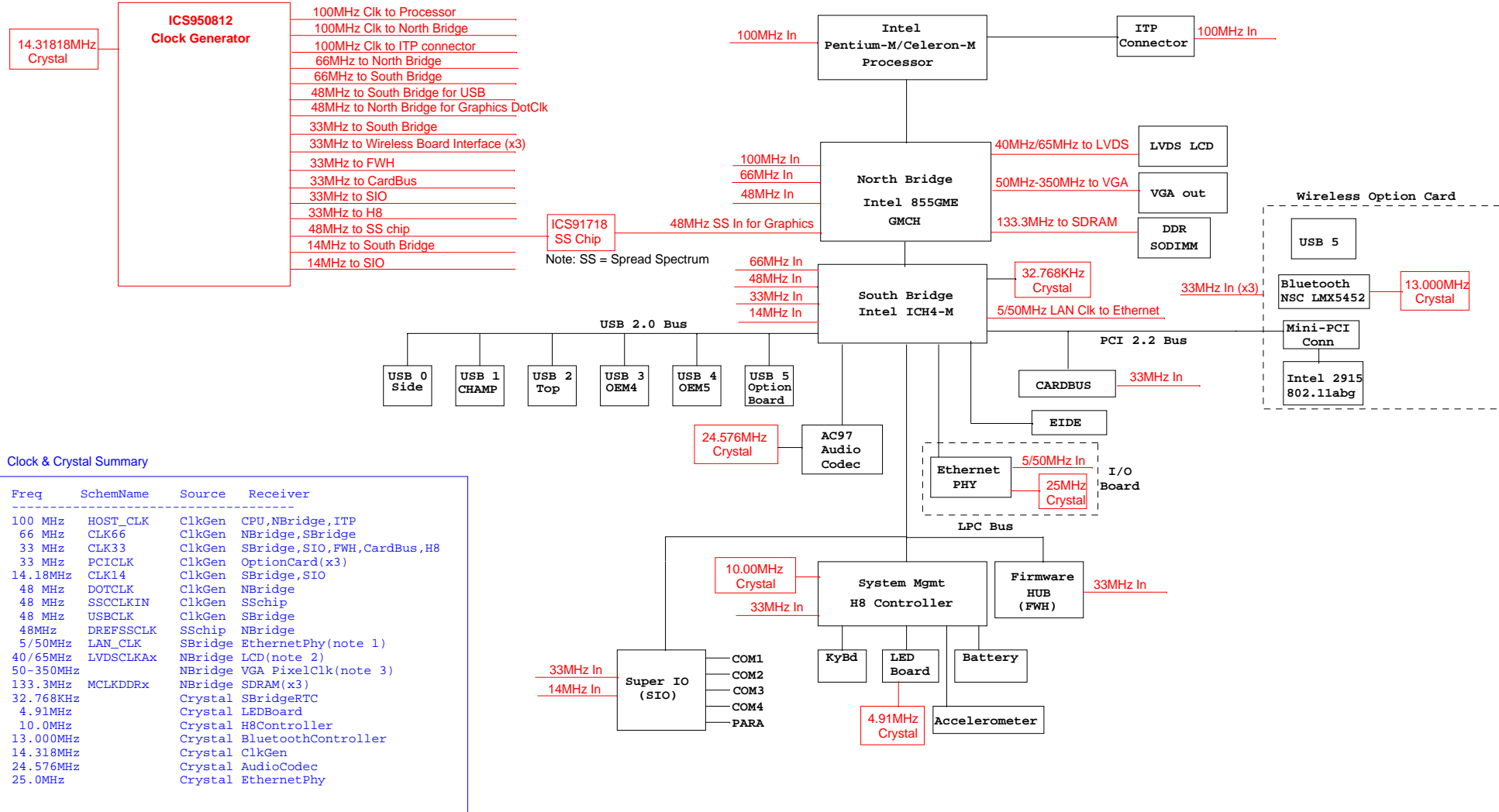


# Hammerhead/Hammerhead eXtreme Tablet

## Crystals and Clocks

REVISIONS				BY
ECO#	REV	DESCRIPTION OF CHANGE		
		Created drawing for FCC 8/29/06		MJD



Clock & Crystal Summary

Freq	SchemName	Source	Receiver
100 MHz	HOST_CLK	ClkGen	CPU,NBridge,ITP
66 MHz	CLK66	ClkGen	NBridge,SBridge
33 MHz	CLK33	ClkGen	SBridge,SIO,FWH,CardBus,H8
33 MHz	PCICLK	ClkGen	OptionCard(x3)
14.18MHz	CLK14	ClkGen	SBridge,SIO
48 MHz	DOTCLK	ClkGen	NBridge
48 MHz	SSCCLKIN	ClkGen	SSchip
48 MHz	USBCCLK	ClkGen	SBridge
48MHz	DREFSSCLK	SSchip	NBridge
5/50MHz	LAN_CLK	SBridge	EthernetPhy(note 1)
40/65MHz	LVDSCLKAx	NBridge	LCD(note 2)
50-350MHz		NBridge	VGA PixelClk(note 3)
133.3MHz	MCLKDDRx	NBridge	SDRAM(x3)
32.768KHz		Crystal	SBridgeRTC
4.91MHz		Crystal	LEDBoard
10.0MHz		Crystal	H8Controller
13.000MHz		Crystal	BluetoothController
14.318MHz		Crystal	ClkGen
24.576MHz		Crystal	AudioCodec
25.0MHz		Crystal	EthernetPhy

### Notes for Clks and Crystals:

- 1) LAN\_CLK will be 5MHz for 10Mbps operation, 50MHz for 100Mbps operation
- 2) LVDS clk is 40MHz for 800x600 resolution, 65MHz for 1024x768 resolution
- 3) Pixel clk varies with display resolution, refresh rate and color depth - 50MHz for basic 800x600, 350MHz for 2048x1536x24bpp with 75Hz refresh

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