

IR

The diagram illustrates the electrical connections for an IR receiver module. Key components and connections include:

- VDD_IR** supply connected to a **10uF** capacitor and a **10R** resistor (**R20**).
- VDD33** supply connected to one terminal of a **33K** resistor (**R11**).
- The other terminal of **R11** is connected to the **IR** pin of the module.
- A **100R** resistor (**R28**) is connected between the **IR** pin and the **GPIO19** pin.
- The **IR** pin is also connected to **GND1**.

FLASH

The diagram shows the following connections for the BY25Q16B8STG flash memory (U4):

- Pin 1 (CS) to ESP_CS
- Pin 2 (DO) to ESPI_DATA1
- Pin 3 (WP) to ESPI_DATA2
- Pin 4 (GND) to ground
- Pin 5 (DI) to ESPI_DATA0
- Pin 6 (SCLK) to ESPI_CLK
- Pin 7 (HOLD) to ESPI_DATA3
- Pin 8 (VCC) to VDD33

A 0.1uF capacitor (C8) is connected between VDD33 and ground.

The schematic diagram illustrates the RTL8710BN module, a QFN32 5X5 package. The central component is the RTL8710BN-A0-CG chip (U3), which is an AmebaZ 8710BN-A1 QFN32 5X5. The chip is connected to various external components:

- Power:** A 3.3V regulator (S1) provides power to the VDD33 pin. The chip also has a VBAT pin connected to a 2.2uF capacitor (C5).
- Crystal Oscillator:** A 40MHz crystal oscillator (Y1) is connected to the XO and XI pins. It is decoupled by capacitors C6 (8.2pF) and C9 (8.2pF).
- Antenna:** An antenna (ANT_FFA) is connected to the RFO pin. It is decoupled by a 2.7nH inductor (L3) and capacitors C14 (1.5pF) and C15 (1.8pF).
- GPIOs:** The chip has multiple GPIO pins (GPIOA_0 to GPIOA_30) connected to various external components, including a 10K resistor (R7) and a 10K resistor (R8).
- I2C/SPI:** The chip has I2C and SPI pins (I2C0, I2C1, SPI0, SPI1, SPI2, SPI3, SPI4, SPI5, SPI6, SPI7, SPI8, SPI9, SPI10, SPI11, SPI12, SPI13, SPI14, SPI15, SPI16, SPI17, SPI18, SPI19, SPI20, SPI21, SPI22, SPI23, SPI24, SPI25, SPI26, SPI27, SPI28, SPI29, SPI30, SPI31, SPI32, SPI33, SPI34, SPI35, SPI36, SPI37, SPI38, SPI39, SPI40, SPI41, SPI42, SPI43, SPI44, SPI45, SPI46, SPI47, SPI48, SPI49, SPI50, SPI51, SPI52, SPI53, SPI54, SPI55, SPI56, SPI57, SPI58, SPI59, SPI60, SPI61, SPI62, SPI63, SPI64, SPI65, SPI66, SPI67, SPI68, SPI69, SPI70, SPI71, SPI72, SPI73, SPI74, SPI75, SPI76, SPI77, SPI78, SPI79, SPI80, SPI81, SPI82, SPI83, SPI84, SPI85, SPI86, SPI87, SPI88, SPI89, SPI90, SPI91, SPI92, SPI93, SPI94, SPI95, SPI96, SPI97, SPI98, SPI99, SPI100, SPI101, SPI102, SPI103, SPI104, SPI105, SPI106, SPI107, SPI108, SPI109, SPI110, SPI111, SPI112, SPI113, SPI114, SPI115, SPI116, SPI117, SPI118, SPI119, SPI120, SPI121, SPI122, SPI123, SPI124, SPI125, SPI126, SPI127, SPI128, SPI129, SPI130, 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