



## IR-210/IR-210-5

Universal IR Learning Module  
(6 x IR outputs, 224 x IR cmds)

### Features

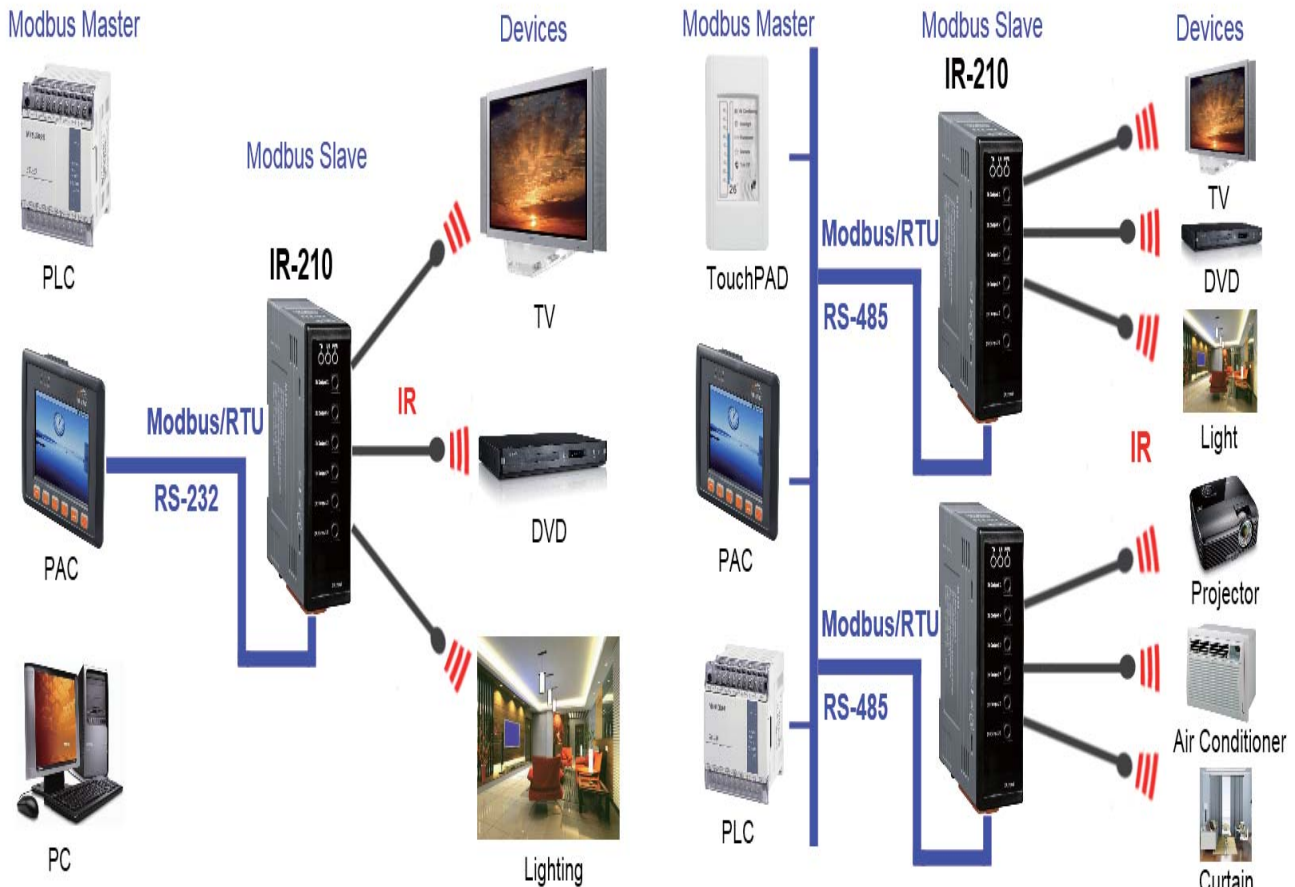
- 6 IR output channels.
- 1 IR learning input.
- Supports 6 IR carrier frequencies: 33, 36, 37, 38, 40 and 56 kHz.
- IR command capacity: 224
- Supports RS-232 and RS-485 serial interface.
- Supports Modbus RTU protocol to emit IR commands.
- Provides ASCII String Command (DCON protocol) to emit IR commands.
- Provides API library for users' program development easily.
- Built-in Watchdog.
- RoHS Compliance.



### Introduction

IR-210 is a universal IR learning remote module which can learn IR remote commands of diverse electronic devices. The learning commands can be stored in the module or saved to a file. IR-210 supplies 6 IR output channels for individual and simultaneous control on multiple devices. The accompanied RS-232 and RS-485 interfaces with Modbus RTU and DCON protocols provide more flexible expansion and control on the module. As a replacement of IR remote controls and a module that can be easily integrated with Modbus master devices (e.g. PAC, PLC, PC... etc.), IR-210 is well-suited for smart home and building automation.

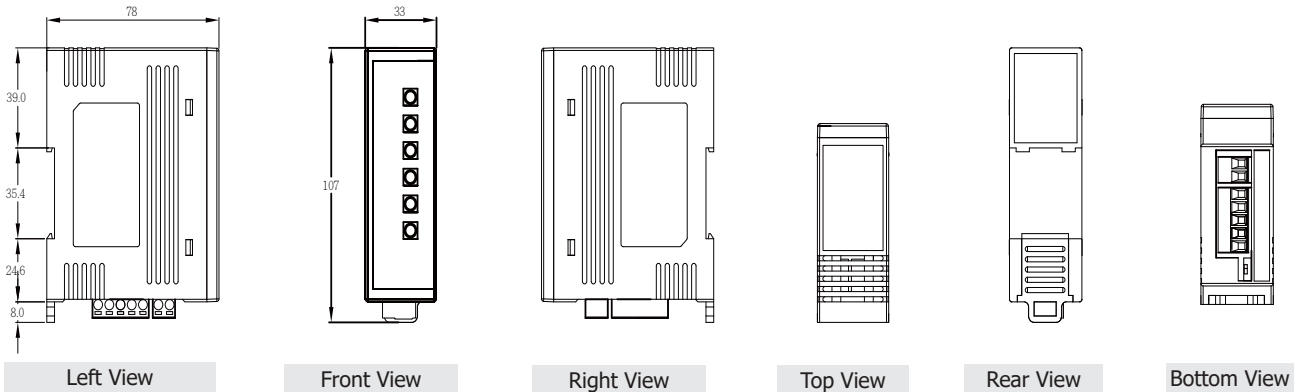
### Applications



## Specifications

| Hardware                       |  |
|--------------------------------|--|
| IR Interface                   |  |
| IR Output Channels             | 6 channels with 3.5 mm audio jack  |
| IR Learning Input              | 1 channel. Supports 6 IR carrier frequencies: 33, 36, 37, 38, 40, 56 kHz.    |
| Serial Communication Interface |  |
| Connector                      | 2-pin (RS-485) / 5-pin (RS-232, Power) screw terminal connector              |
| COM1                           | RS-232 (TxD, RxD, GND)   |
| COM2                           | RS-485 (DATA+, DATA-)  |
| Baud Rate                      | 9600, 19200, 38400, 57600, 115200 bps  |
| Protocol                       | Modbus RTU / DCON (slave)  |
| LED Indicator                  |  |
| Round LED                      | TR (IR Transmitting) / LN (IR Learning) / PWR (Power)                        |
| Power                          |  |
| Power supply                   | +10 ~ +30 V <sub>DC</sub>  |
| Power Consumption              | Stand by: 0.65 W 1 IR output used: 2.5 W      6 IR outputs used: 12 W (Max.) |
| Mechanism                      |  |
| Installation                   | DIN-Rail Mounting  |
| Dimensions                     | 33 mm x 78 mm x 107 mm (W x L x H)   |
| Dip Switch                     | FW (Firmware update mode) / OP (Firmware operation mode)                     |
| Environment                    |  |
| Operating Temp.                | -25 ~ +75°C  |
| Storage Temp.                  | -30 ~ +80°C  |
| Humidity                       | 10 ~ 90% RH, non-condensing  |

## Dimensions (Units: mm)



## Ordering Information

|                    |  |
|--------------------|--|
| <b>IR-210 CR</b>   | Universal IR Learning Module (6 x IR outputs, 224 x IR cmds) (RS-232, RS-485), with 2 x CA-IR-SH2251 emitter cables (RoHS)   |
| <b>IR-210-5 CR</b> | Universal IR Learning Module (6 x IR outputs, 224 x IR cmds) (RS-232, RS-485), with 2 x CA-IR-SH2251-5 emitter cables (RoHS) |

## Accessories

|                         |  |
|-------------------------|--|
| <b>CA-IR-SH2251</b>     | Single-headed IR emitter (with adhesive pad, Ø 3 mm IRED, 2.5 m) |
| <b>CA-IR-SH2252</b>     | Dual-headed IR emitter (with adhesive pad, Ø 3 mm IRED, 2.5 m)   |
| <b>CA-IR-SH2251-5</b>   | Single-headed IR emitter (with adhesive pad, Ø 5 mm IRED, 2.5 m) |
| <b>CA-IR-SH2252-5</b>   | Dual-headed IR emitter (with adhesive pad, Ø 5 mm IRED, 2.5 m)   |
| <b>CA-IR-SH2251-360</b> | Semi-sphere-headed IR blaster cable (with adhesive pad, 2.5 m)   |