



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

### Specific audio characteristics

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



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

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

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

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## Your distributor

## 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



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