

Circuit description of Appliance module ZW-03A

The main board is power provider, it uses D1 to D4 bridge to get 24 Vdc for active relay RL1 and use zener ZD2 to get stable 12 DC voltage then this voltage reduced by U1 L4931 to 3.3 Vdc for MCU use. Daughter board has MCU module ZM3102 U1 to handle the RF operation of transmit and receive at frequency 908.42MHz, this signal frequency was set by L1 and C2 with different value for US and EU version, and reach distance of 100 feet at line of sight condition. It connect to main board with J1 connector to get 3.3Vdc and control signal to relay RL1 dependence on switch SW1 is pushed to On/Off then energized or release RL1A power the load or not. U1 also control communication to Z-wave network and other devices due to there is routing table exist for indirect RF signal control used, and monitor loader condition to protect appliance when it overload. J2 connector reserved for on line programming device when there is new function added.