1) *FUNCTIONAL BLOCK DIAGRAM*
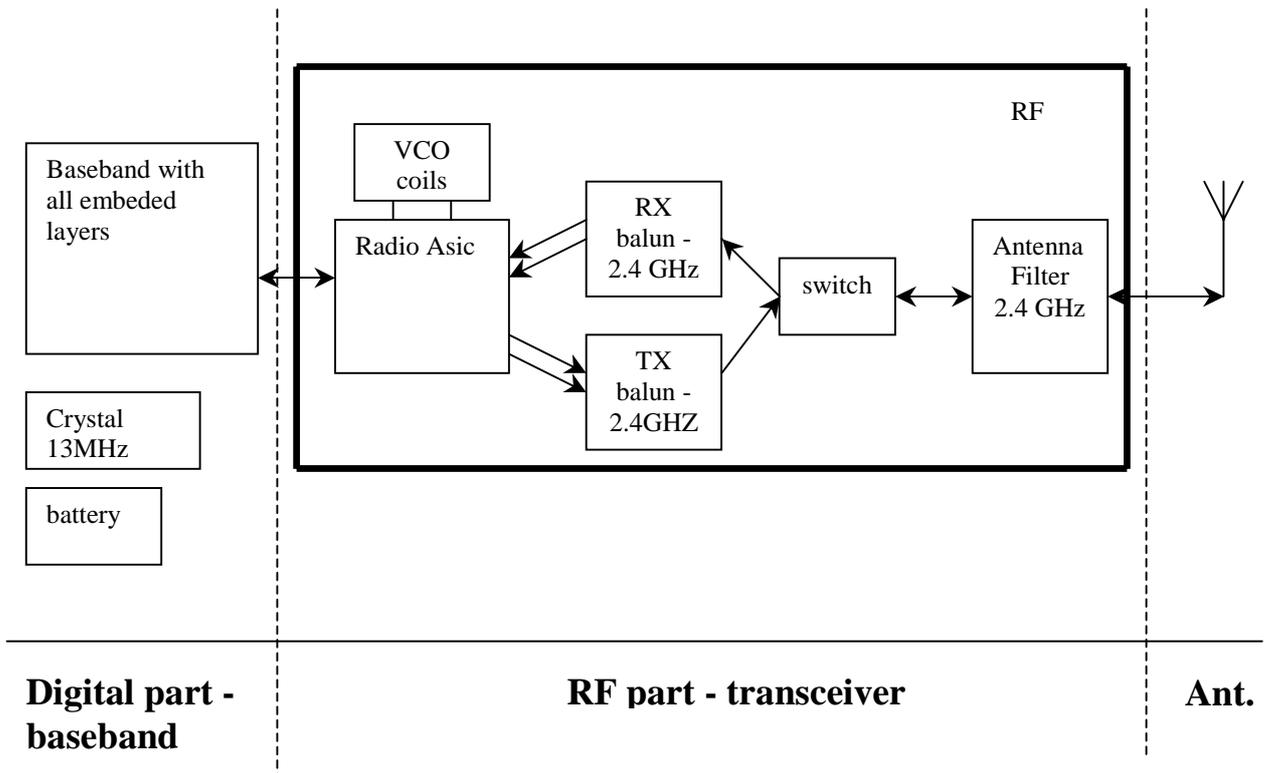

The Blueharp module can be divided in 3 parts:
-   the antenna.
-   the radio module. The radio part have to be connected to the antenna.
-   The baseband controller. This part manage the radio and all embedded software layers.

2) *RADIO ASIC DETAILED BLOCK DIAGRAM*

The Radio asic is a state-of-the-art near-zero IF single-chip transceiver providing a low cost solution for Bluetooth applications. This advanced device features a fully integrated high sensitivity receiver, channel filtering suitable for Bluetooth implementations, a symmetrical 1.2 GHz VCO, and a transmitter preamplifier to drive the switch to the antenna .
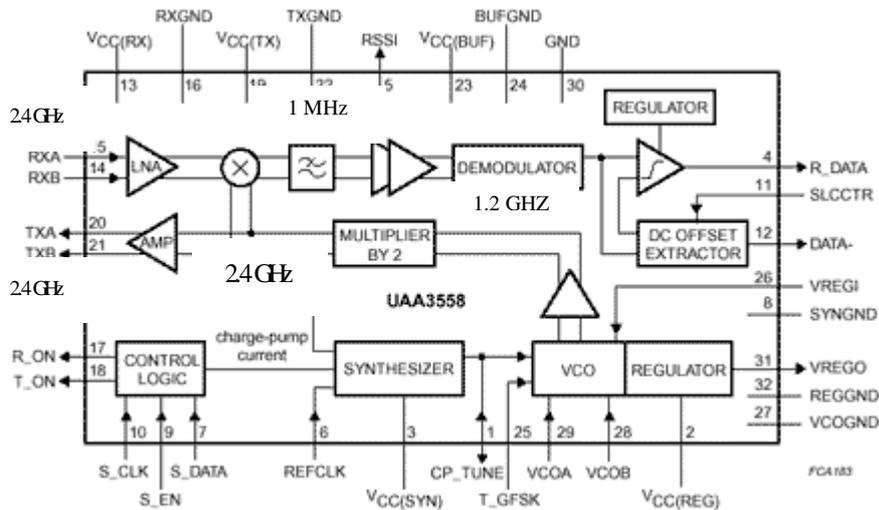
symbol	number	description
VTUNE	1	Vco Tuning input
VCC(reg)	2	Regulator positive supply voltage
VCC(syn)	3	Synthesizer positive supply voltage
R_DATA	4	Digital received data output
RSSI	5	Receved signal strength intensity voltage output
REFCLK	6	Reference frequency input (13 MHz)
S_DATA	7	3-wires bus data control input
SYNGND	8	Synthesizer ground
S_EN	9	3 wires bus digital signal control input
S_CLK	10	3 wires bus clock signal input
SLCCTR	11	Receiver output slicer control input
DATA	12	Receiver data analog decision voltage output
VCC(rx)	13	Receiver positive voltage supply
RXB	14	Received signal input B
RXA	15	Received signal input A
RXGND	16	Receiver ground
R_ON	17	Receiver pin diode control digital output
T_ON	18	Transmitter control digital I/O
VCC(tx)	19	Transmitter positive voltage supply
TXA	20	Transmitted signal output A (RF 2.4 GHZ)output applied to the TX balun The signal from the VCO is frequency doubled and amplified
TXB	21	Transmitted signal output B(RF 2.4 GHz) output applied to the TX balun The signal from the VCO is frequency doubled and amplified.
TXGND	22	Transmitter ground
VCC(buf)	23	Buffer positive voltage supply
BUFGND	24	Buffer ground
T_GFSK	25	Modulation input
VREGI	26	Regulator input voltage
VCOGND	27	VCO ground
VCOB	28	VCO coil input B
VCOA	29	VCO coil input A
GND	30	ground
VREGO	31	Regulator output voltage
REGGND	32	Regulator ground