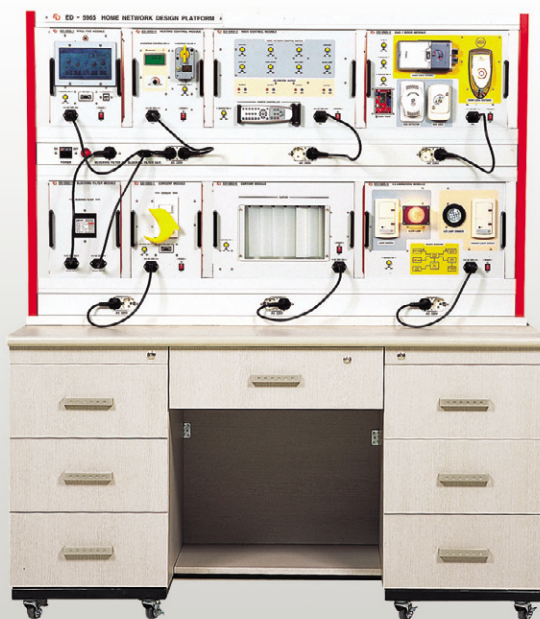


- Ubiquitous

## HOME NETWORK DESIGN PLATFORM

New  
ED-5965

- Home network based experiments suitable for ubiquitous computing
- Designed to help develop network devices on the basis of Lon Protocol
- Control of each device installed in the field through power line communication
- Related experiments through Neuron C and MICOM programming
- Home network control in utilization of LabVIEW
- Modular structure with a rack for convenient wiring
- Home network device control through the Internet(Home Gateway)



### ACCESSORIES

- MiniEVKComiler
- LonMaker 3.1
- Experimental Rack
  - » Single Unit Power Source Rack
  - » Built-in 15A Circuit Breaker
  - » Built-in Indication Lamp
  - » Dimension: 1490(W) x 918(H) x 320(D)mm
- Connection Cables
- AC Power Cord
- User's Guide Manual

### OPTIONS

- Experimental Table
  - » MDF Material, Wheel type With Drawers
  - » 1490(W) x 800(D) x 846(H)mm

## > EXPERIMENTS

- Overview of Home Network technology
- Principles on Home Network device related hardware and software
- Understanding of Home Network scenarios
- Programming for each device's operation
- Commissioning and network binding Using LonMaker
- Control of each device
- Interoperable self installation

### IO Switch Control Module

- Control by power line communication
- Remote control through each module's switch
- F/W programming with Neuron C

### Electric Outlet Module

- Control by power line communication
- Control by the remote controller
- Control through IO\_SWITCH
- External control interface through UART
- F/W programming with Neuron C

### Heating Control Module

- Control by power line communication
- Control by the remote controller
- Control through IO\_SWITCH
- F/W programming with Neuron C

### Illumination Module

- Control by power line communication
- Control by the remote controller
- Control through IO\_SWITCH
- IR(remote controller) reception F/W experiments
- F/W programming with Neuron C

### Wall Pad Module

- 7" touch LCD and similar functions as offered by the Wall Pad at home
- Control of door using C-MOS Camera
- Home gateway experiments
- Control of ED-5965 model through Internet in utilization of PDA and PC

### Blinds Control Module

- Control by power line communication
- Control by the remote controller
- Control through IO\_SWITCH
- F/W programming with Neuron C

### Gas/Door Control Module

- Control by power line communication
- Control by the remote controller
- Control through IO\_SWITCH
- F/W programming With Neuron C

## Experiments Module

**ED-5965-1**  
Wall Pad Module

- Icons for the module components on 7" touch LCD for control
- C-MOS Camera
- Monitoring and door control
- Processor : PX270 ARM CORE/PL3120 Transceiver
- Display : 7" touch LCD
- Communication : Ethernet , Power Line Communication

**ED-5965-2**  
Heating Control Module

- Temperature control device for heating valve control
- Encoder Switch for temperature control
- Control of the valve through Main Control module
- Control by LabVIEW program
- Control by the Remote Controller(Integrated type)
- Control through Wall Pad

**ED-5965-3**  
Main Control Module

- Modular control through the switches
- Remote Controller for controlling each module
- External output terminal for customized experiments
- Processor : PL3120 Transceiver
- 12V Relay, 24V Relay OUT Terminal
- Total of 8 input switches
- Infrared(IR) communication in utilization of the Remote Controller

**ED-5965-4**  
Gas/Door Control Module

- GAS Detector for gas valve control
- Main Control module for door control
- Control By LabVIEW program
- Control through Wall Pad
- ZigBee/RFID for door control
- Processor : PL3120 Transceiver
- Digital door lock
- Gas detector, DC 12V gas valve
- CC2420 ZigBee module

**ED-5965-5**  
Blocking Filter Module

- Isolates the equipment from its surrounding and blocks Communication once power line communication goes through this filter
- Rated Voltage : 220/110V
- Rated Current : 50A
- Operating Temperature : -10C ~ +40C
- Distortion : above 40dB
- Bandwidth : 110kHz ~ 140kHz

# HOME NETWORK DESIGN PLATFORM

# ED-5965



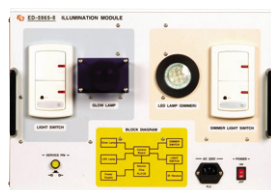
## ED-5965-6 Electric Outlet Module

- Electric outlet control
- Control by LabVIEW program using RS-232 Interface
- Processor : PL3120 Transceiver
- RS-232 monitoring



## ED-5965-7 Blinds Control Module

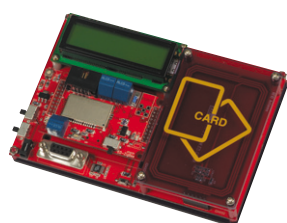
- Control of blinds through Main Control module
- Control by LabVIEW program
- Control by the Remote Controller(Integrated type)
- Control through Wall Pad
- Processor : PL3120 Transceiver
- DC 24V Motor Control(Power Line Communication)



## ED-5965-8 Illumination Control / IR Module

- ON/OFF Switch for Lamp control
- Main Control module for Lamp control
- Control By LabVIEW Program
- Control by the Remote Controller(Integrated Type)
- Control through Wall Pad
- Processor : PL3120 Transceiver
- AC 220V Glow Lamp, DC 12V LED Lamp
- Combined Infrared Switch

## Experiments Module



### RFID/ZigBee Access Control Module

- Control through power line communication
- Door control using RFID and ZigBee
- RFID, ZigBee, PLC (Power Line Communication) Access
- F/W programming through Neuron C
- 13.56MHz RFID Reader
- Sensing Distance: 100mm
- ISO/IEC 14443 Type A, Type B
- Processor : AT89C51(8051)
- ZigBee module(CC 2420)



### Software

Each device's control is possible through each Icon of the integrated HMI that enables controlling illumination, heating, blinds, electric outlet, dimmer and indoor temperature

### SYSTEM CHARACTERISTICS

- Memory : ROM 24kB, EEPROM 4kB, SRAM 2kB
- Interface : RS-232

- Operating System : Protocol Scheduler
- Communication Channel : PLC
- Dimension : 420(W) x 300(H) x 95(D)mm
- Input Voltage : 220V