



Long distance UART TTL module



This module enables a **two-ways digital link** up to a range of **6000m**.

Available in the **869MHz or 902/928MHz** in FHSS (Frequency Hopping Spread Spectrum) bands, these **pre-certified** module-modems usable **without a licence** can be qualified in compliance with the RTTE European Directive EN 300-220 / EN 300-489 and the FCC Part 15.247 American standard.

It is considered as a **complete radio solution** which integrates a digital radio transceiver, a microcontroller, a dedicated firmware. Data transmission is performed via a UART serial interface.

Its easy integration even for non RF specialists, allowing a high reduction of technologic risks and costs and a « Time to market » optimization.

It covers most applications requiring **long-distance communication**, automatic watering control system, long distance GPS data transmission, yachting autopilot, fireworks launching system, modular remote control system, modular radio telemetry system ... and more generally all types of applications requiring long range or in particular disturbed environment.

Specifications

863/870MHz version

902/928MHz version

• Embedded protocol	ADEUNIS RF enhanced & versatile RF comm manager	
• Embedded profil	Middle data rate multichannel Modem High data rate monochannel Modem	Full & sub-band FHSS modem Improved full & sub-band FHSS modem
• Link setup & configuration	Through AT commands	
• Rough data rate	Programmable up to 57.6kbps	
• Serial link	RS232 TTL or RS485 (485 buffer lines)	
• UART TTL ports	TXD - RXD - RTS - CTS or RS485 driving capabilities	
• Specific modes	Specific development upon request	
• Modulation	FSK	
• Programmable radiated RF power	Up to 500mW / 27dBm	
• Sensitivity	-108dBm (WB) / -112dBm (NB)	
• Range	5000m (WB) 6000m(NB)	
• RSSI level	RF signal qualification	
• UART programmable data rates	Standards from 0.6 to 115kbps	from 1.2 to 57.6kbps
• Function modes	Transparent or Adressed	Adressed secured
• Programmable frequencies	869.40 to 869.65MHz	902 to 928MHz
• Channelization	1 (WB) – 3 (NB)	up to 50 channels

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

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

Part Numbers

ARF7429A : Module-modem version 869MHz
 ARF7429B : Module-modem version 902/928MHz
 ARF7439Q : DemoKit 869MHz
 ARF7439R : DemoKit 902/928MHz

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