

Reveal ETEN Glofiish X650



Deassembly: Close to GTA HW Architecture

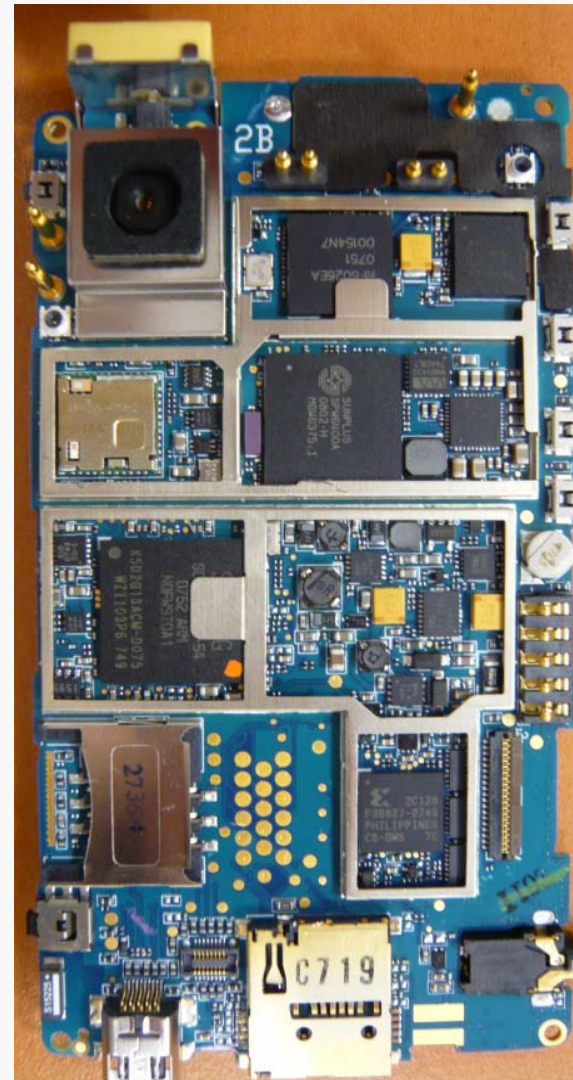
Openmoko
open. mobile. free.

Glofiish X650 at a glance

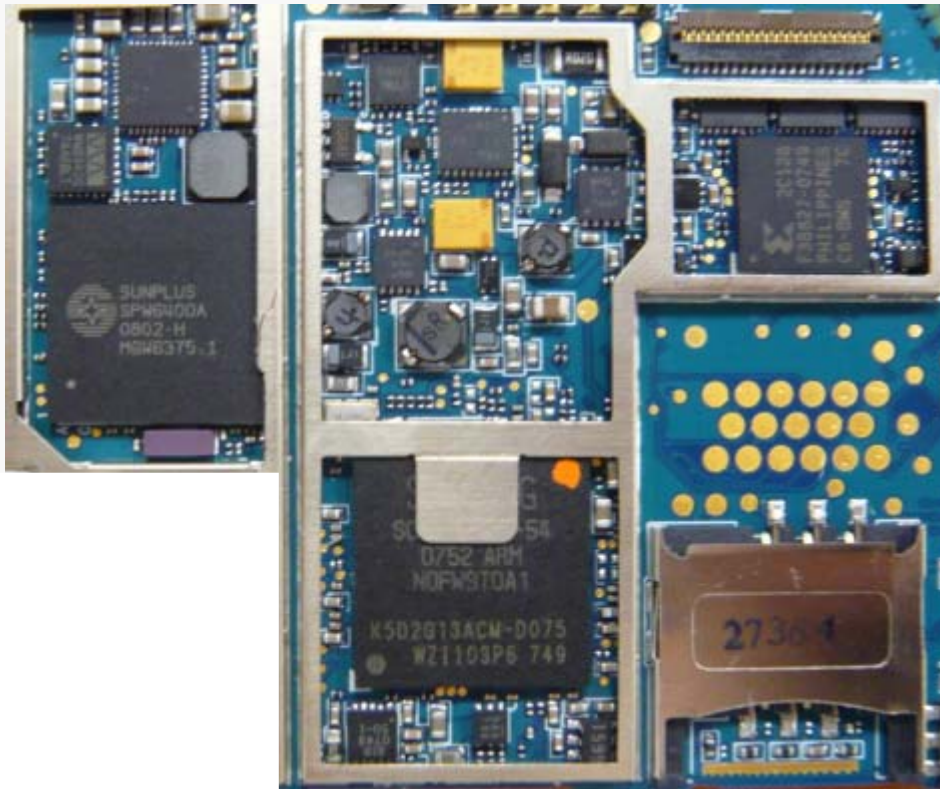


Available:	Q1 2008
CPU	Samsung SC32442 500 MHz Processor
Network:	GSM 850/900/1800/1900
Data:	GPRS + EDGE + WIFI+GPS
Memory	256MB Flash+64MB SDRAM
Screen:	480x640 pixels, 65k colours,VGA
Camera:	2 megapixeks AF
Size:	Compact PDA-style device 107 x 58 x 14.7 mm / 136 grams
Bluetooth:	Yes
Memory Card:	microSD
Infra-red:	No
Polyphonic:	Yes
Java:	Limited
Battery life:	5~6 hours talktime / 7 days standby (1520mAh)
FM	FM tuner+ transmitter

X650 PCBA

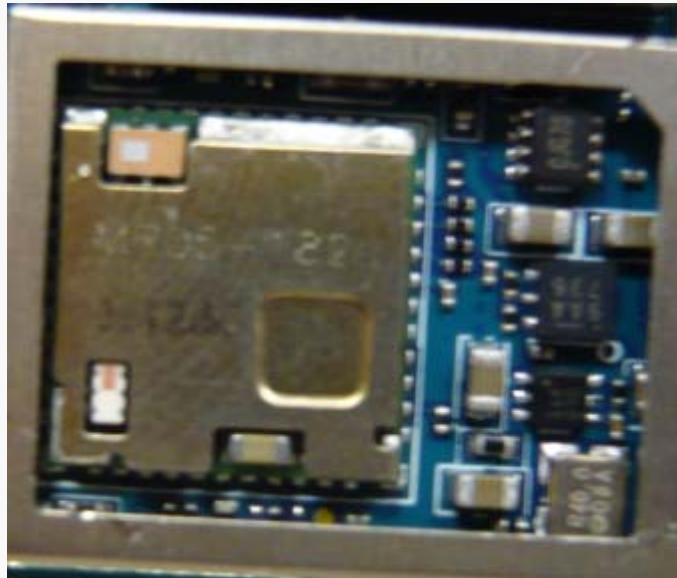


X650 Bandband



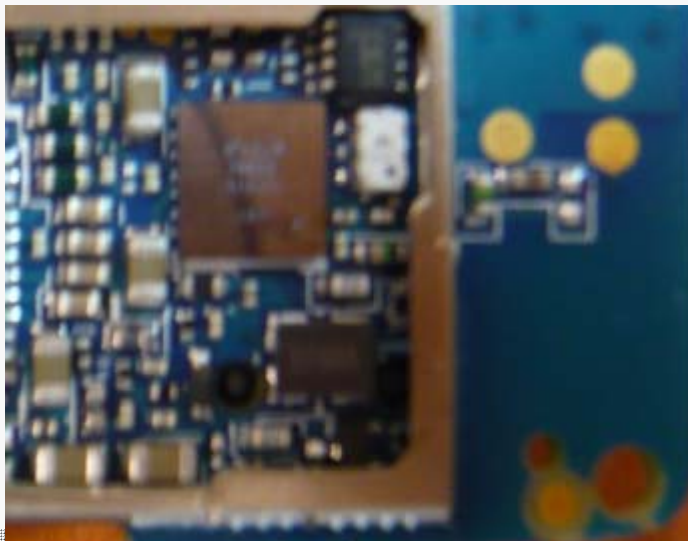
MCU	Samsung SC32442 B54 (ARM9 200MHz) with MCP +Sunplus SPW6400 GSM DBB (ARM9)
ABB??	Sunplus SPW6711
MCP NAND	128MB NAND Flash
MCP M-SDRAM	64MB
Audio Codec	Wolfson WM8940
CPLD	Xilinx CoolRunner II XC2C128

X650 BT&Wifi



WiFi

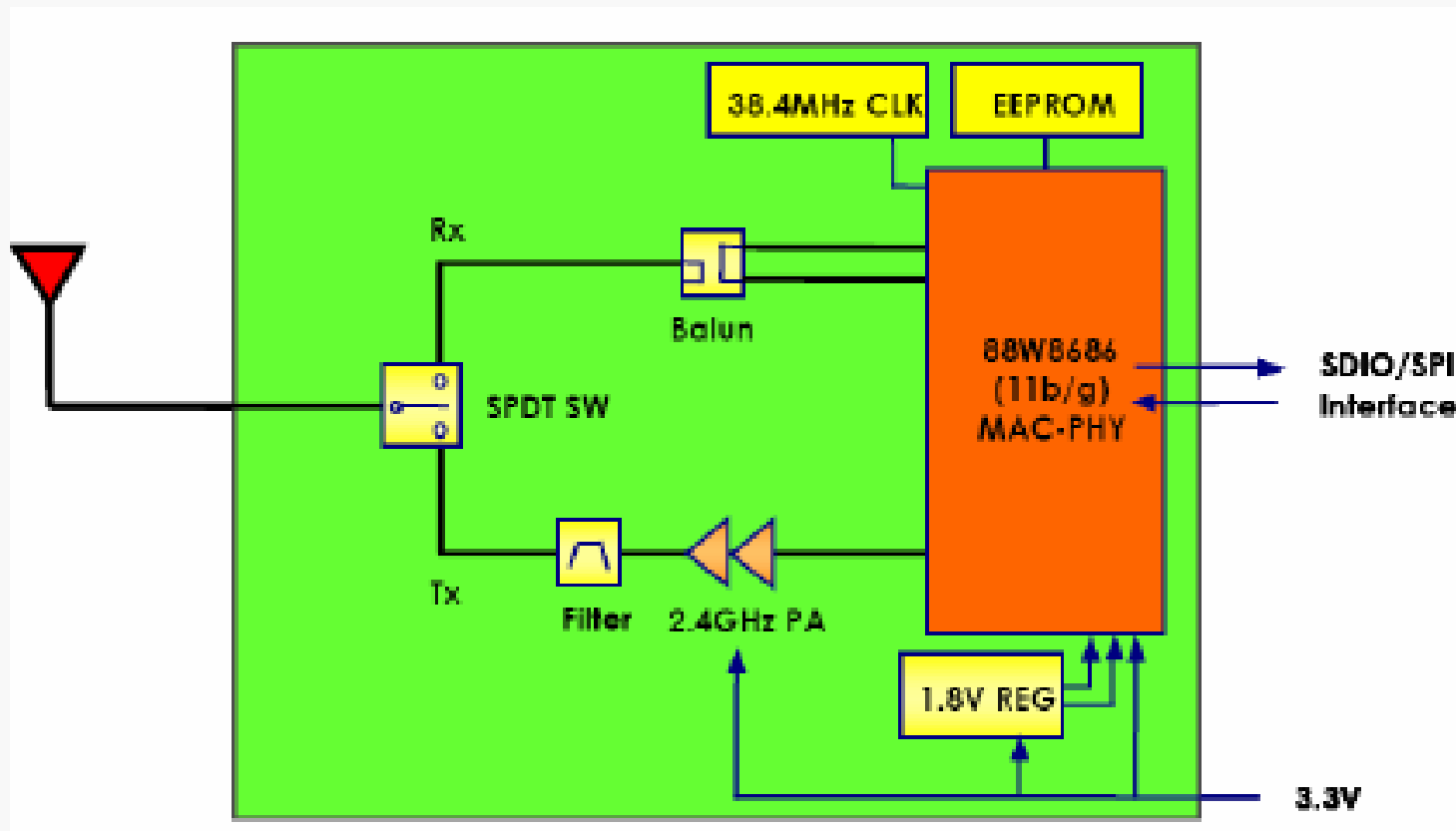
Module (Marvell 88W8686) Murata?



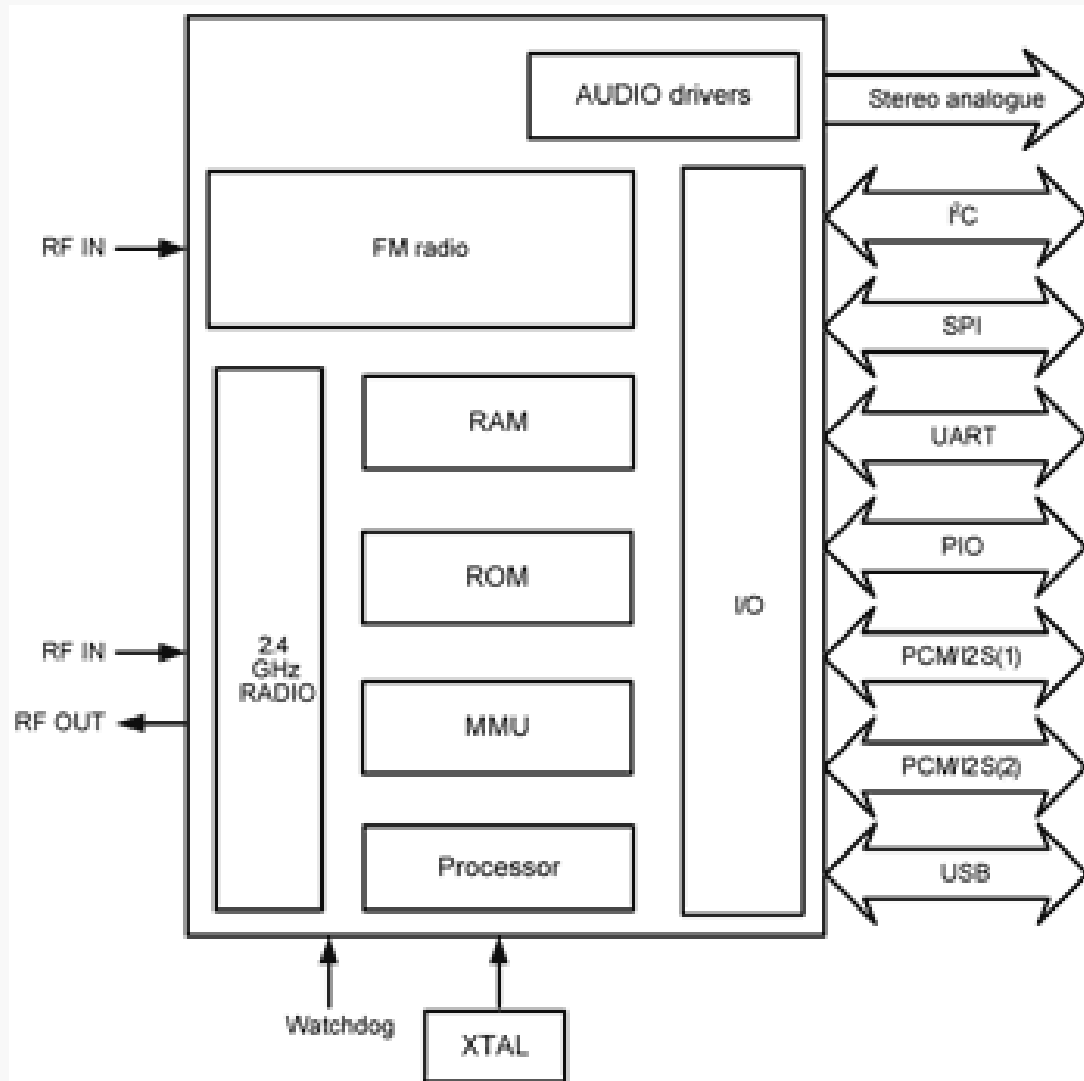
Bluetooth

CSR Bluetooth BC5 (BT+FM) V2.0 EDR
Single chip

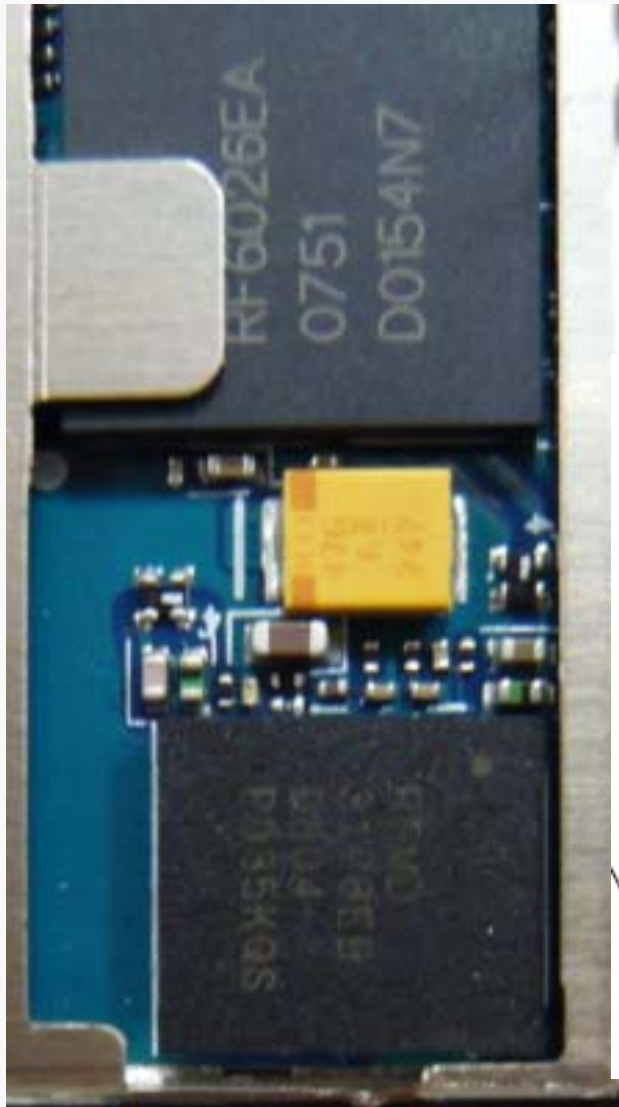
Wifi Block Diagram



Bluetooth Block Diagram



X650 GSM RF



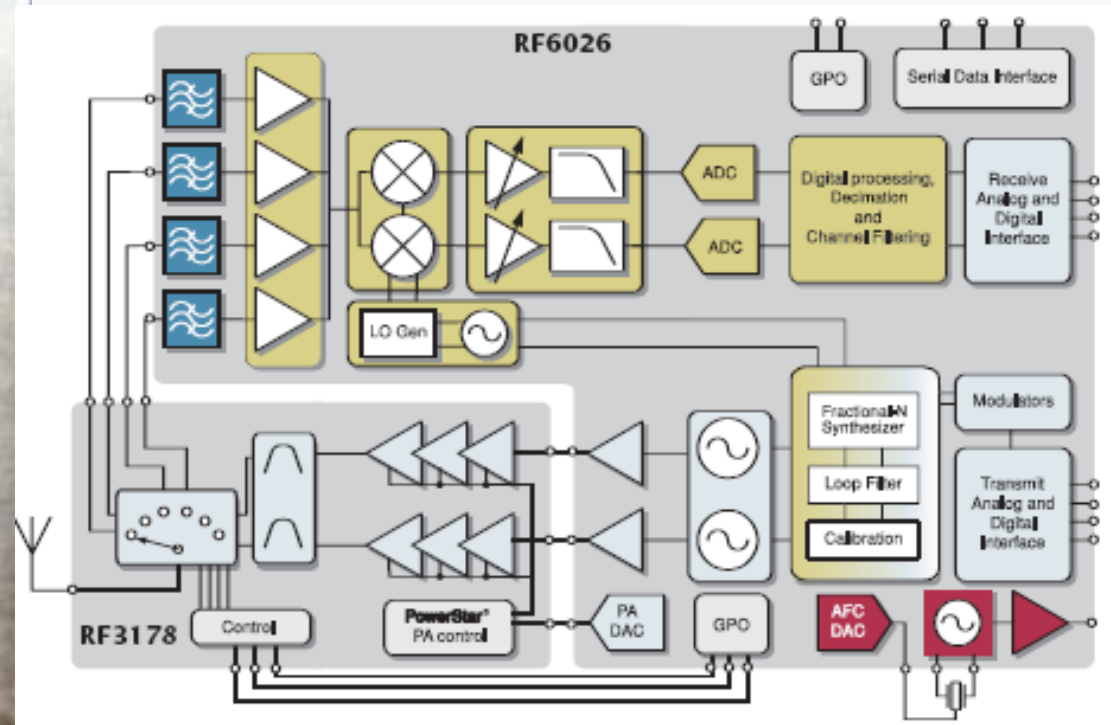
[POLARIS™ 2 TOTAL RADIO™ Module]

GSM Transceiver
Module

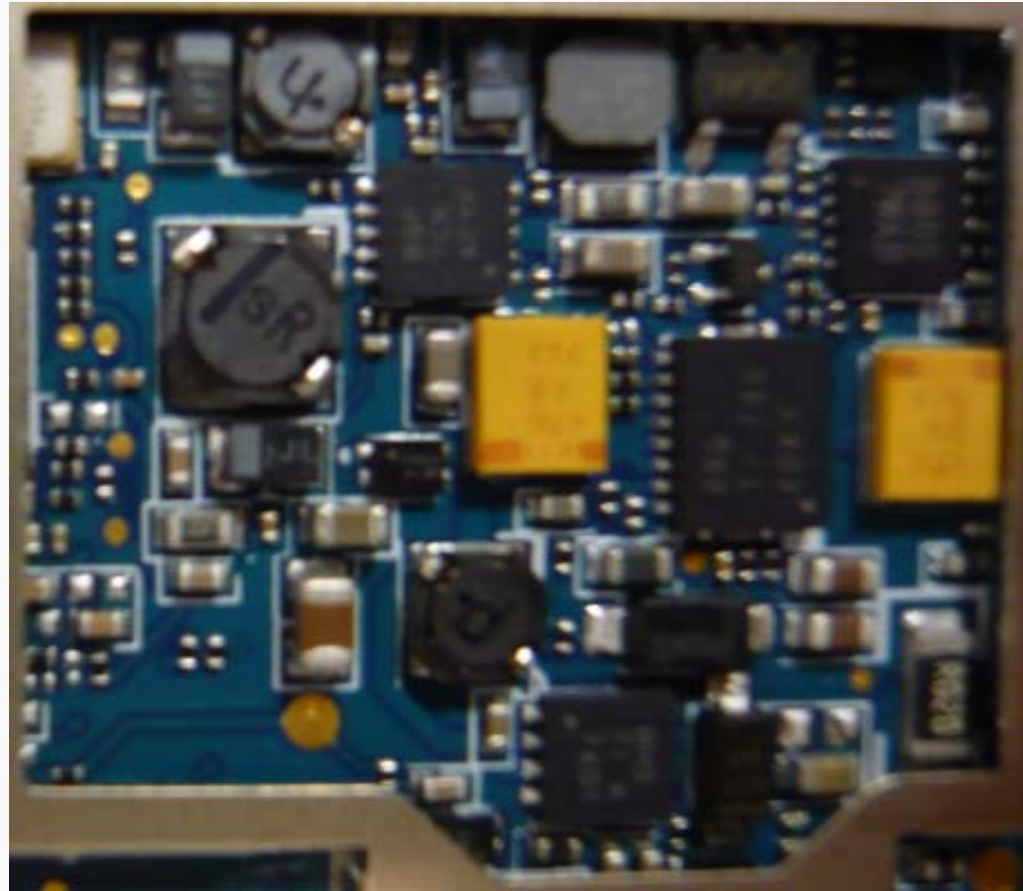
RFMD 6026

GSM Transmitter
Module

RFMD 3178 Quad-Band GSM/EDGE

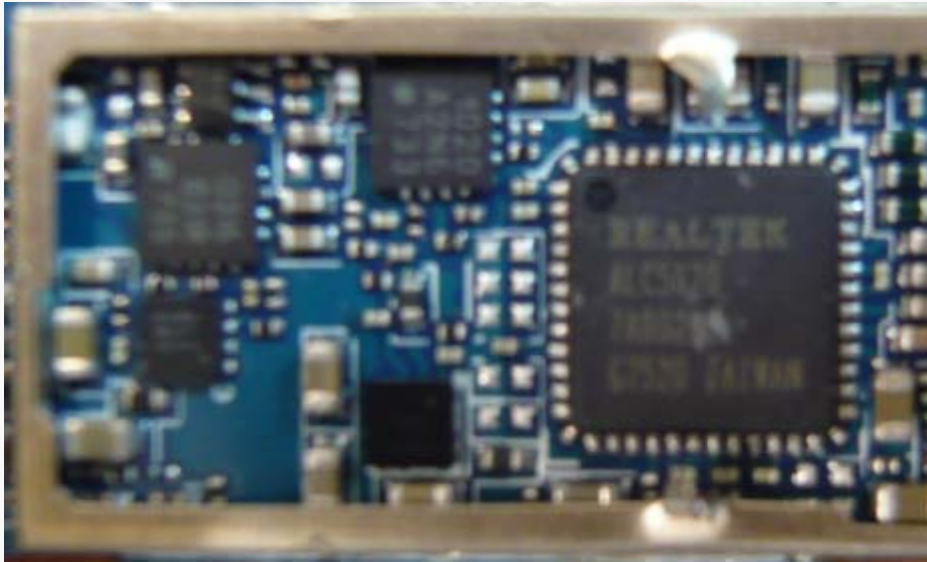


X650 Power Management

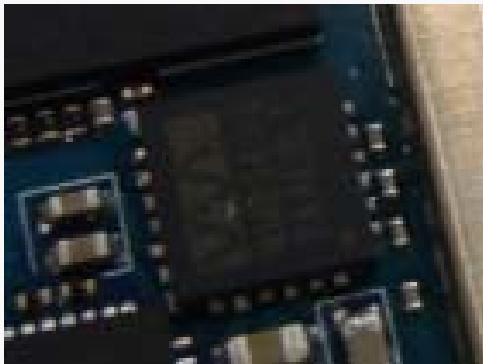


The above components include DC/DC converters, LDOs and charger IC.

X650 Dual Audio Codecs

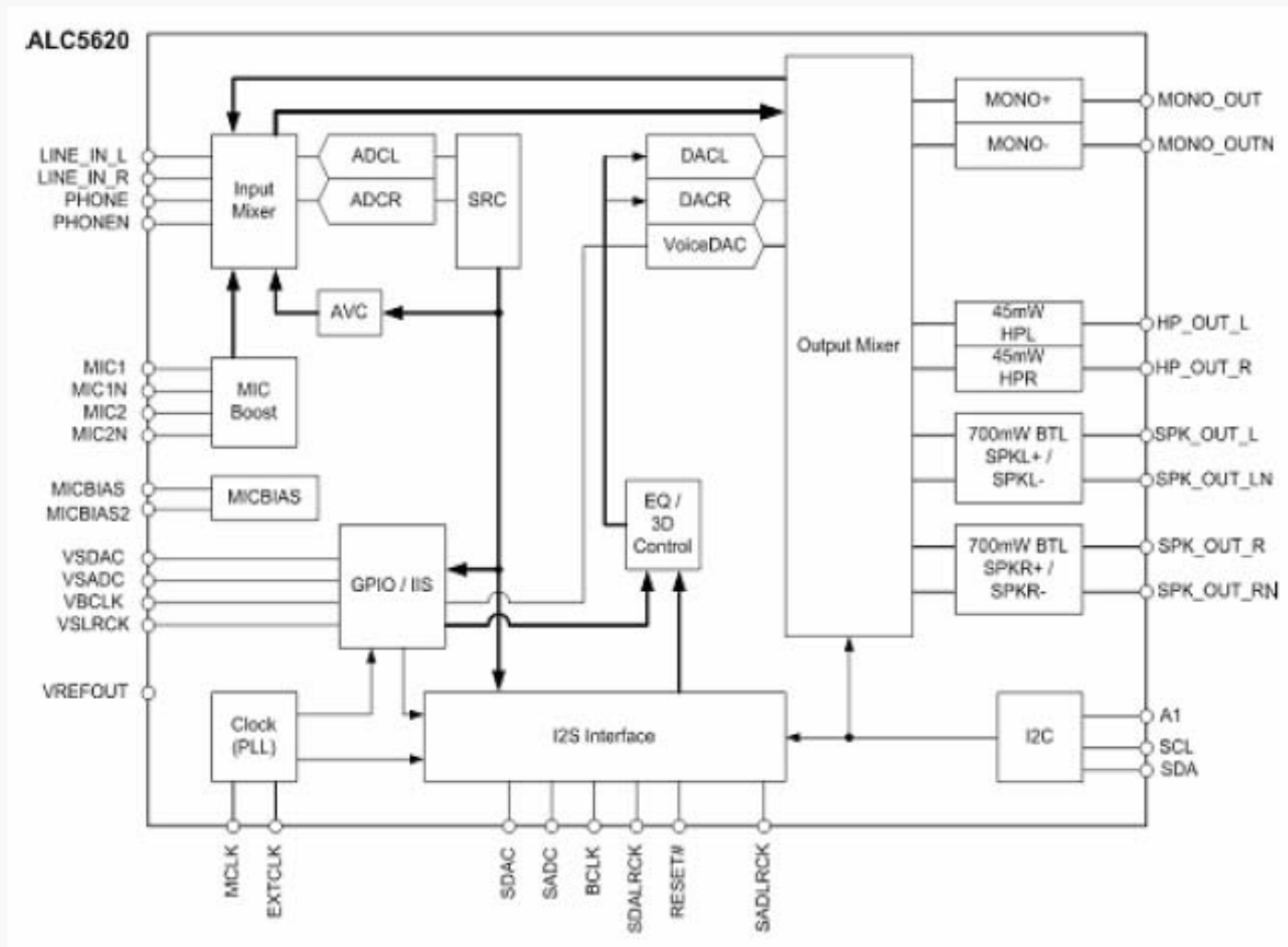


Audio Codec1	REALTEK ALC5620
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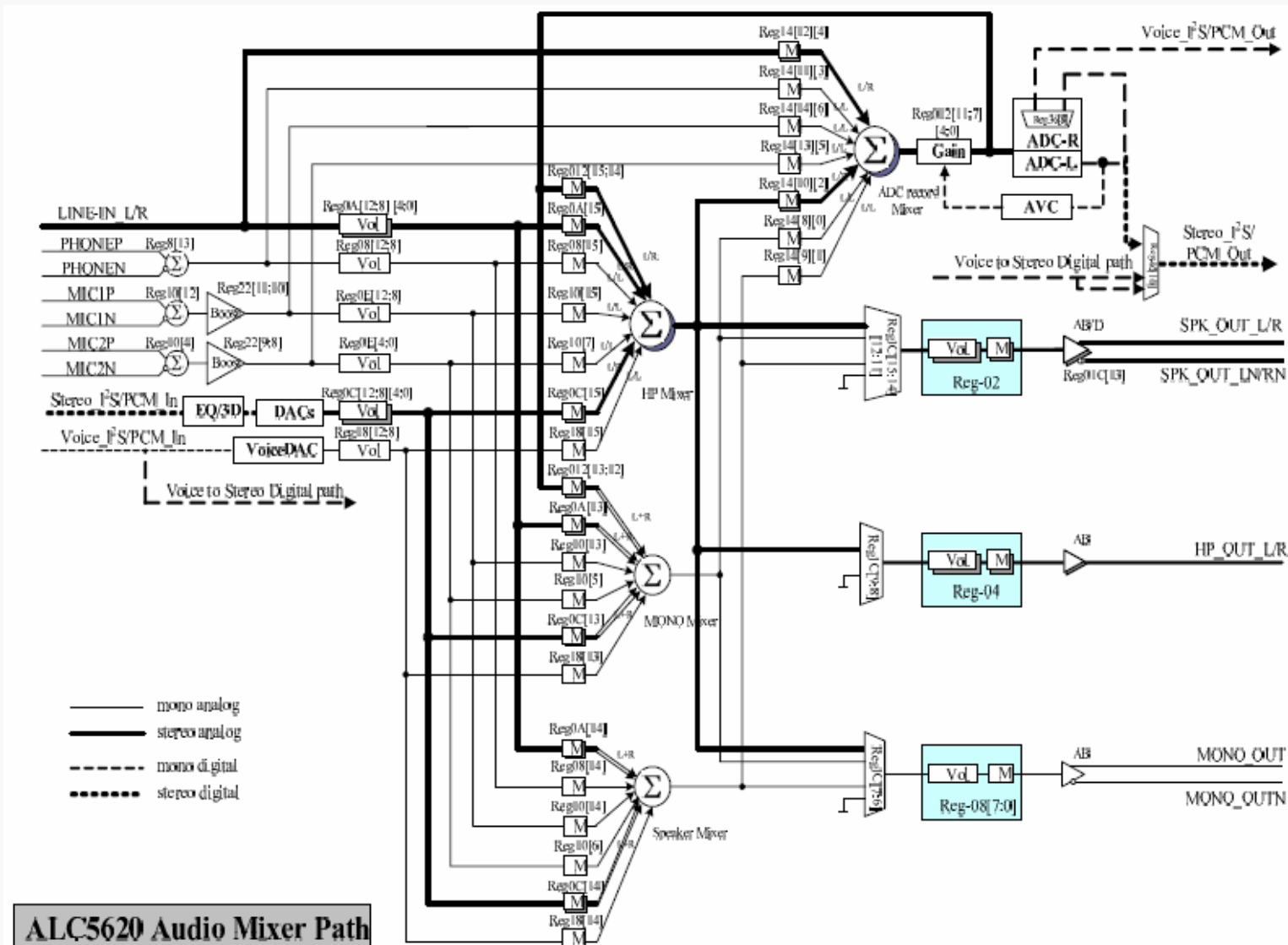


Audio Codec2	Wolfson WM8940
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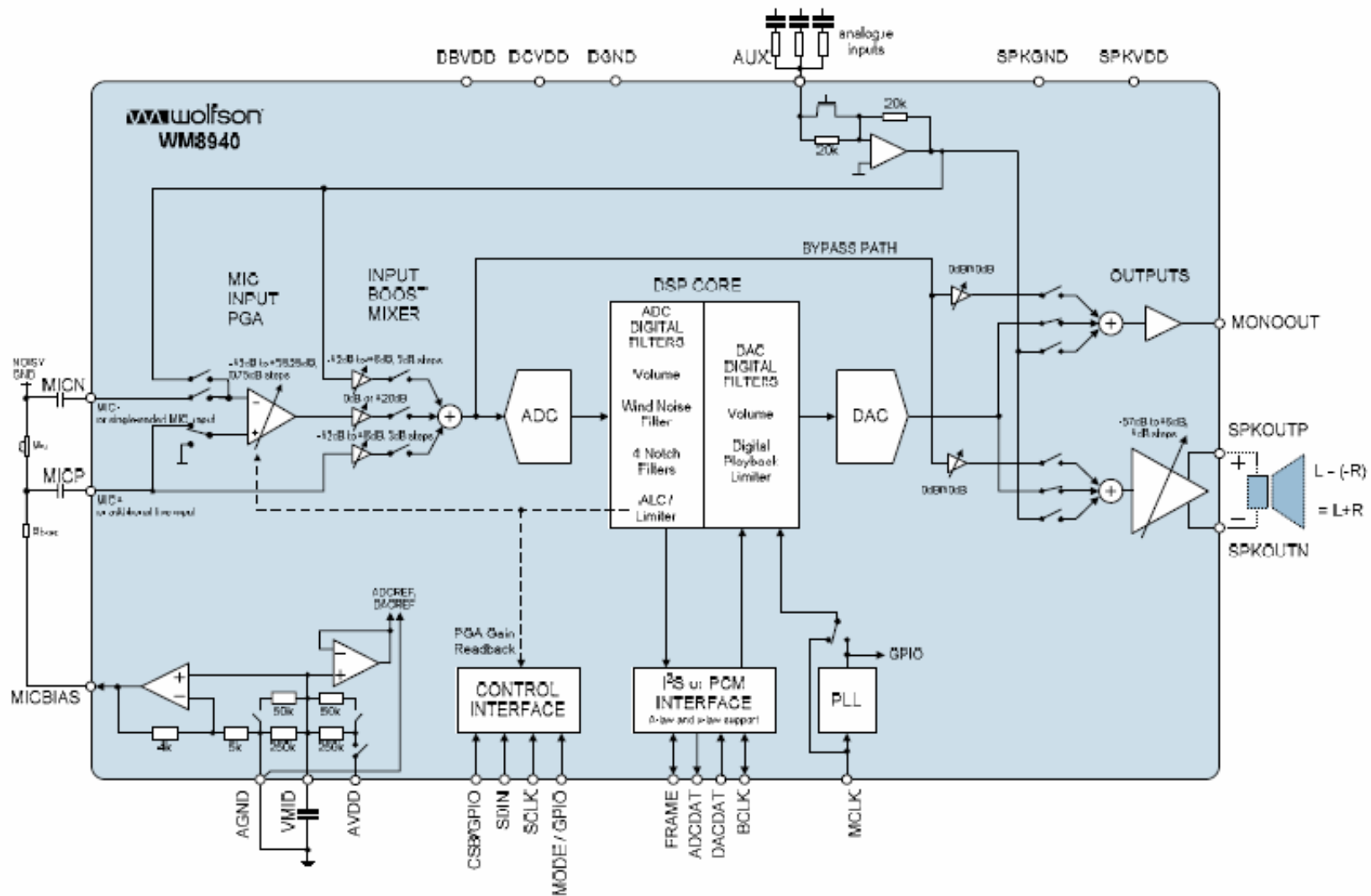
Audio Codec1



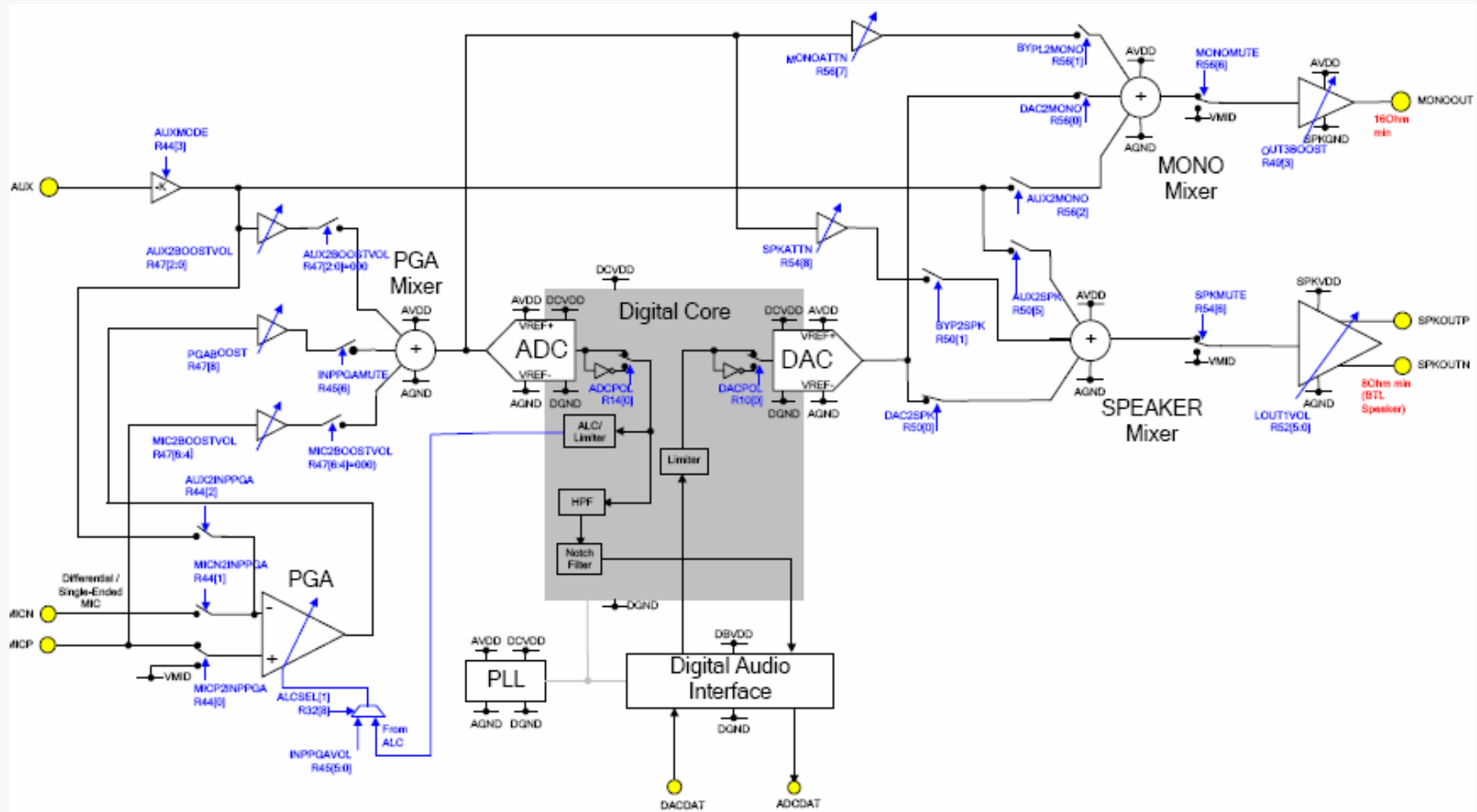
Audio Codec1 Audio Mixer Path



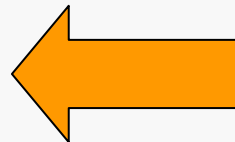
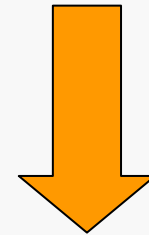
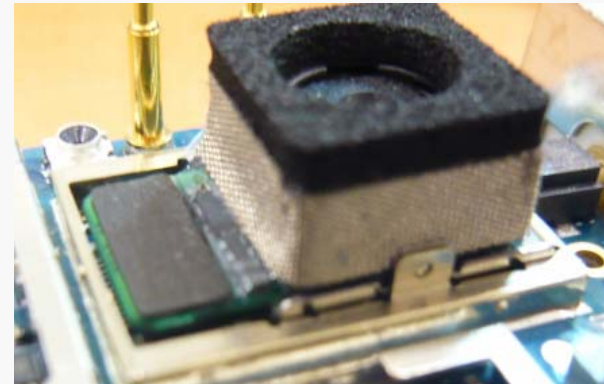
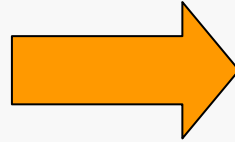
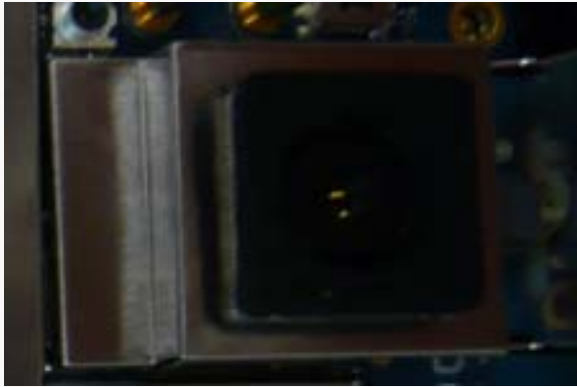
Audio Codec2



Audio Codec2 Audio Mixer Path

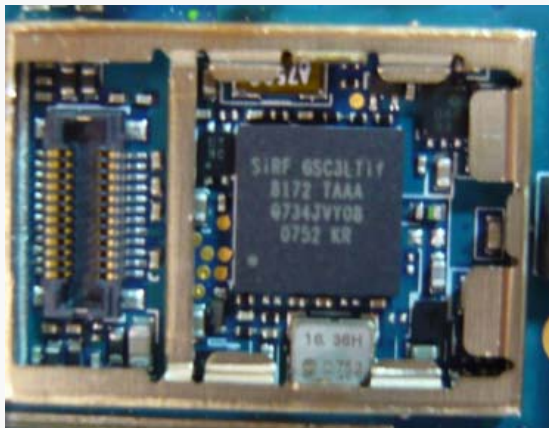


GPS Chip?

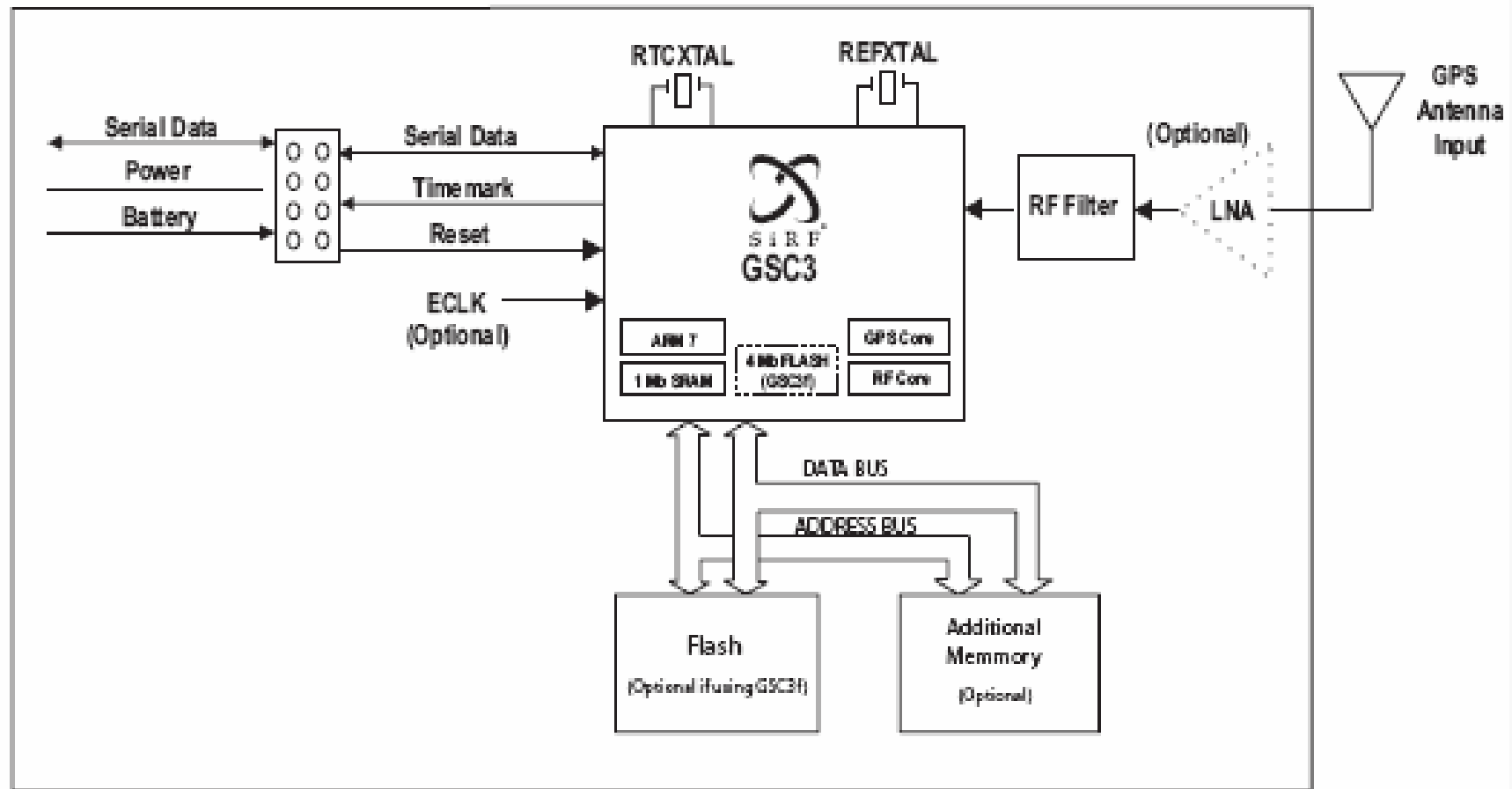


GPS

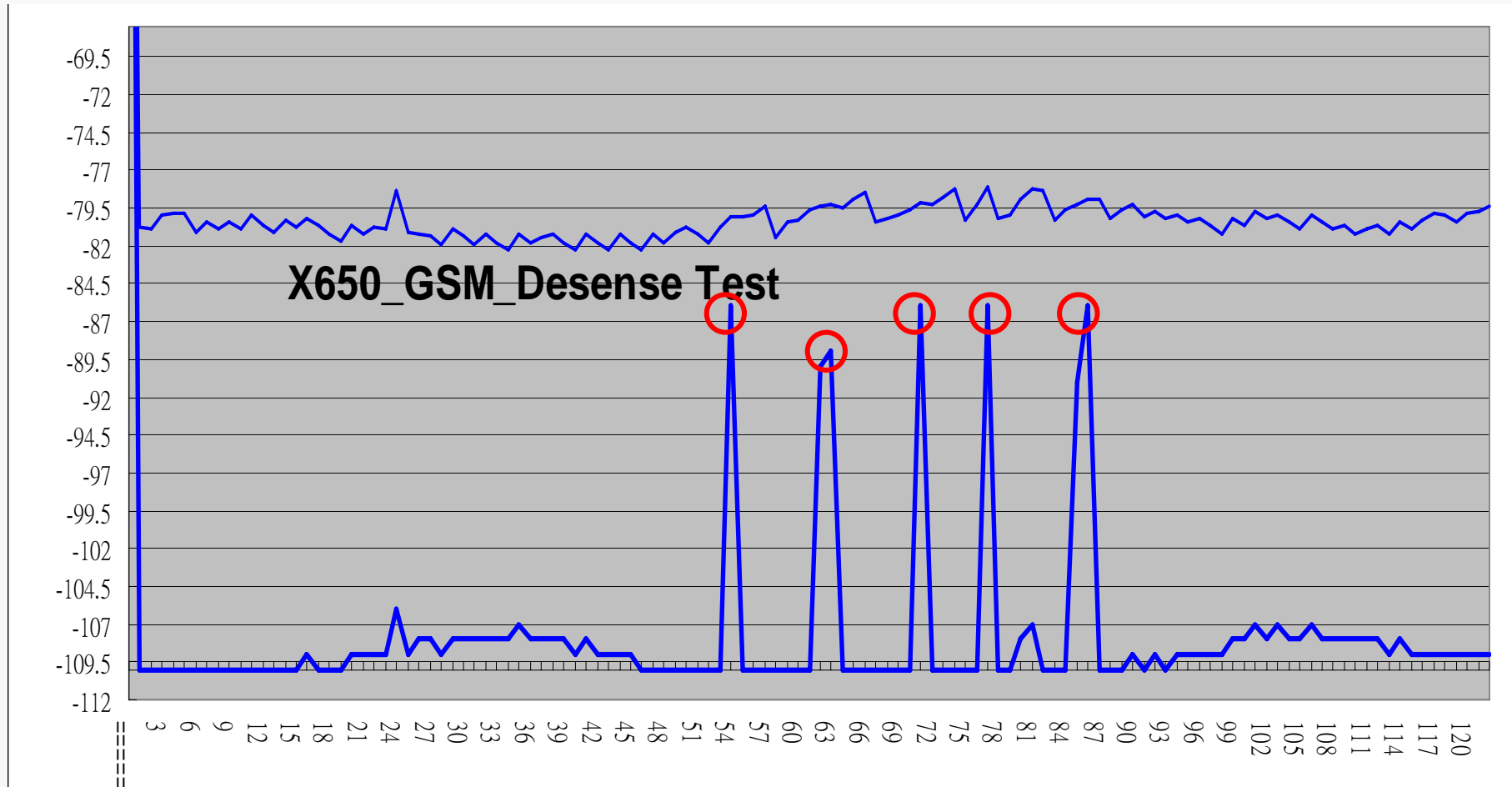
SiRF StarIII GSC3LTif



GPS Block Diagram



X650 GSM Desense



X650 Suspend Current

Scenario	Power Consumption
GSM Only	Min 3.9mA
GSM+WLAN	Min 3.9mA
GSM+WLAN+BT	Min 5.6mA
GSM+WLAN+BT+GPS	Max 258mA
All-OFF	5.1mA (Static)

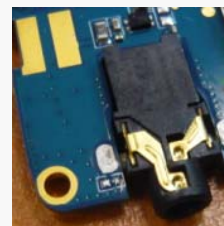
Other Electric Mechanical Components



Top-poly 2.8' TFT VGA LCM with 4 wire
Is it familiar?



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MCNEX 9.5*9.5*5.5mm 2.0M AF



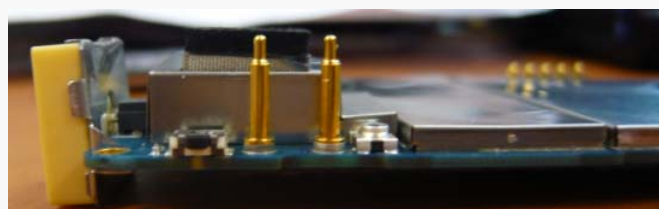
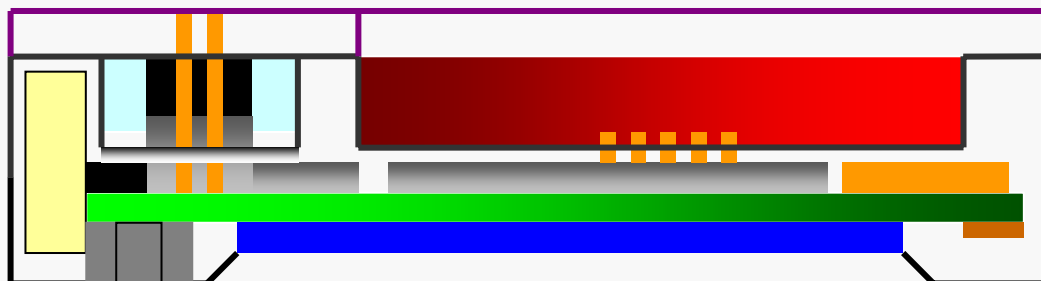
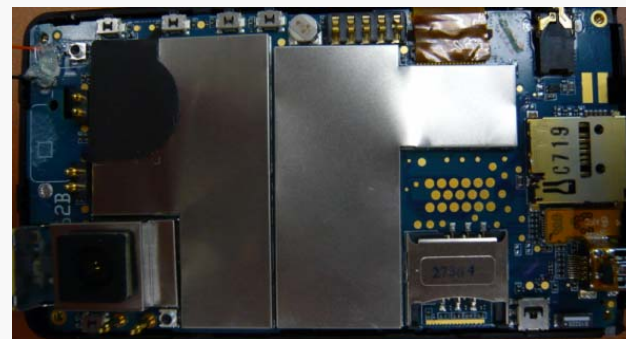
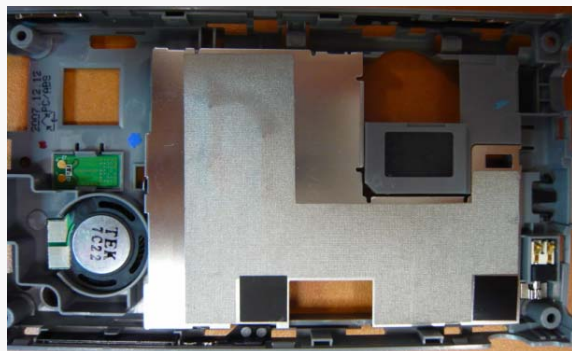
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Knowles SiSonic MEMs Microphone



Mechanical Staking



How X650 called Ultra-Thin

- Normal LCM
- Normal GPS Ant
- Normal Camera Module
- Normal Mechanical Components
- Normal Li-Poly Battery
- Normal Speaker without chamber

Everything is normal !!

0.8mm ↓

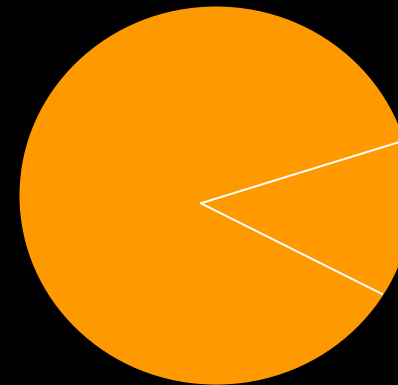
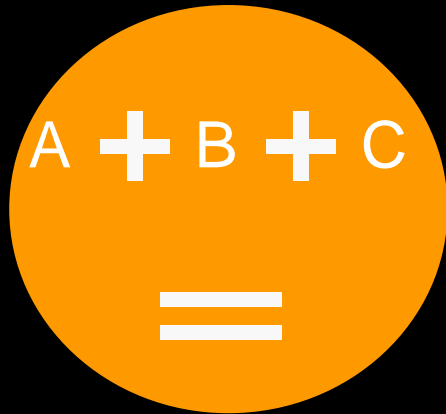
Could we make a thinner phone??

Road to Commercial Market



Questions before these questions??

Is it I really want?



Is the market share important ?



Me too? or Me to ?