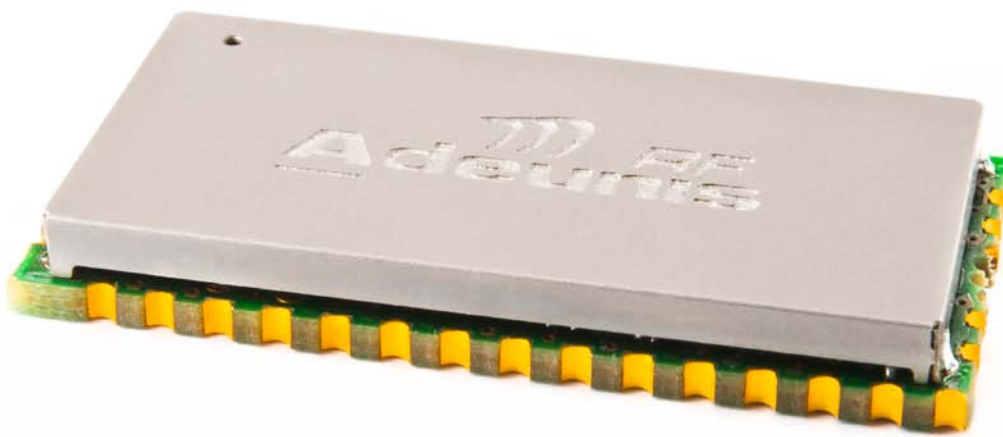# SHORT FORM CATALOGUE

RF Modules
and Accessories

TYPICAL RF APPLICATIONS

Energy - AMR

Remote energy reading and measurement, urban heating control, energy management in buildings and data centers, remote control of public lighting, energy cartography and regulation. RF solutions developed by ADEUNIS RF enable fine and optimized management of resources while achieving substantial energy savings.
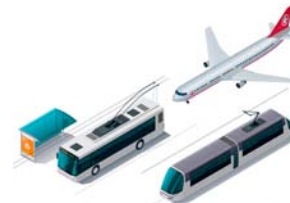
Industry

ADEUNIS RF contributes to the development of wireless systems in hostile industrial environments: industrial machine control, automatic system monitoring, trouble shooting, radio control for lifting machines, satellite positioning systems, drilling machines, container tracking, etc.

Security & control

ADEUNIS RF is present in many fields linked to the security of goods and persons and access control: building security, alarms, access control to sites and danger zones, control of retractable bollards, management of hourly badge readers, secure stoppage devices for maintenance crews, home automation applications, ...

Transportation

By providing our radio skill, ADEUNIS RF contributes to developing complex systems in the field of transport, such as the control of traffic light priority, information for travellers, timetable synchronisation, car park and vehicle management, electronic display systems, signalling, satellite location systems....
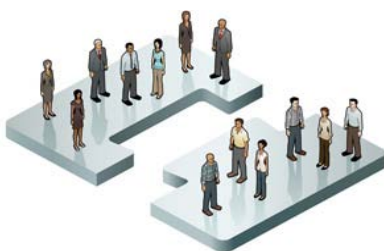
Military

ADEUNIS RF develops and installs RF systems, dedicated on-board systems in the military and defense sectors: target carrier systems, control of fuel cells and drones, night vision, frontier surveillance, etc...

Health

Wireless sensors for patients with respiratory problems, wireless links for intracranial pressure sensors, portable digital radiography appliances, miniature wireless sensors for orthopedic surgery, emergency call systems and satellite location, etc. ADEUNIS RF develops RF customized or catalogue systems, respecting strict constraints specific to the health field.

General public

Geolocation systems, remote control of autonomous humanoid robots, maintenance of ticket validators, real-time display of the number of parking spaces available, queue management, electronic score displays, totems for fuel, ...,ADEUNIS RF designs and develops radio solutions based on extremely varied customer issues.

TWIMO RF MODULES

HP 868

TWIMO HP868 RTU (Radio Gateway)	ARF7581BA
TWIMO HP868 API (Programmable)	ARF7736AA

Range	Up to 6 km
Frequency	863-870MHz
Power	500mW
Radiated RF Power	27dBm
Sensitivity	-110dBm
Modes	TDMA, Transparent, Adressed, network, Packet, Secured
RF Data rate	10 / 38.4 / 57.6kbps
Power consumption	600mA (TX) / 22mA (RX) / 8µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	32 x 16 x 3mm
Standards	EN300-200 V2010

MP 868

TWIMO MP868 RTU (Radio Gateway)	ARF7580BA
TWIMO MP868 API (Programmable)	ARF7735AA

Range	Up to 1 km
Frequency	863-870MHz
Power	50mW
Radiated RF Power	17dBm
Sensitivity	-110dBm
Modes	TDMA,Transparent, Adressed, network, Packet, Secured
RF Data rate	10 / 38.4 / 57.6kbps
Power consumption	100mA (TX) / 22mA (RX) / 8µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	32 x 16 x 3mm
Standards	EN300-200 V2010

WIRELESS M-BUS MODULES

W-MBUS

W-MBUS 868 Bidirectional	ARF7751BB
W-MBUS 868 Bidirectional + AES128 + OMS	ARF7751CA

Range	Up to 1.5 km
Wireless M-BUS	Fully certified stack + applicative firmware
Frequency	868-870MHz
Power	25mW
Radiated RF Power	14dBm
Sensitivity	-110dBm (T) / -112dBm (S) / -117dBm (R)
Modes	R1 / R2 / S1 / S1-m / S2 / T1 / T2
AES128 OMS	Encryption & Decryption (supports OMS mode 5)
Power consumption	35mA (TX) / 22mA (RX) / 0.6µA (Standby)
Supply voltage	2 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	26 x 16 x 3mm
Standards	EN13757-4: 2005

NARROW BAND RF MODULES

NB169

NB169 RTU   ARF7761BA

Range	Up to 30 km
Frequency	169.4 to 169.59MHz
Power	500mW
Radiated RF Power	27dBm
Sensitivity	-122dBm
Modes	Transparent, Adressed, network, Packet, Secured
RF Data rate	2.4 to 38.4kbps
Power consumption	700mA (TX) / 40mA (RX) / 8µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	32 x 16 x 3mm
Standards	EN300-200 V2010

NB 868

NB 868 RTU   ARF7763BA

Range	Up to 20 km
Frequency	863-870MHz
Power	500mW
Radiated RF Power	27dBm
Sensitivity	-120dBm
Modes	Transparent, Adressed, network, Packet, Secured
RF Data rate	2.4 to 57.6kbps
Power consumption	700mA (TX) / 40mA (RX) / 8µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	32 x 16 x 3mm
Standards	EN300-200 V2010

NB 868-25mW

NB 868-25mW RTU   ARF7764BA

Range	Up to 4 km
Frequency	863-870MHz
Power	25mW
Radiated RF Power	14dBm
Sensitivity	-120dBm
Modes	Transparent, Adressed, network, Packet, Secured
RF Data rate	2.4 to 57.6kbps
Power consumption	48mA (TX) / 24mA (RX) / 8µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	32 x 16 x 3mm
Standards	EN300-200 V2010

RF TRANSMITTERS

ARF19 TX 4dBm

ARF19 - TX 4dBm (ASK)	ARF7870AA

Range	Up to 200m
Frequency	868.525MHz
Power	3mW
Radiated RF Power	4dBm
RF Data rate	1.2 - 2.4kbps
Power consumption	10mA (TX) / < 2µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	25 x 14 x 3mm
Standards	EN300-200 V2010

ARF19 TX 10dBm

ARF19 - TX 10dBm (ASK)	ARF7723AA
ARF19 - TX 10dBm (FSK)	ARF7798AA

Range	Up to 400m
Frequency	868.525MHz
Power	10mW
Radiated RF Power	10dBm
RF Data rate	1.2 - 2.4kbps (ASK) / 1.2 to 9.6kbps (FSK)
Power consumption	30mA (TX - ASK) / 40mA (TX - FSK) / < 2µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	25 x 14 x 3mm
Standards	EN300-200 V2010

ARF27 TX

ARF27 - TX 500mW (ASK)	ARF7724AA
ARF27 - TX 500mW (FSK)	ARF7786MA

Range	Up to 6 km
Frequency	868.525MHz
Power	500mW
Radiated RF Power	27dBm
RF Data rate	1.2 - 2.4kbps (ASK) / 1.2 to 9.6kbps (FSK)
Power consumption	600mA (TX) / < 2µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	22 x 12 x 3mm
Standards	EN300-200 V2010

RF RECEIVERS

ARF19/27 RX

ARF19 - TX 10dBm (ASK)	ARF7723AA
ARF19 - TX 10dBm (FSK)	ARF7798AA

RF Sensitivity	-115dBm (ASK) / -108dBm (FSK)
Frequency	868.525MHz
RF Data rate	1.2 - 2.4kbps (ASK) / 1.2 to 9.6kbps (FSK)
Power consumption	10mA (RX) / < 1µA (Standby)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	26 x 15 x 7mm
Standards	EN300-200 V2010

BLUETOOTH® MODULES

BTC2-Data

BTC2-DATA Class2 Integrated antenna	ARF7678AA
BTC2-DATA Class2 RF Out Pin	ARF7678BA

Range	Up to 30m
Frequency	2.41-2.48GHz
Power	1mW
Radiated RF Power	0dBm
Sensitivity	-86dBm
Bluetooth®	2.1 Stack (chipset CSR Blecore4-Ext)
Bluetooth® profiles	SPP - OPP - DUN
Basebad - Link Manager - L2CAP - RF COMM - SDP - SCO	
RF Data rate	up to 3Mbps EDR
Power consumption	50mA (TX) / 50mA (RX)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	22 x 14 x 3mm
Standards	EN300-328 / EN301-489

ARF52

ARF52 Class1 Integrated antenna	ARF7456A
ARF52 Class1 U.FL connector	ARF7456B

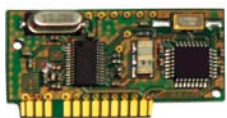| Range	Up to 150m
Frequency	2.41-2.48GHz
Power	100mW
Radiated RF Power	20dBm
Sensitivity	-85dBm
Bluetooth®	2.1 Stack (chipset CSR Blecore4-Ext)
Bluetooth® profiles	SPP - OPP - DUN
Basebad - Link Manager - L2CAP - RF COMM - SDP - SCO	
RF Data rate	up to 3Mbps EDR
Power consumption	300mA peak (TX) / 50mA (RX)
Supply voltage	3 to 3.6V
Operating temperature	-40° / +85°C
Dimensions	33 x 18 x 5mm
Standards	EN300-328 / EN301-489

REMOTE CONTROL 869MHz - 2 ways

ARF18

ARF18 remote control 1 key	ARF7292A
ARF18 remote control 2 keys	ARF7292B
ARF18 remote control 3 keys	ARF7292C
ARF18 remote control 4 keys	ARF7292D

Range	300m
Frequency	869.525MHz
Power	6mW
Operating temperature	-30° / +70°C

ARF18 OEM Receiver	ARF7294A

Sensitivity	-104dBm
Frequency	869.525MHz
Consumption	15mA
Outputs	Serial interface level, 0/VCC
Power supply	2.7-3.6V

STARTER KITS

OPEN4 Platform

OPEN4 Platform	ARF7868AA

To compose a Starter Kit, an Extension pack must be combined ton an Open4 platform

- Evaluate ADEUNIS RF products
- Perform RF measurements
- Develop a prototype

Available for the following modules :
- TWIMO RF
- Wireless M-Bus
- Bluettoth
- Narrow Band

TWIMO extension pack

TWIMO HP868 Extension pack	ARF7864AA
TWIMO MP868 Extension pack	ARF7865AA

Including :
- Extension board + module
- Antenna
- User guide

W-MBUS extension pack

Wireless M-Bus Extension pack	ARF7863AA

Including :
- Extension board + module
- Antenna
- User guide

Narrow Band extension pack

NB169 Extension pack	ARF7889AA
NB868 Extension pack	ARF7891AA
NB458 Extension pack	ARF7890AA

Including :
- Extension board + module
- Antenna
- User guide

Bluetooth® extension pack

BTC2-Bluetooth® Extension pack	ARF7861AA

Including :
- Extension board + module
- Antenna
- User guide

ACCESSORIES

Power blocks

	Designation	Connector type	Size	Part Nb
	Power block - 12V-800mA - For SK Extension pack	Jack5.5/2.1	185 cm	**ACC1400DM**

Software Development Kit

TWIMO SDK Software development Kit   **ARF7689AA**

Develop softwares application based on TWIMO RF API modules

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

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 Wireless M-Bus, Bluetooth®, Wifi® standards
Worldwide ISM bands
RF solutions from kHz to GHz
Low consumption products
Network - 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, EN13757 EN60950 ...

Your local distributor

V3.2