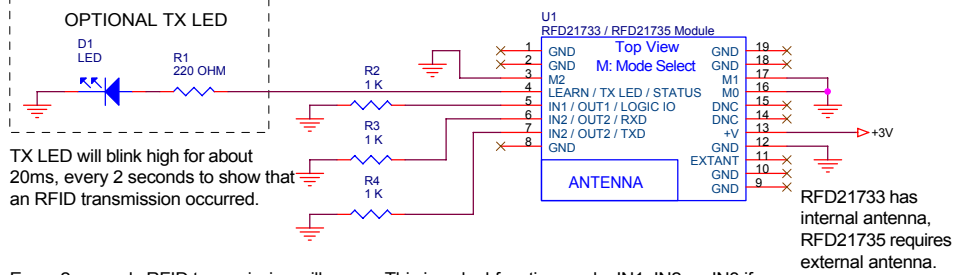


Active RFID Transmitter

Mode 0

If not used, leave P0.3 unconnected.



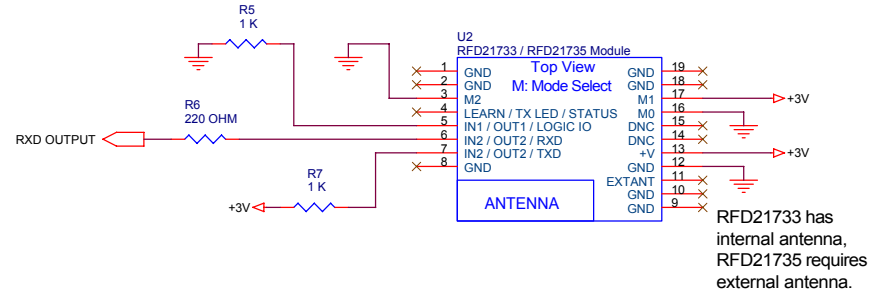
Every 2 seconds RFID transmission will occur. This is a dual-function mode, IN1, IN2, or IN3 if driven high will function exactly like they would in switch transmitter mode. IN1, IN2 and IN3 must all be kept low for RFID transmissions to occur automatically.

In this mode P0.4, P0.5, P0.6 are always inputs, however the resistors to ground are used for safety, just in case there was a mode misconfiguration during testing time that causes any of those pins to be configured as an output instead. The resistors are recommended. If you choose to remove them, you can connect all three inputs directly to ground.

+3V supply can be between +1.9V and +3.6V

9600,N,8,1 Serial UART Receiver

Mode 2



Every 2 seconds RXD will output the 5 bytes sent by the RFID transmitter, byte 1 will have bit 0 set to 1 to indicate that the source of the transmission was an RFID transmission, it will also have bit 4 set to 1 to which is the bit it forces high during an RFID transmission. The 4 following bytes, byte 2 through 5 will be the ESN of the transmitting RFID transmitter.

The resistor on P0.4 is required. P0.4 is a switch IO signal, it is normally an input, so if left open it can float and cause the radio to go into transmit mode. If signal is received from another UART Serial Transmitter, to drive this pin, it will switch to an output and produce an active high output, so if you connect it directly to ground there will be a conflict. So the only option is to have the resistor there to keep it pulled low to as not to cause a transmission, and to be there as a load for when and if it receives a Logic I/O transmission and begins to drive.

The resistor on P0.5 RXD Output is not required but is only added for safety during prototyping. Use caution not to place too large of a resistor value as not to increase the slew rate. For most applications 220 ohm should be ideal. This pin is expecting to be connected to an input.

The resistor on P0.6 is not required but is recommended, just in case there is a mode misconfiguration that causes the radio to go to a mode that drives P0.6 and causes a conflict. If you choose to remove it, then connect P0.6 directly to the +3V supply.

The RXD output is at +3V logic level, you must use a level shifter to talk to an RS232 port, do not connect directly to an RS232 port.

+3V supply can be between +1.9V and +3.6V

Patents Pending

RFPD8 8-Mode Chart for RFD21733 / RFD21735
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Mode	Description	Mode Select Inputs			Learn / Status			
		2	1	0	IN 3	IN 2	IN 1	
0	Active RFID Transmitter	0	0	0	IN 3	IN 2	IN 1	TX LED
1	3 Input Switch Logic Transmitter	0	0	1	IN 3	IN 2	IN 1	TX LED
2	Serial UART Transceiver, 9600, N, 8, 1	0	1	0	TXD IN	RXD OUT	LOGIC I/O	X
3	Serial UART Transceiver, 9600, N, 8, 1	0	1	1	TXD IN	RXD OUT	LOGIC I/O	ESN LEARN Network
4	3 Output Switch Logic Receiver - 500ms	1	0	0	OUT 3	OUT 2	OUT 1	X
5	3 Output Switch Logic Receiver - 500ms	1	0	1	OUT 3	OUT 2	OUT 1	ESN LEARN Network
6	3 Output Switch Logic Receiver - 20ms	1	1	0	OUT 3	OUT 2	OUT 1	X
7	3 Output Switch Logic Receiver - 20ms	1	1	1	OUT 3	OUT 2	OUT 1	ESN LEARN Network
RFD21733 / RFD21735 Pin Number:		3	17	16	7	6	5	4

Please contact RF Digital anytime for application support questions at support@rfdigital.com

RFID TX TO UART RX

Description:

Active RFID transmitter, transmits its ESN every 2 seconds. Serial UART receiver, receives and outputs the transmitters ESN through its Serial RXD pin at 9600,N,8,1.

RFD76001 Application

For Part Number:
RFD21733 / RFD21735
02-01-09 12:36 PM

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