out | | | |
| | 5-, 7- wire (single) | Not available | | | |

■ Notes: Control boards and control ICs are optimized for our touch panels and may not perform at full potential with products from other companies. Our 7-wire touch panels are proprietary and cannot be used with control boards or ICs from other manufacturers.

RoHS Compliance: EU RoHS: The control boards contain components with lead content exceeding the threshold. However, this lead is covered under the RoHS exemption criteria.

China RoHS (Measures for the Environmental Administration of the Control of Pollution by Electronic Information Products):
The control boards contain components with lead content exceeding the threshold. For details regarding the Environmental Protection Use Period (EPUP), please contact us directly.

## Contact

**Japan**
FCL COMPONENTS LIMITED
Shinagawa Seaside Park Tower
12-4, Higashi-shinagawa 4-chome,
Tokyo 140 0002, Japan
Tel: +81 3 3450 1682
Email: fcl-contact@cs.fcl-components.com

**North and South America**
FCL COMPONENTS AMERICA, INC.
2055 Gateway Place, Suite 480
San Jose, CA 95110 U.S.A.
Tel: +1 408 745 4900
Email: contact@fcl-components.us

**Web:** www.fcl-components.com/en/

**Europe**
FCL COMPONENTS EUROPE B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: +31 23 5560910
Email: info@fcl-components.eu

**Asia Pacific**
FCL COMPONENTS ASIA, LTD.
51 Changi Business Park Central, #06-07
Singapore 486066
Tel: +65 6375 8560
Email: fcal@fcl-components.com

**China**
FCL COMPONENTS (SHANGHAI) CO., LTD.
Unit 1105, Central Park –Jing An, No.329 Heng Feng Road, Shanghai 200070, China
Tel: +86 021 3253 0998
Email: fcsh@fcl-components.com

**Hong Kong**
FCL COMPONENTS HONG KONG Co., LIMITED
Room 13, 23/F, Seapower Tower, Concordia Plaza,
No.1 Science Museum Road,
Tsim Sha Tsui East, Kowloon, Hong Kong
Tel: +852 2881 8495
Email: fcsh@fcl-components.com

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