DAD07
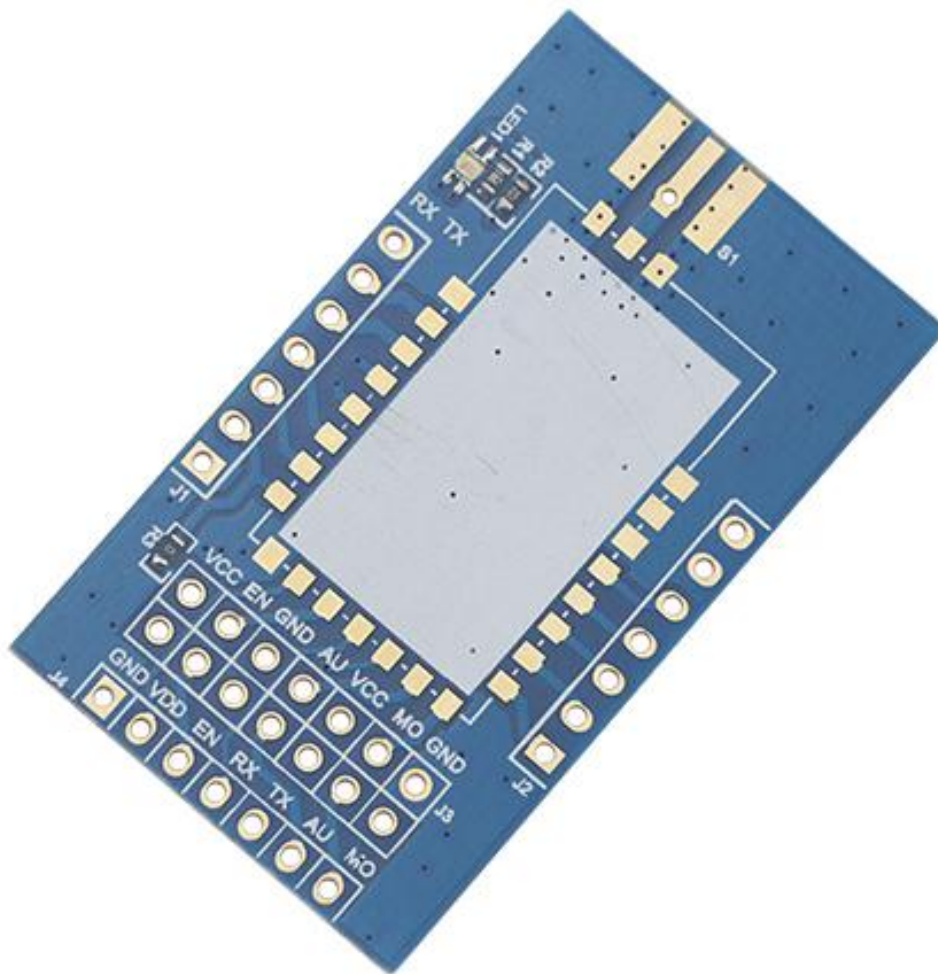## Testing board for DRF1262DS and DRF1268DS

V1.00

DESCRIPTION

DAD07 is a testing board designed for data radio modem DRF1268DS and DRF1262DS. The DRF126xDS modules are SMD package so DAD07 board is designed to convert the modules to DIP package which makes the testing of the modules much easier. The board contains a bi-color LED which is connected to the LED pins of the modules to indicate the transmit and receive status. SMA connector and 2.54mm pin headers can be soldered on the board to make the distance testing more convenient.
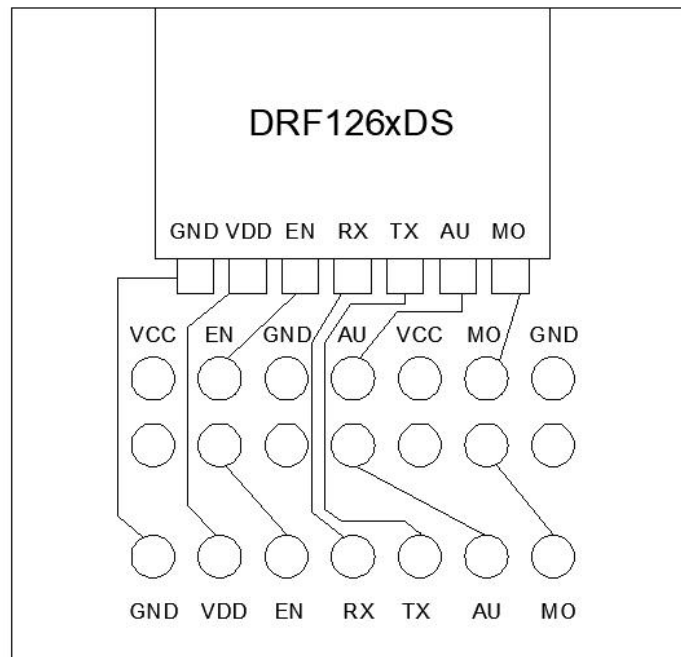

Figure 1: Pin Connections between DRF126xDs and DAD07

Figure 1 shows a part of DAD07 board with DRF126xDS module on it. The pin names on the DAD07 board have the same meaning as those on the DRF126xDS module. DRF126xDS can work in four power modes which are controlled by the levels of EN and MO pins. However the two pins of DRF126xDS can be connected to the DAD07 board through jumpers and they also can be connected to VCC or GND through jumpers. The AU pin of DRF126xDS is a status indication pin and it also can be connected to the AU pin of DAD07 though a jumper.

DRF1262DS/DRF1268DS	DAD07	Connecting Status
GND	GND	Connected
VDD	VDD	Connected
EN	EN	No
RX	RX	Connected
TX	TX	Connected
AU	AU	No
MO	MO	No

Table 1: Pin Connection between DRF126xDS and DAD07

1. Power Mode 0   (EN=0, MO=0)

In this mode, the EN pin and MO pin of the DRF126xDS module should be connected to GND so users can connect the two pins to the GND through jumpers. The pins (EN/AU/MO) of DAD07 are in floating status, which means the three pins have no electrical connection with DRF126xDS.
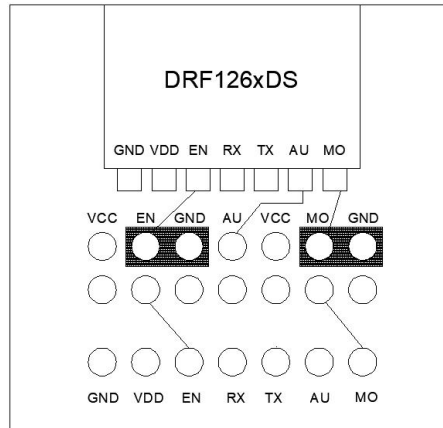

Figure 2: DRF126xDS Module in Power Mode 0

Num.	Pin Name	DRF126xDS	DAD07
1	GND	GND	GND
2	VDD	VDD	VDD
3	EN	GND	---
4	RX	RX	RX
5	TX	TX	TX
6	AU	NC	---
7	MO	GND	---

Table2: Pin Status of DRF126xDS and DAD07 in Power Mode 0

2. Power Mode 1 (EN=0, MO=1)

In this mode, the EN pin of DRF126xDS module should be connected to GND and the MO pin is connected to VCC. The pins (EN/AU/MO) of DAD07 are in floating status for the same reason.
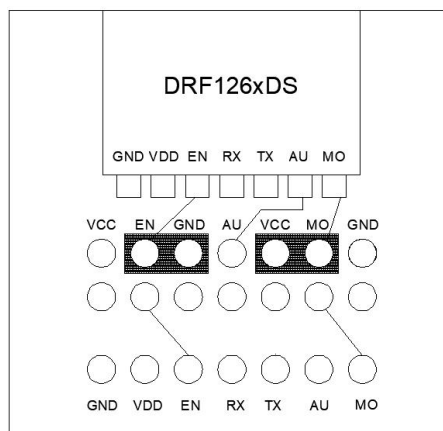

Figure 3: DRF126xDS Module in Power Mode 1

Num.	Pin Name	DRF126xDS	DAD07
1	GND	GND	GND
2	VDD	VDD	VDD
3	EN	GND	---
4	RX	RX	RX
5	TX	TX	TX
6	AU	NC	---
7	MO	VCC	---

Table3: Pin Status of DRF126xDS and DAD07 in Power Mode 1

3. Power Mode 2 (EN=1, MO=0)

In this mode, the EN pin of DRF126xDS module should be connected to VCC and the MO pin is connected to GND. The pins (EN/AU/MO) of DAD07 are in floating status for the same reason.
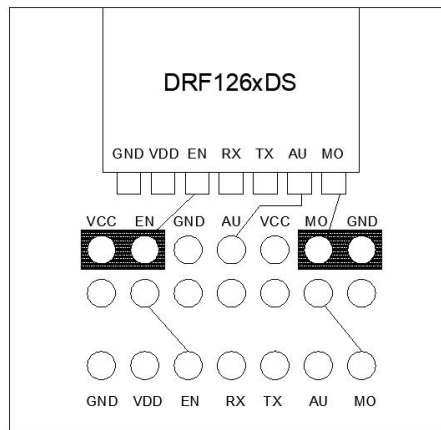

Figure 4: DRF126xDs Module in Power Mode 2

Num.	Pin Name	DRF126xDS	DAD07
1	GND	GND	GND
2	VDD	VDD	VDD
3	EN	VCC	---
4	RX	RX	RX
5	TX	TX	TX
6	AU	NC	---
7	MO	GND	---

Table4: Pin Status of DRF126xDS and DAD07 in Power Mode 2

4. Power Mode 3 (EN=1, MO=1)

In this mode, the EN pin and MO pin of the DRF126xDS module should be connected to VCC so users can connect the two pins to the VCC on the left side through jumpers. The pins (EN/AU/MO) of DAD07 are in floating status for the same reason.
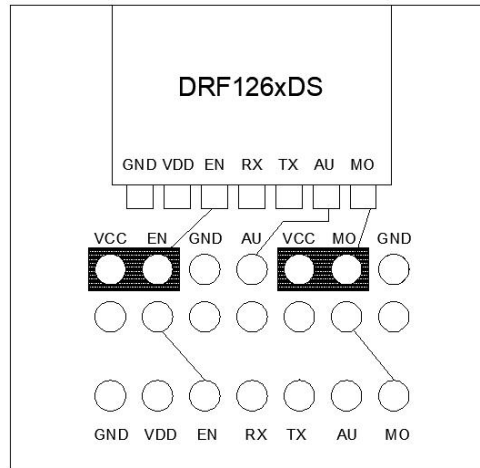

Figure 5: DRF126xDs Module in Power Mode 3

Num.	Pin Name	DRF126xDS	DAD07
1	GND	GND	GND
2	VDD	VDD	VDD
3	EN	VCC	---
4	RX	RX	RX
5	TX	TX	TX
6	AU	NC	---
7	MO	VCC	---

Table5: Pin Status of DRF126xDS and DAD07 in Power Mode 3

5. Direct Connection

The four types of connections for MO and EN pins above are suitable for the situations that the two pins can not be controlled by external I/O pins easily such as connecting the board to computer through a USB-to-TTL converter board DAC02. If users can control the module through a microcontroller, the EN/MO/AU pin of the DRF126xDS can be connected to the EN/MO/AU of DAD07 directly through jumpers so the microcontroller can control these pins directly through I/O pins.
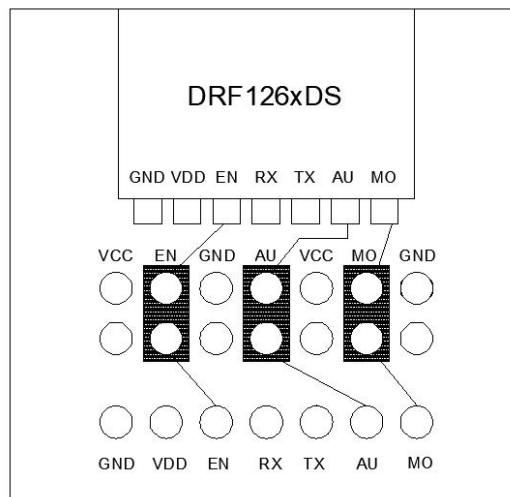
Figure 6: Direct Connection

Num.	Pin Name	DRF126xDS	DAD07
1	GND	GND	GND
2	VDD	VDD	VDD
3	EN	EN	EN
4	RX	RX	RX
5	TX	TX	TX
6	AU	AU	AU
7	MO	MO	MO

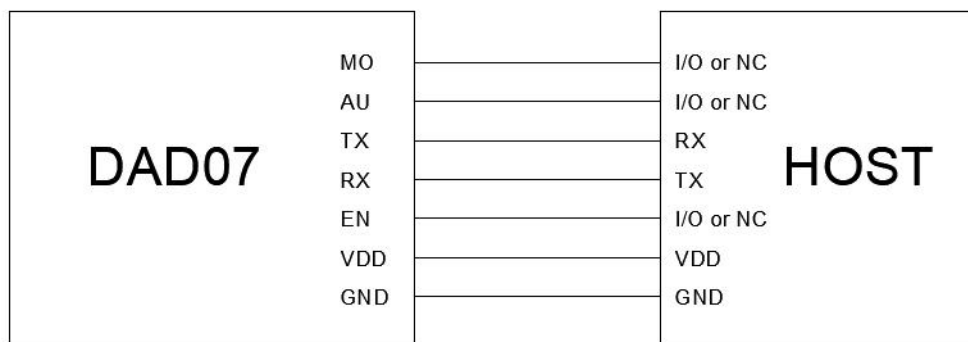Table6: Pin Status of DRF126xDS and DAD07 in Direct Connection

Figure 7: Connection between DAD07 and the Host

In short the EN/AU/MO pins of DAD07 are isolated electrically if the EN/MO/AU pins of DRF126xDS have no direct connection with them so the three pins of DAD07 can be connected to any pin of the host (MCU or USB kit) or be floating. If users choose the direct connection through jumpers, the EN/AU/MO pin of DAD07 must be connected to the I/O pins of the host in order to obtain the fixed level control on the EN/MO pins of the DRF126xDS module.
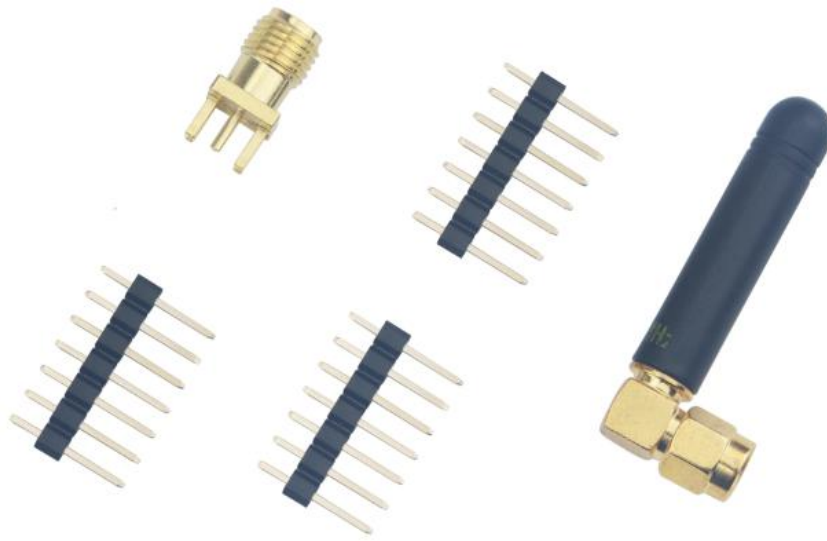
Accessories for DAD07 Board

Figure 8: Accessories for DAD07 board

Figure 9: DAD07 Board with DRF126xDS Module Installed

Ordering Information

The DAD07 board is suitable for testing 433MHz DRF1268DS and 868/915MHz DRF1262DS. If it is ordered separately, users need to specify the frequency of antenna in case the communication distance of DRF126xDS modules are seriously affected because of the mismatched antenna.

Part Name	Description
DAD07	DAD07 board, no antenna
DAD07-043	DAD07 board + 433MHz antenna
DAD07-086	DAD07 board + 868MHz antenna
DAD07-091	DAD07 board + 915MHz antenna

Table 7: Ordering Information

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