

LV-200 LabVIEW™ I/O Interface Lab



LV-200 LabVIEW™ I/O Interface Lab is a platform of hardware/software development. It offers a variety of I/O and peripheral devices used in real life and adopts National Instruments LabVIEW™ (G programming language) as development software. Data transfer between LV-200 Lab and computer is performed via USB interface. LV-200 also provides a comprehensive Experiment Manual which describes the operation of I/O circuits and peripheral devices as well as the programming of control programs (Virtual Instruments) using G programming language.

● Features

1. Data transfer and communication between LV-200 Lab and computer via USB interface
2. Digital output devices : LED BAR and 7-segment LED display provided for digital data display
3. Digital input devices : Data switches provided for digital data input
4. A/D and D/A converters applied for input and output applications of analog signal and digital data
5. Providing a number of hardware such as stepping motor, EEPROM and LCD for control application of peripheral devices
6. Comprehensive Experiment Manual including a detailed description of software and hardware
7. DC power supplies available for internal and external circuits
8. All experiments can be run on a trial-version LabVIEW™ software.

● Specifications

1. 8-Bit LED bar x 1
2. 7-segment LED display x 2
3. 5-bit data switch x 1
4. A/D converter x 2 ADC0804, 8-bit successive approximation A/D converter
5. D/A converter x 2 DAC0800, 8-bit current-output D/A converter
6. Stepping motor driver ULN2803, octal high-voltage high-current darlington transistor arrays
7. Stepping motor 7.5-degree step angle
8. LCD display 20x2 character LCD
9. Memory 93C66, 4096-bit (256 x 16-bit) serial EEPROM
10. 5 I/O ports : input ports A and B, output ports C, D, and E
11. Built-in power supply
Input AC power : 100V~240V
Output DC power : +12V,-12V,+5V, +3.3V

List of Experiments

1. Digital output control
2. Digital input control
3. Digital I/O control
4. A/D converter control
5. D/A converter control
6. Stepping motor control
7. LCD control
8. EEPROM control
9. Advanced applications:
Counter, stepping motor controller using event structure, LCD advertising display from front panel, LCD advertising display from EEPROM, two-channel oscilloscope, digital voltmeter, acquiring data and storing in EEPROM, two-channel function generator

System Requirements

1. Software requirement : LabVIEW™ 8.6 or higher
2. Personal computer

● Accessories

1. Experiment manual
2. LabVIEW™ introduction
3. AC power cord
4. USB cable
5. Connection leads and plugs : 1 set
6. IDC cable (5 x 2 pin) : 1 set
7. Installation CD
(including USB driver program, trial-version LabVIEW™, NI-VISA and example programs)