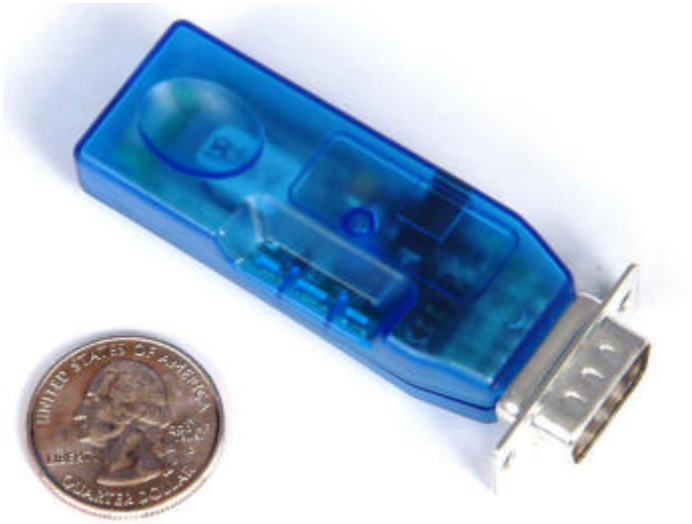
Bluetooth 2.0/EDR Serial Adapter

Product Specification

Model# : RN240 (RS-232) , RN422 (RS-422)

Description:

Bluetooth v2.0 Class1 Serial Adapter



Overview:

- CSR BlueCore04 Chip/8Mb flash
- Bluetooth v2.0 Compliant.

(also compatible with 1.2/1.1)

- Secure and robust link, FHSS, 128 bit encryption, error correction and guaranteed packet delivery.
- High speed UART-RS232 interface.
- UART baudrates from 1200 to 234K.
- Low power: <10 ma discoverable,

40ma connected, 5ma SNIFF)

- Supports SPP, and DUN profiles.
- Built in stack/applications, auto-discovery, auto-connect, and instant cable modes.
- Class1, up to 15dBm (100meters)
- 3 Status LEDS.
- 4 configuration DIP switches
- Internal jumpers for DCE/DTE swap.
- Dimension: 24 mm w x 72 mm l x 15 mm h.

www.rovingnetworks.com

431 Monterey Ave, Suite 5
Los Gatos, CA 95030 USA
(408) 395-6539

1. Hardware & Technical Information

1.1 Port Pin definition

Pin No.	RN-240M	RN-240F	RN-422M
1	NC	NC	NC
2	RXD	TXD	NC
3	TXD	RXD	RXD-
4	NC	NC	TXD+
5	Ground	Ground	GND
6	NC	NC	5VDC
7	RTS	CTS	RXD+
8	CTS	RTS	TXD-
9	4-11VDC	4-11VDC	NC

1.2 Block Diagram

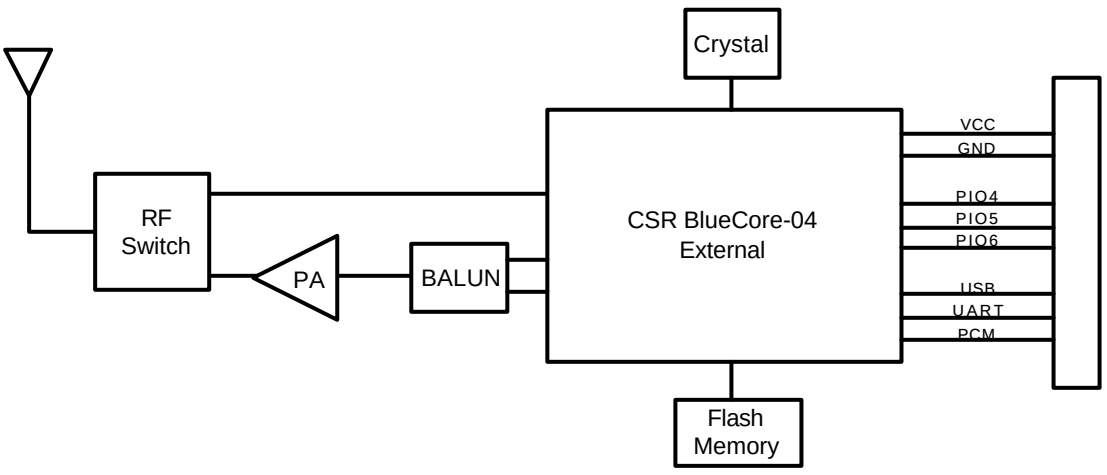


Fig 1.3.1 RN240, RN422 Class1 Block Diagram

1.3 Electrical Characteristics

	Min	Typ.	Max.	Unit
Supply Voltage (DC)	4.0	5.0	11.0	V
RX Supply Current	-	35	60	mA
TX Supply Current	-	65	100	mA
Average power consumption				
Standby/Idle (default settings)	-	25	-	mA
Standby/Idle (lowest power)	2.5	4	-	mA
Connected(normal mode)		40		mA
Connected(low power Sniff)		15		mA

¦ Operating and Environmental Conditions

Operating Temperature Range	-40 °C ~ 85 °C
Storage Temperature Range	-40 °C ~ 85 °C
Relative Humidity (Operating)	≤90%
Relative Humidity (Storage)	≤90%

1.4 Radio Characteristics

¦ RN240, RN422 Class1 BT2.0 Adapter

	Frequency (GHz)	Min	Typ	Max	BT Spec.	Unit
Sensitivity at 0.1%BER	2.402	-	-80	-86	≤ -70	dBm
	2.441	-	-80	-86		dBm
	2.480	-	-80	-86		dBm
RF Transmit Power	2.402	15.0	16.0		≤15	dBm
	2.441	15.0	16.0			dBm
	2.480	15.0	16.0			dBm
Initial Carrier Frequency Tolerance	2.402	-	5	75	75	kHz
	2.441	-	5	75		kHz
	2.480	-	5	75		kHz
20dB bandwidth for modulated carrier		-	900	1000	≤ 1000	kHz
Drift (Five slots packet)		-	15	-	40	kHz
Drift Rate		-	13	-	20	kHz
$\Delta f1_{avg}$ "Maximum Modulation"	2.402GHz	140	165	175	$140 < \Delta f1_{avg}$	kHz
	2.441GHz	140	165	175		kHz
	2.480GHz	140	165	175		kHz
$\Delta f2_{max}$ "Minimum Modulation"	2.402GHz	115	190	-	115	kHz
	2.441GHz	115	190	-		kHz
	2.480GHz	115	190	-		kHz