

Bluetooth Modules That Simply Work with iPhone, iPad, and iPod Devices

PRODUCT BRIEF



Roving Networks Bluetooth Solution

Roving Networks Bluetooth APL modules natively support iAP (iPod Accessory Protocol) data connections and directly manage authentication, reducing engineering effort and cost, and simplifying accessory product design.

Apple iOS devices such as the iPhone freely connect with Bluetooth hands-free and headset accessories. However, establishing Bluetooth data connections with Apple devices requires a unique discovery/pairing sequence and negotiation with the Apple authentication co-processor.

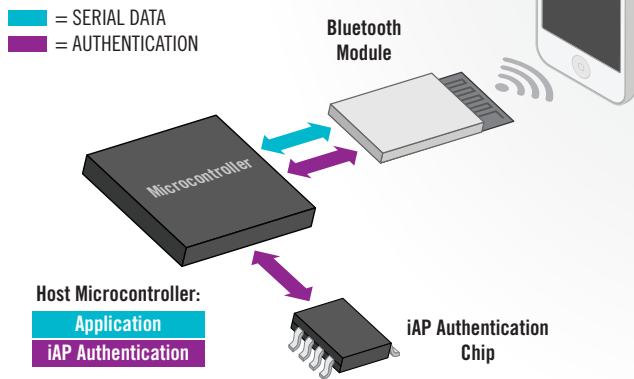
APL modules are based on the standard RN41-I/RM and RN42-I/RM, making them footprint compatible. Power, ground and UART connections are identical, and connection of the Apple authentication chip is direct to the module via a 3-wire interface.



FEATURES

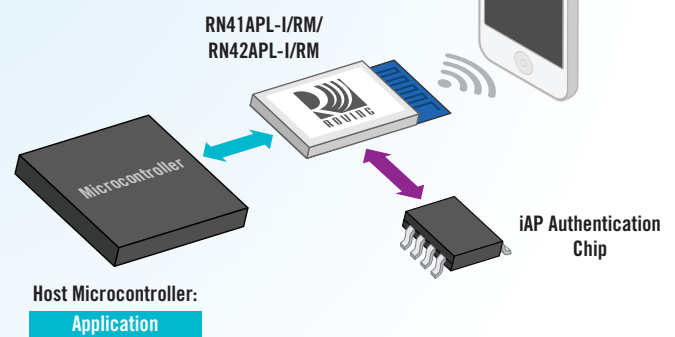
- Discoverable/Connectable with iPhone, iPod or iPad
- Allows dual profile Bluetooth connections to other smartphone or computing platforms
- Automatically stores Bluetooth address of the last paired iPhone, iPod, or iPad device, for quick reconnection
- Secure Simple Pairing (SSP) enables 'no PIN code required' operation
- Supports the complete Roving Networks Bluetooth feature set
- Direct hardware connection to the authentication coprocessor
- No iAP firmware development required for authentication on host microprocessor
- Class 1 (~100m) and Class 2 (~30m) versions available

Conventional Approach Customer Implements iAP on Microcontroller



- High-end host microcontroller
- Adds complexity to firmware and hardware design
- Longer development cycles and learning curves
- Increases power consumption
- Difficult to port code across microcontroller platforms

Roving Networks Bluetooth Solution Bluetooth Module Implements iAP



- Low-cost host microcontroller
- Simple host interface
- iAP transparent to user
- Developers focus on their design, not iAP protocols
- Same interface for other smart phones and computing platforms

Developing Bluetooth Enabled iPhone, iPad and iPod Accessories

All products designed to connect to iPhone's, iPod's and iPad's including those that incorporate the Roving Bluetooth APL module must be registered and approved with Apple's Made for iPod (MFi) program.

Developers of such products should visit Apple's developer portal at: <http://developer.apple.com/ipod/>

With MFi membership, engineers can purchase the evaluation kit which includes detailed documentation and support.

The RN-4x-APL-EVAL evaluation kits include:

- RN-4x-APLX development board which contains:
 - RN4xAPL-I/RM module
 - Apple authentication co-processor
 - Status LEDs
 - Power regulation
 - RS232 and TTL signals
- Four RN4xAPL-I/RM modules
- Complete design documents including schematics
- Source code for the Roving Networks Diagnostic Application



PRODUCT SELECTOR

Module	Class	Typ. Range	Development Kit
RN41APL-I/RM	Class 1	100m	RN-41-APL-EVAL ^{Note 1}
RN42APL-I/RM	Class 2	30m	RN-42-APL-EVAL ^{Note 2}

Note 1 <http://www.microchipdirect.com/ProductSearch.aspx?keywords=RN-41-APL-EVAL>

Note 2 <http://www.microchipdirect.com/ProductSearch.aspx?keywords=RN-42-APL-EVAL>

