



## Class2 Bluetooth® module for Data or Audio transmission



This miniature module enables **full duplex Bluetooth® data or audio transmissions over 20m**.

It uses the international 2.45 GHz frequency band as described by European Directive RTTE / EN300-328 / EN301-489 and US FCC part 15 (USA/CAN). This module is **Bluetooth V2 "End Product" certified**, meaning users are able to directly use the Bluetooth® logo. Data transmission and configuration are both managed through UART-type TTL serial interface. The air rate is **723kbps**. **Miniature antenna is included**.

With the "Data" version, the embedded SPP profile allows the ARF32 module to establish a wireless serial connection with **PDA's, laptops, mobile phones** or any other Bluetooth enabled device.

The "Audio" versions offer, on top of the data features, an SCO link that **supports HFP, HSP and HSAG profiles**. By using the HSAG profile, the ARF32 module becomes a gateway to **any generic Bluetooth headset**. With the HFP and HSP profiles, and with additional basic microphone and speaker, the ARF32 module becomes a **"hand free" system**.

Both "Data" and "Audio" versions are extremely easy to use, evaluate and integrate with the tools included in the DemoKits

## Specifications

**Available versions : "Data" / "Data & digital Audio" / "Data & analog Audio"**

### General characteristics

|                        |  |
|------------------------|--|
| • Bluetooth V2 stack   | Baseband, Link manager, L2CAP, RFCOMM, SDP, SCO          |
| • Comm & Data profiles | GAP, SDAP, SPP   |
| • Air rate             | 723 kbps   |
| • Serial "TTL" Port    | TXD - RXD - RTS - CTS                                    |
| • UART rate            | Standards from 9.6 up to 921.6kbps                       |
| • Frequency            | FHSS / 2.402 to 2.480GHz                                 |
| • Radiated RF power    | 1 mW through integrated antenna                          |
| • RF sensitivity       | -85 dBm for BER 10-3                                     |
| • Operating range      | > 20 m   |
| • Operating voltage    | 3.3V typ (2.85 up to 3.6V)                               |
| • Consumption          | < 45 mA  |
| • Temperature range    | -35°C / +70°C  |
| • Dimensions           | 25 x 18 x 3,5 mm (+1.5mm for Audio version)              |
| • Compliance           | EN 300-328 / EN 301 489 (Europe) - FCC part 15 (USA/CAN) |
| • Mounting             | Plugged (or SMD only for Data version)                   |



### Specific audio characteristics

|                        | Digital version      | Analog version          |
|------------------------|----------------------|-------------------------|
| • Audio profiles       | HFP*, HSP**, AG***   |                         |
| • Digital Audio coding | PCM                  | PCM 13 bits             |
| • Onboard Audio CODEC  | n/a                  | WINBOND W681360         |
| • Audio bandwidth      | Depends on host      | 200 - 3400 Hz           |
| • Audio I/Os           | PCM SRD-STD-SFS-SCLK | External Mic / Earphone |

### DemoKit - Integration kit including : demoboard, module, RS232 cable, power supply

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

\* Hand free profile  
\*\* Headset  
\*\*\* Audio gateway

### Part numbers

ARF7044A : Class2 Bluetooth® module - "Data" version  
ARF7069B : RS232 "Data" DemoKit  
ARF7208A : Class2 Bluetooth® module - "Data & analog Audio" version  
ARF7208D : Class2 Bluetooth® module - "Data & digital Audio" version  
ARF7213B : RS232 "Audio" DemoKit

### Your distributor