



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

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

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

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