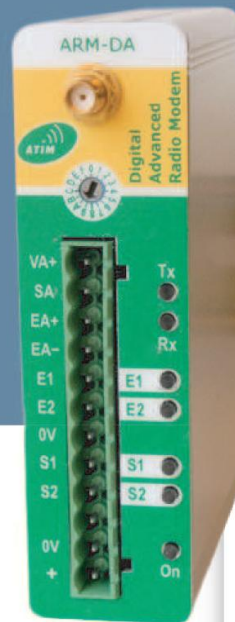# ARM-D / -DA
## Advanced Radio Modem

**Licence free M2M***

## >5 km in 868 MHz 500mW

Digital (-D) / Digital + Analog (-DA)


ARM-DA

**ARM-D and ARM-DA radio modems** are well adapted to data Booleans transmission applications (digital) and transfer of logic and analogical states: remote control, watch, distance management, feedback alarm, etc.

They work in mirror mode (inputs/outputs copy in the two directions, in a cyclic or released way), or in slave modbus mode, accessible in that case from a modbus/TCP or modbus/RTU dispositive, via an ARM-SE radio modem (or ARM-CS, or ARM-IOS).

More precisely, the ARM-DA radio modem is equipped with 2 digital inputs/outputs (VMos protected against short-circuit), and 1 analogical input/output 4-20mA.

The reception Rx LED allows to visualize received signal quality: green (good), orange (medium), red (bad).
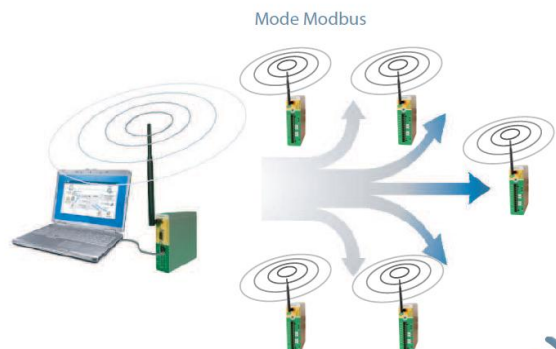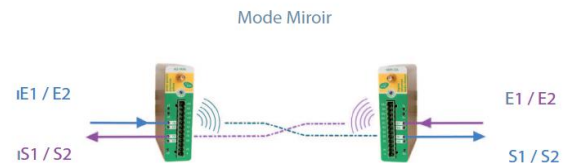
It is also equipped with a serial RS232 port (adaptator cable required) reserved to its configuration (with software under Windows or Hayes commands).

A performing sleep mode permits to supply it with a small solar panel dispositive.

It can be integrate in a wireless communication architecture with serial-Ethernet radio modems (ARM-SE), and also in multipoint mirror mode to the extension modules ARM-X.

▸ **New evolutionary range** of multichannel radio modems

▸ **European norm,** licence free

▸ **433MHz** and **868MHz** versions

▸ Powerful ERP (effective radiated power): **10mW** at **500mW**

▸ **Great sensibility, high range**

▸ Modes : **Mirror, Trigger, & ModBus**

▸ **Repeateur + routing table**

▸ **"Watchdog"** function

▸ **Configuration** via software under windows, or Hayes commands, or ARM-SE web pages

▸ **Aluminum box** for DIN rail mounting

## >M2M infrastructure **example**

Mode Miroir



E1 / E2 → ... → E1 / E2
S1 / S2 ← ... ← S1 / S2

Mode Modbus



## APPLICATIONS TYPES
**DEPORT SANS FIL SIMPLE ET PERFORMANT**

- Simple and performing wireless transfer
- Billboards, synchronization
- Water management, telemetry
- Counting, traceability
- State transfers
- Remote control, alarms
- Etc.



www.atim.com

# ARM-D(A)

Advanced Radio Modem
Digital & Analogique

ARM-DA

Aluminum box for DIN rail mounting

Low thickness in a cabinet

Weight: 250g

105 mm
30 mm
85 mm

# Technical specifications

## FUNCTIONALITIES

"Mirror" mode

"Slave" mode

"Synchro" mode

## Compatibility with ARM range

ARM-SE : radio modem Serial / Ethernet

ARM-X : "eXtended" versions, inputs/outputs

ARM-CS : "Compact Serie" version, tight box

ARM-IO : -S / -D / -A / -D-LP / -A-LP verisons

ARM-C8 et -U8 : transceivers O.E.M. versions

## Articles references

ARM-D4/10 : (433 MHz / 10 mW) 2 digital I + 2 digital O

ARM-D8/500 :  (868MHz 500mW) 2 digital I + 2 digital O

ARM-DA4/10:  2 digital I + 2 digital O and 1I + 1O 4-20mA

ARM-DA8/500 :  2 digital I + 2 digital O and 1I + 1O 4-20mA

## GENERAL INFORMATION

CONFIGURATION:
Windows-based utility or Hayes commands
Parameter saving in EEPROM
RJ13 in rear face for configuration using RS232 cable (in option)

ANTENNA:
SMA female antenna connector on front face
Recommended antennas: ½ wave length whip antenna with elbow (h : 17cm) or ¼ wave length antenna for metal case or cabinet (with ground plan)

ENVIRONMENTAL:
Operating temperature: -20 to +50°C
Storage temperature: -30 to +70°C
Humidity: 0 to 100%

REGULATORY APPROVALS:
ETS300-220
R&TTE
CE certification (pending)

LEDS & MISCELLENAOUS:
Power LED
Tx LED

## CONNECTIONS

Connection with a 12 points terminal, thread 5,08mm

- 2 digital inputs optocoupled (terminal)

- 2 digital outputs Vmos 30V/0,5A max (terminal)

- 1 analogical input 4-20mA / 0-5V (version -DA)

- 1 analogical output 4-20mA / 0-5V (version -DA)

## RADIO INTERFACE "RF"

433MHz or 868MHz bands

ERP: 10mW / 100mW / 500mW according to standards and frequency range

GFSK modulation

Radio throughput: NRZI 19200 bps

16 channels configurable by coding wheel or software

Reception sensitivity: -110dBm @9600bps

## POWER SUPPLY

External 10 - 30 Vdc by screw terminal

Consumption: <50mA@12Vdc (10mW version)

Document non contractuel, spécifications modifiables sans préavis – Mai2009

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