RF

Adeunis
Wireless products & solutions

▶ **Flexible**
▶ **Modular**
▶ **Powerful**
▶ **Robust**
▶ **Certified**

SHORT FORM CATALOGUE

RF Modules

Wireless Expertise
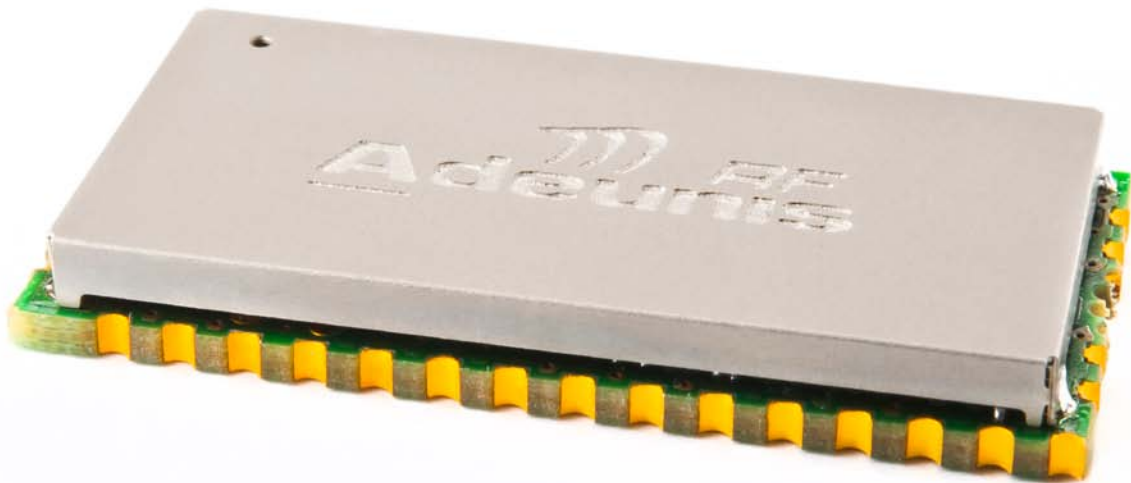
TWIMO RF Modules*

863 / 870MHz ▶ Up to 6000m range - 500mW — HP868

Radiated RF Power: 27dBm
Sensitivity: -110dBm
RF data rate: 10 / 38.4 / 57.6 kbps
Features : TDMA, Addressed, Transparent modes....
API version (programmable), RTU version (Radio gateway)
Power supply: 3 to 3.6V
Power consumption: 600mA (TX) -22mA (RX) - 25µA (Stby)
Operating temperature: -40 / +85°C
Dimensions (mm): 32 x 16 x 3
Standards : EN300-220 v2010

Versions	Part Nb
RTU	ARF7581AA
API	ARF7736AA

863 / 870MHz ▶ Up to 1000m range - 50mW — MP868

Radiated RF Power: 17dBm
Sensitivity: -110dBm
RF data rate: 10 / 38.4 / 57.6 kbps
Features : TDMA, Addressed, Transparent modes....
API version (programmable), RTU version (Radio gateway)
Power supply: 3 to 3.6V
Power consumption: 100mA (TX) -22mA (RX) - 25µA (Stby)
Operating temperature: -40 / +85°C
Dimensions (mm): 32 x 16 x 3
Standards : EN300-220 v2010

Versions	Part Nb
RTU	ARF7580AA
API	ARF7735AA

All TWIMO modules have compatible footprints

Bluetooth® Modules

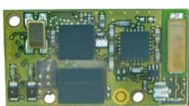## 2.41/ 2.48GHz ▶ 30m range - 1mW — BTC2-Data

Class 2 Bluetooth® module
Radiated RF power: 0dBm
Sensitivity: -86dBm
RF data rate: up to 3Mbps EDR
Bluetooth® 2.1 stack (Chipset BC04)
Data profiles: SPP - OPP - DUN
Baseband - Link Manager - L2CAP - RFCOMM - SDP - SCO
Power supply: 3 to 3.6V
Power consumption: 50mA (RX) - 50mA (TX)
Operating temperature: -40 / +85°C
Dimensions (mm): 22 x 14 x 3

Versions	Part Nb
Integrated antenna	ARF7678AA
RF Out Pin	ARF7678BA

2.41/ 2.48GHz ▶ 150m range - 100mW — ARF52

Class 1 Bluetooth® module
Radiated RF power: 20dBm
Sensitivity: -85dBm
RF data rate: up to 3Mbps EDR
Bluetooth® 2.1 stack (Chipset BC04)
Data profiles: SPP - DUN - SPP Config.
Baseband - Link Manager - L2CAP - RFCOMM - SDP - SCO
Power supply: 3 to 3.6V
Power consumption: 40mA (RX) - 300mA peak (TX)
Operating temperature: -40 / +85°C
Dimensions (mm): 33 x 18 x 5

Versions	Part Nb
Integrated antenna	ARF7456A
U.FL Connector	ARF7456B

Wireless M-Bus Modules

863 / 870MHz

▸ 1000m range - 25mW -117dBm

WMBUS

Radiated RF Power: 14dBm
Sensitivity: -110dBm (T mode) / -112dBm (S mode) / -117dBm (R mode)
Fully certified M-Bus stack with applicative firmware.
Modes: R1 / R2 / S1 / S1-m / S2 / T1 / T2
AES128 encryption & decryption
Power supply: 2 to 3.6V
Power consumption: 35mA (TX) - 22mA (RX) - <0.6µA (Stby)
Operating temperature: -40 / +85°C
Dimensions (mm): 26 x 16 x 2
Standards : EN13757-4 : 2005

Versions	Part Nb
Wireless M-BUS	**ARF7751BB**
Wireless M-BUS w/ AES128	**ARF7751CA**

Narrow band Modules

169MHz

▸ Up to 30km range - 500mW -122dBm

NB169

Radiated RF Power: 27dBm
Sensitivity: -122dBm
RF data rate: 1.2 to 38.4 kbps
Features : Asynchronous, transparent, low power modes....
RTU version (Radio gateway)
Power supply: 3 to 3.6V
Power consumption: 700mA (TX) - 40mA (RX) - 25µA (Stby)
Operating temperature: -40 / +85°C
Dimensions (mm): 32 x 16 x 3
Standards : EN300-220 v2010

Versions	Part Nb
RTU	**ARF7761AA**

458MHz

▸ Up to 15km range - 500mW -120dBm

NB458

Radiated RF Power: 27dBm
Sensitivity: -120dBm
RF data rate: 1.2 to 4.8 kbps
Features : Asynchronous, transparent, low power modes....
RTU version (Radio gateway)
Power supply: 3 to 3.6V
Power consumption: 700mA (TX) - 40mA (RX) - 25µA (Stby)
Operating temperature: -40 / +85°C
Dimensions (mm): 32 x 16 x 3
Standards : EN300-220 v2010

Versions	Part Nb
RTU	**ARF7762AA**

868MHz

▸ Up to 18km range - 500mW -120dBm

NB868

Radiated RF Power: 27dBm
Sensitivity: -120dBm
RF data rate: 1.2 to 38.4 kbps
Features : Asynchronous, transparent, low power modes....
RTU version (Radio gateway)
Power supply: 3 to 3.6V
Power consumption: 700mA (TX) - 40mA (RX) - 25µA (Stby)
Operating temperature: -40 / +85°C
Dimensions (mm): 32 x 16 x 3
Standards : EN300-220 v2010

Versions	Part Nb
RTU	**ARF7763AA**

Starter kits

Evaluate ADEUNIS RF products
Perform RF measurements
Develop a prototype

Available for the following modules
- TWIMO RF
- Wireless M-Bus
- Bluetooth®
- Narrow bands

Versions	Part Nb
Open4 platform*	**ARF7868AA**

* To compose a Starter Kit, an Extension pack must be combined to an Open4 platform.

863 / 870MHz ▶ TWIMO extension board pack

Including
- Extension board
- Antenna
- User's guide

Versions	Part Nb
TWIMO HP868	**ARF7864AA**
TWIMO MP868	**ARF7865AA**

868 / 870MHz ▶ WMBUS extension board pack

Including
- Extension board
- Antenna
- User's guide

Versions	Part Nb
Wireless M-Bus	**ARF7863AA**

2.41 / 2.48GHz ▶ Bluetooth® extension board pack

Including
- Extension board
- Antenna
- User's guide

Versions	Part Nb
BTC1-Bluetooth®	**ARF7861AA**
BTC2-Bluetooth®	**ARF7862AA**

169 / 458 / 868MHz ▶ Narrow Bands extension board pack

Including
- Extension board
- Antenna
- User's guide

Versions	Part Nb
NB169	**ARF7889AA**
NB458	**ARF7890AA**
NB868	**ARF7891AA**

ACCESSORIES ▶ Power block for extension board

12V-800mA
Jack 5.5/2.1

Versions	Part Nb
Power block	**ACC1400DM**

SDK - Software Development kit

Develop softwares application based on TWIMO RF API modules

Available for the following modules
- HP868 TWIMO RF module
- MP868 TWIMO RF module

Versions	Part Nb
TWIMO SDK**	**ARF7689AA**

** Software development kit

RF Transceivers

▶ **Up to 6000m range - 500mW**

ARF54

Radiated RF Power: 27dBm
Sensitivity: -103dbm
RF data rate: up to 57.6kbps
Features: Transparent, Addressed, Repeater modes
Power supply: 2.7 to 3.6V
Power consumption: 700mA (TX) / 35mA (RX)
Operating temperature: -40 / +85°C
Dimensions (mm): 41 x 24 x 6

Versions	Part Nb
External antenna	**ARF7429A**

---

902 / 928MHz

▶ **6000m range - 500mW**

ARF54

Radiated RF Power: 27dBm
Sensitivity: -103dbm
RF data rate: up to 57.6kbps
Features: Addressed mode
Power supply: 2.7 to 3.6V
Power consumption: 700mA (TX) / 35mA (RX)
Operating temperature: -40 / +85°C
Dimensions (mm): 41 x 24 x 6

Versions	Part Nb
External antenna	**ARF7429B**

---

863 / 870MHz

▶ **300m range - 8mW**

ARF44

Radiated RF Power: 9dBm
Sensitivity: -103dbm
RF data rate: 19.2 kbps
Features: Transparent mode
Power supply: 2.5 to 3.6V
Power consumption: 36mA (TX) / 23mA (RX)
Operating temperature: -40 / +85°C
Dimensions (mm): 27 x 24 x 6

Version	Part Nb
External antenna	**ARF7419A**

Remote Control

869.525MHz

▶ **300m range - 2 ways**

ARF18

Remote control
Radiated RF Power: 7dBm (6mW)
Modulation: FSK
Operating temperature: -40 / +85°C

OEM receiver
Sensitivity: -104dBm
Power supply: 2.7 / 3.6V
Consumption: 15mA

Numbers ok keys	Part Nb
1 key	**ARF7292A**
2 keys	**ARF7292B**
3 keys	**ARF7292C**
4 keys	**ARF7292D**

Receiver version		Part Nb
OEM	Outputs: serial interface level, 0/VCC	**ARF7294A**

Transmitters

869.525MHz	▶ 200m range - 3mW	ARF19

RF Radiated Power: 4dBm
RF data rate: 1.2 to 2.4 kbps
Power supply: 3 to 3.6V
Power consumption TX : 10mA
Operating temperature: -40 / +85°C
Dimensions (mm): 25 x 14 x 3
Standards : EN300-220 v2010

Versions	Part Nb
OOK (ASK)	**ARF7870AA**

869.525MHz	▶ 400m range - 10mW	ARF19

RF Radiated Power: 10dBm
RF data rate: 1.2-2.4 kbps (OOK), 1.2 to 9.6 (FSK)
Power supply: 3 to 3.6V
Power consumption TX : 30mA (ASK), 40mA (FSK)
Operating temperature: -40 / +85°C
Dimensions (mm): 25 x 14 x 3
Standards : EN300-220 v2010

Versions	Part Nb
OOK (ASK)	**ARF7723AA**
FSK	**ARF7798AA**

869.525MHz	▶ 6000m range - 500mW	ARF27

RF Radiated Power: 27dBm
RF data rate: 1.2-2.4 kbps (OOK), 1.2 to 9.6 (FSK)
Power supply: 3 to 3.6V
Power consumption TX: 600mA
Operating temperature: -40 / +85°C
Dimensions (mm): 22 x 12 x 3
Standards : EN300-220 v2010

Versions	Part Nb
OOK (ASK)	**ARF7724AA**
FSK	**ARF7786MA**

Receivers

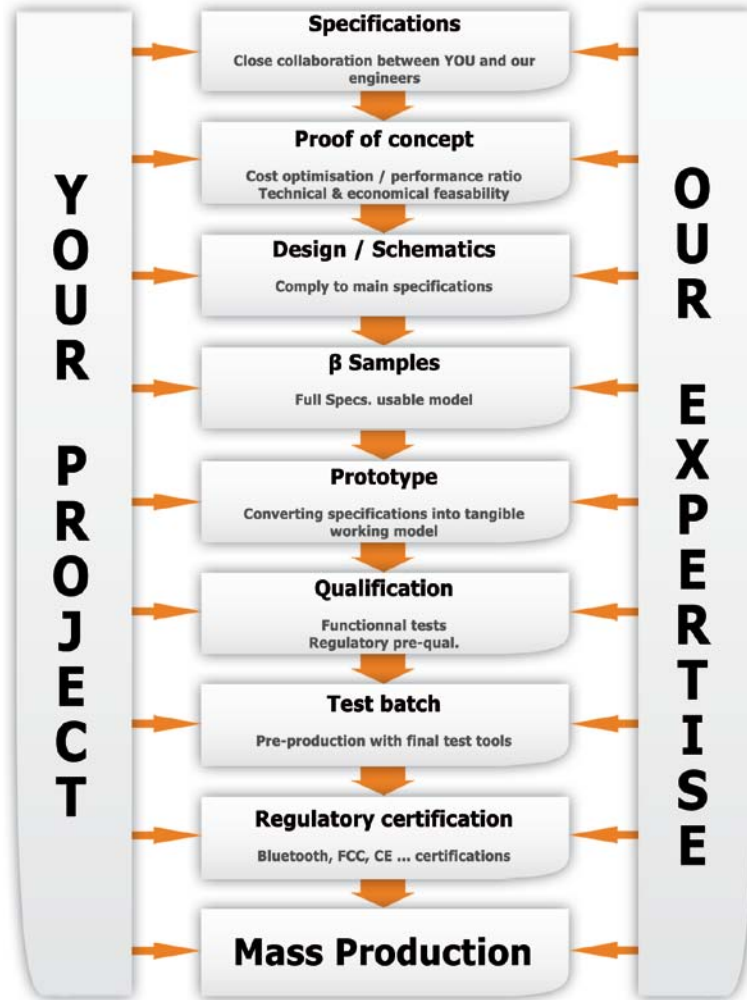| 869.525MHz	▶ AM / FM Digital link	ARF19 / 27

Sensitivity: -113dBm (ASK) / -107dBm (FSK)
RF data rate: 1.2 to 2.4 kbps (ASK) / 1.2 to 9.6 kbps (FSK)
Power supply: 2.2 to 5V
Power consumption: 10mA
Operating temperature: -40 / +85°C
Dimensions (mm): 26 x 15 x 7

Versions	Part Nb
ASK	**ARF7245A**
FSK	**ARF7244A**

From idea ... to product ... to market

Short time to market through wireless engineering expertise combinated with low-cost production

Y O U R   P R O J E C T

O U R   E X P E R T I S E

Specifications
Close collaboration between YOU and our engineers

Proof of concept
Cost optimisation / performance ratio
Technical & economical feasability

Design / Schematics
Comply to main specifications

β Samples
Full Specs. usable model

Prototype
Converting specifications into tangible working model

Qualification
Functionnal tests
Regulatory pre-qual.

Test batch
Pre-production with final test tools

Regulatory certification
Bluetooth, FCC, CE ... certifications

Mass Production

Typical applications

Public & consumer market
Home automation
Access control
Alarm - Security
Technical building management
Clock system management
Medical
Electronic surveillance
...

Industry
Remote control for automation
Measurement & telemetry
Remote management
Traceability
On-board systems
Door remote control
Logistics & storage
...

Energy - Environment
Metering
Gas and oil industries
Water treatment
Photovoltaic
Windmill
...

Long range
Site-to-site communication
Electronic display
Signaling
Agriculture
Transport
...

About ADEUNIS RF

Founded in 1993, Adeunis RF is a privately owned independent company, designing and manufacturing solely Wireless Products. Based in the High Tech Valley near Grenoble and partnered with several research institutes and organizations, we benefit from unique technical expertise.

With an installed base of more than 4 million units and an annual production exceeding 500 000 pieces, we have acquired experience in a myriad of markets and applications requiring wireless connectivity. Our success is not only based on profitability and market share, but on building enduring, long term partnerships with our Customers based on our core values of innovation, quality, compliance and environmental responsibility.

Services & skills

Skills area
Solutions using Bluetooth®, Wifi®, Wireless M-Bus, NFC & Zigbee standards
Worlwide ISM bands
RF solutions from kHz to GHz
Low consumption products
Mesh - Addressed - Repeater & Transparent transmission modes

Standard expertise
Owner of several patents
Strong worldwide Standards knowledge
Partnership with European laboratories
Capability to propose pre/full certifications and European Notifications
Strict compliance with Standards: EN300-220, EN301-489, EN300-113, EN60950 ...

Your local distributor

Adeunis RF
Wireless products & solutions

283 rue Louis Néel - Parc Technologique Pré Roux
38920 CROLLES - France
Tél. : +33 (0)4 76 92 07 77
Fax : +33 (0)4 76 04 80 87
arf@adeunis-rf.com
www.adeunis-rf.com - www.vokkero.com

V1.7