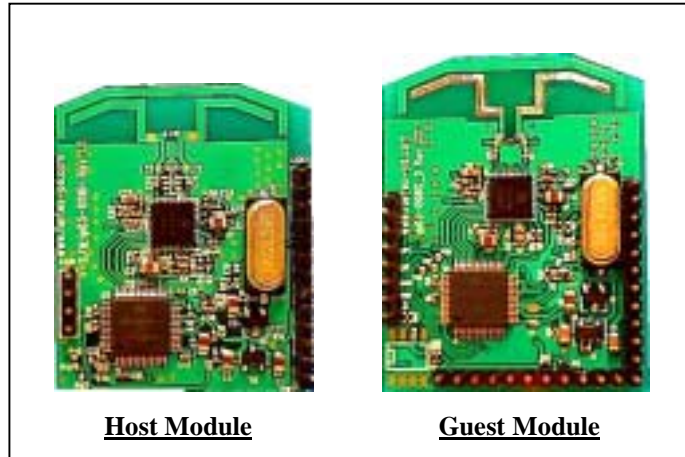


2.4GHz Wireless Modules for PS2 GamePad

Brief Description:

FPD03-0060 2.4G RF modules for PS2 GamePad are a pair of transceiver modules designed for 2.4G wireless PS2 game controllers. It employs the latest state-of-the-art 2.4G RF technology from Motorola, providing a high quality, high reliability and robust RF link. It has specially built-in



features to reduce power consumption and improved communication latency making it superior than its counterparts in the current market. The module pair consists of a host module which is for communicating with a PS2 game console and a guest module which is to be installed into a PS2 game controller for sampling and transferring button status to the host module. The guest module also receives commands from the host module to drive two vibration motors and mode LED of a standard PS2 game controller accordingly. Both modules come with built-in PCB antenna which has operating distance of about 30m.

Module Features:

- Use latest Motorola's 2.4G RF technology
- Low cost with superior wireless performance
- Long range of operation to about 30 meters
- small module size, measured about 30mm(wide) x 40mm(long) x 10mm(high) for guest module; measured about 30mm(wide)x35mm(long)x10mm(high) for host module
- Extremely low power consumption with automatic shut down.
(current consumption less than 20 mA during gameplay and about 800uA at standby. Battery life can be 50 hrs for continuous playing and 50 days for standing-by if using AAA type battery)
- Automatic recovery of RF link for momentary loss of signal
- Use Motorola patented "Inverted C" PCB printed antenna. No external antenna is required.
- 16 dip-switch selectable module ID

- Options available to supports 16 million pre-set ID eliminating the need for external dip switches for ID setting.
- Low battery indicator
- RF link status indicator
- Rumble function

RF Features:

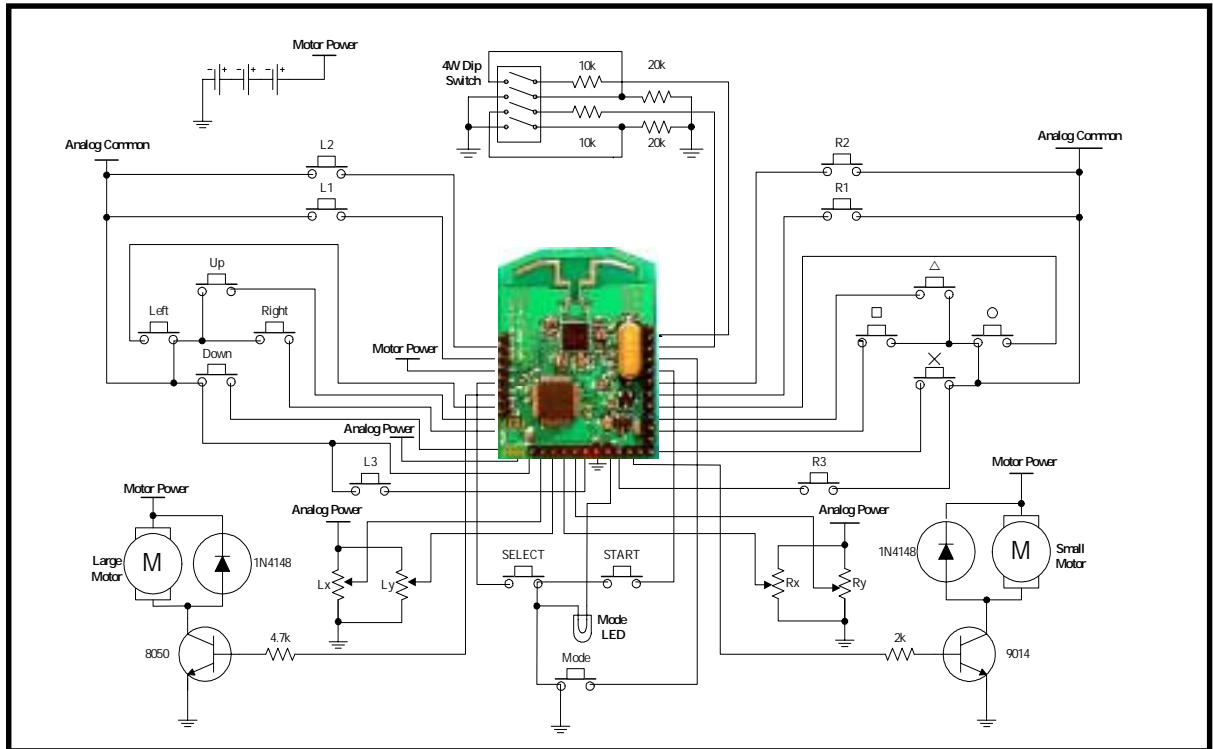
- RF transceiver employs Motorola MC13190 which is a short-range, low power 2.4G band single chip radio
- The baseband is implemented using Motorola MCT29000 which is a 32-bit low power ASIC engine
- Over the air data rate up to 5 Mbps.
- Baseband section utilizes Manchester coding that encodes the data and produces a phase-modulated signal, providing privacy without the overhead of encryption
- Very low latency, compatible to wired performance Designed and tested to coexist with similar wireless systems such as cordless phones, microwave ovens, wireless LANs, Bluetooth devices, etc..
- Using Motorola patented Enhanced AM modulation scheme
- Frequency diversity is incorporated to provide more uniform coverage in areas where multipath nulls might occur.
- Design catered for various regulatory requirements by different countries, including FCC 15.249, EN300328-2 and EN300440-2.
- Typical modulation output power is 4.8dbm
- Typical receiver sensitivity is -71 dBm @ 2×10^{-4} Bit Error Rate

Technical Specifications:

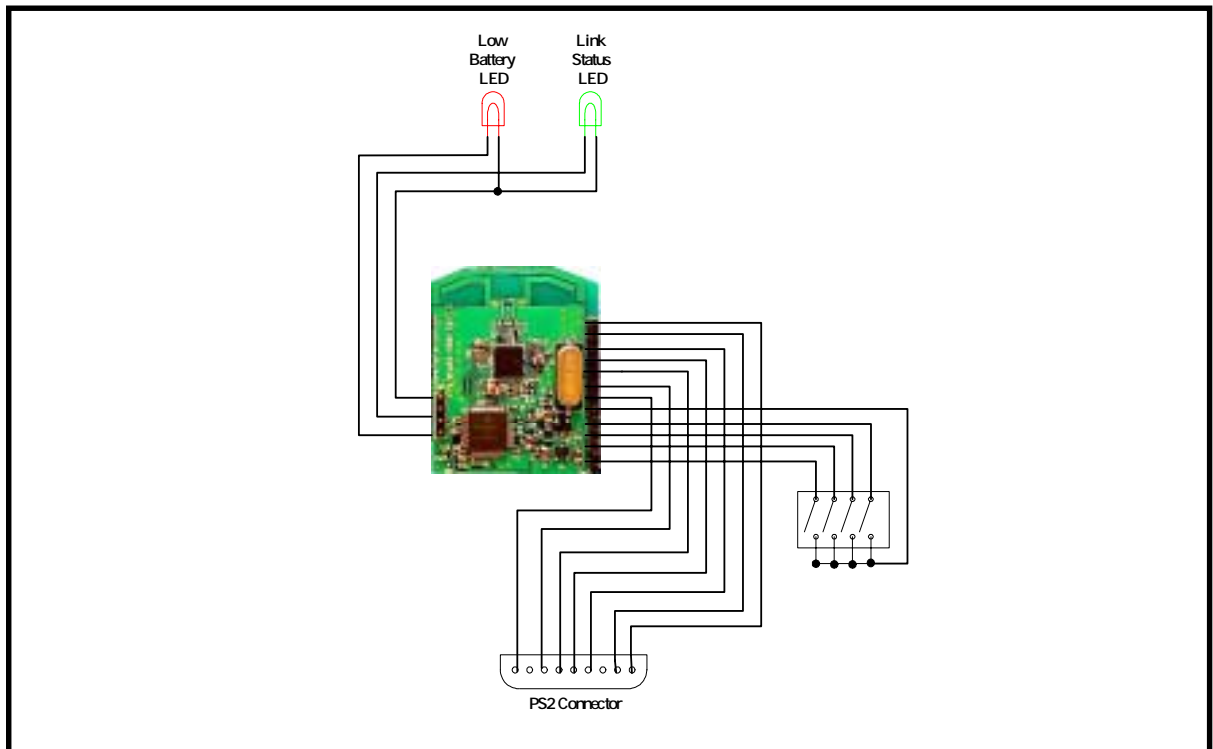
Characteristics	Data
Input Voltage	Host Module: 3.3v to 7v Guest Module: 3.3v to 7v
Current Consumption	Host Module (@3.3v): 20mA Guest Module (@4.5v): 18mA operating 0.8mA standing -by
Board Size	Host Module: 29mm x 40mm x 10mm Guest Module: 29mm x 42mm x 10mm
RF carrier	2.426 GHz / 2.456 GHz
Modulation Scheme	Motorola patented Enhanced AM modulation

RF Output Power	4.8dBm (Nominal)
RF Receive Sensitivity	-71 dBm @ 2×10^{-4} Bit Error Rate (Typical)
Over The Air Data Rate	5Mb/s (Maximum)
Encoding Method	Manchester coding
Antenna	Built-in Motorola patented “Inverted C” antenna

Typical Application Circuits:



Typical application circuit for the Guest controller



Typical application circuit for the Host Module