

User Manual ARM-D / ARM-DA

Advanced Radio Modem [®]





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EC-DECLARATION OF CONFORMITY



Manufacturer's name: ATIM SARL
Responsible person : RAIMBERT Francis, Manager
Manufacturer's address : Les guillets - 38250 Villard de lans - France

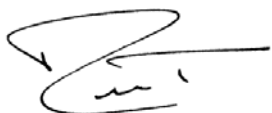
declares that the product:

Product name: ARM Radio Modems Range (Advanced Radio Modem)
Model number: ARM-S/ARM-E/ARM-D/ARM-X (433MHz/10mW, 868MHz/500mW versions)
Intended use: Data Transmissions, Digital and analog values Transmissions.

complies with essential requirements of article 3 of R&TT 1999/5/EC Directive, if used for its intended use and that the following standard has been applied:

- 1 **SAFETY** (Article 3.1a of the 1999/5/EC Directive)
Applied standard(s) NF EN60950 Ed. 2000
(*health*) Recommendation 519 (July 1999)
- 2 **Electromagnetic compatibility** (Article 3.1b of the 1999/5/EC Directive)
Applied standard(s) EN 301 489-3 v1.4.1
- 3 **Efficient use of the radio frequency spectrum** (Art.3.2 of the 1999/5/EC Directive)
Applied standard(s) ETSI EN300 220-3 v1.1.1

Villard de lans, January 10th 2005



Francis RAIMBERT, Manager.

1 PRESENTATION

This guide contains main information for a quick setup of the ARM-D radio modem.

For more details, it is recommended to refer to the User Manual.

ATIM keeps the right to modify the features of the product and the information of the User Manual without any notice.

For technical support, contact our distributors or resellers.

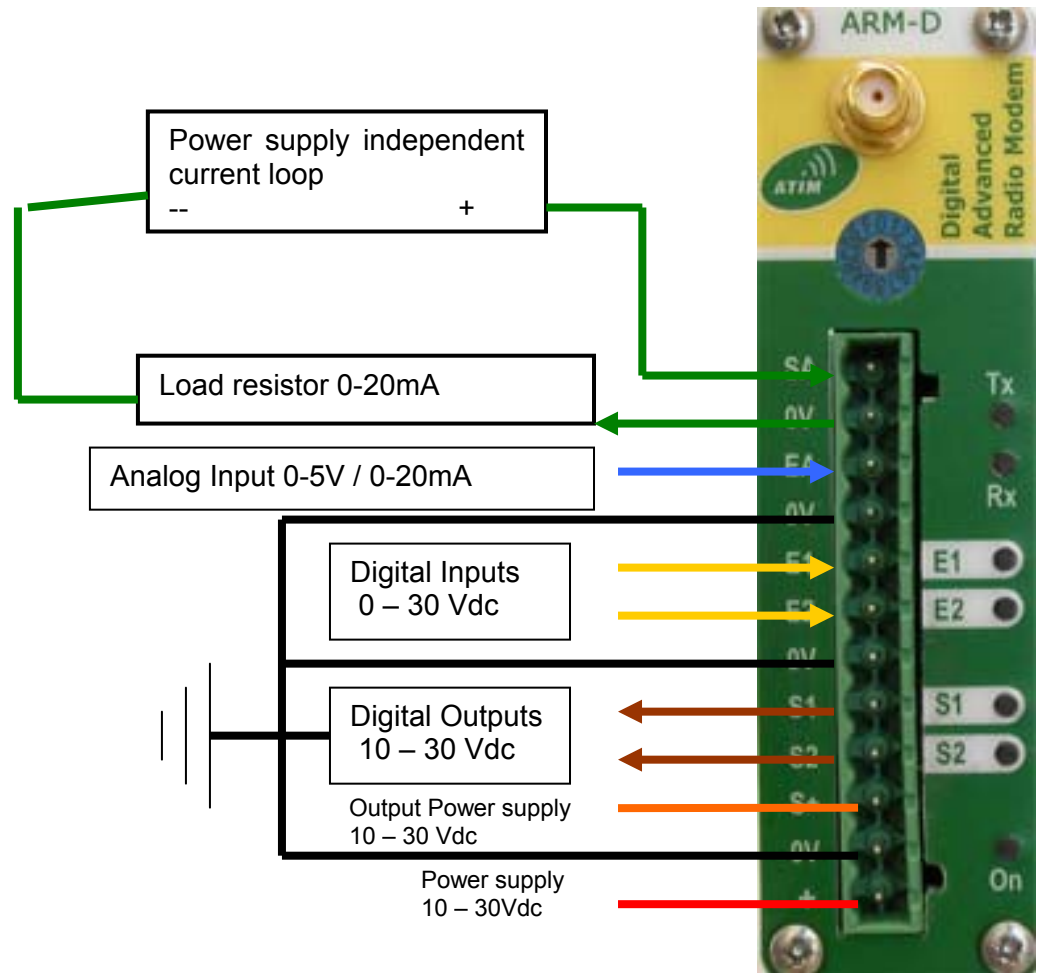
→ Please refer to the ARM-S user guide for the basic lines concerning the ARM.

2 INSTALLATION

Before setting the product, please read the following recommendations:

- Do not plug 110 or 220V power supply to the radio modem (max. voltage: 30 Vdc)
- For your security, the connection of the power supply to the ARM radio modem must be realized power off. Check the module's power supply is cut before all intervention.
- The ARM radio modem's power supply voltage must be between 10 and 30 Vdc.
- Do not install directly the ARM radio modem in outdoor. It is not waterproof and if such installation is required it needs to be integrated in a waterproof case or electrical cabinet (in option on request).
- Before connecting or disconnecting the antenna, make sure to discharge to the ground, static electricity as the antenna input is very sensible.
- Connect the metal DIN rail and consequently the ARM to the ground.
- If the antenna is fixed to an outdoor pole, the later must be also connected to the ground. A surge protection module must be inserted on the antenna cable, between the antenna and the ARM radio modem as shown here below.
- Respect the standards by using only recommended cables and antennas in order to be within the ERP authorized by the regulations.

2.1 Radio modem connections



2.2 POWER SUPPLY

Connect the power supply on the « 0V » and « + » of the spring-cage plug connector. The voltage must be between 10V and 30V, rectified and filtered (max current: 300mA). Warning! Some bad quality 220V power supply may deliver some picks lower than 10V. The « 0V » (negative pole) is connected to the case and consequently to the ground through the DIN rail.

2.3 SERIAL RS232

This port at the rear (RJ11) can be used only for configuring the radio modem.

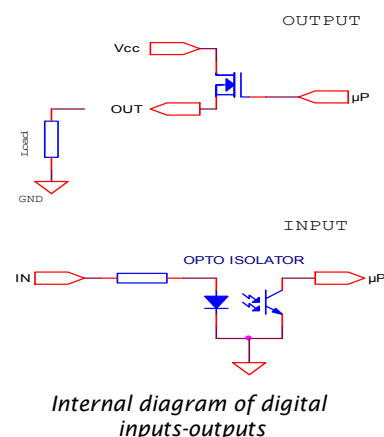
Attention !

You need a special cable ref CAB-RS1 and the utility "ARM MANAGER" or a terminal to configure the ARM-D or ARM-DA.

2.4 DIGITAL INPUT AND OUTPUT

The ARM-D radio modem is equipped with 2 digital inputs and 2 digital outputs (max current / output: 500mA). Each output has an internal overload protection.

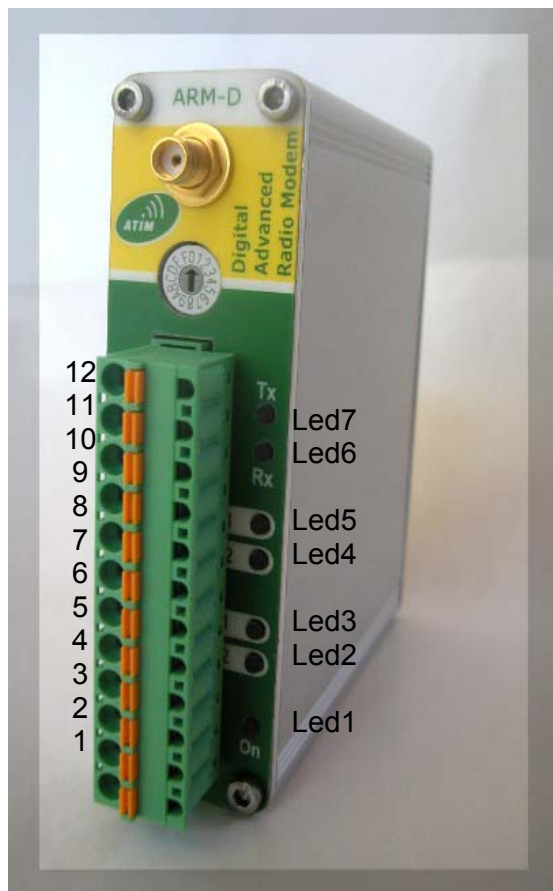
It is possible to command the digital outputs or to read the digital inputs by using Modbus protocol. In this case the ARM radio modem behaves like a slave Modbus. Refer to the User Guide for the configuration of this mode.



2.5 LEDS AND TERMINAL BLOCKS

Terminal block :

- 1 : + Power supply (10 to 30Vdc)
- 2: 0V (Ground)
- 3: + Power supply for the outputs (10 to 30Vdc)
- 4: Digital Output S2 (from the ARM)
- 5: Digital Output S1 (from the ARM)
- 6: 0V (Ground)
- 7: Digital Input E2 (for the ARM)
- 8: Digital Input E1 (for the ARM)
- 9: 0V (Ground)
- 9: Optional Analog 4-20mA Input (-)
- 10: Optional Analog 4-20mA Input (+)
- 11: Optional Analog 4-20mA Output (-)
- 12: Optional Analog 4-20mA Output (+)



Leds:

- Led1: Green Led for Power ON/OFF
- Led2: Red Led for Out2
- Led3: Red Led for Out1
- Led4: Orange Led for In2
- Led5: Orange Led for In1
- Led6: Tricolor Led for Rx (Radio reception)
- Led7: Green Led for Tx (Radio transmission)

2.6 ANALOG INPUTS - OUTPUTS

For the power supply of the current loop (4-20mA), you cannot use the same power supply (no common ground) than the radio modem !

This power supply must imperatively be OFF if the radio modem is turned off !

The analog input current must be below the maximal value of 20mA to avoid internal components destruction.

Note :

If the input current of the transmitter's modem is lower than 2mA roughly, the output current of the receiver's modem will switch in alarm mode (current=0mA). When this current goes back over 2mA, the output current returns to 4mA.