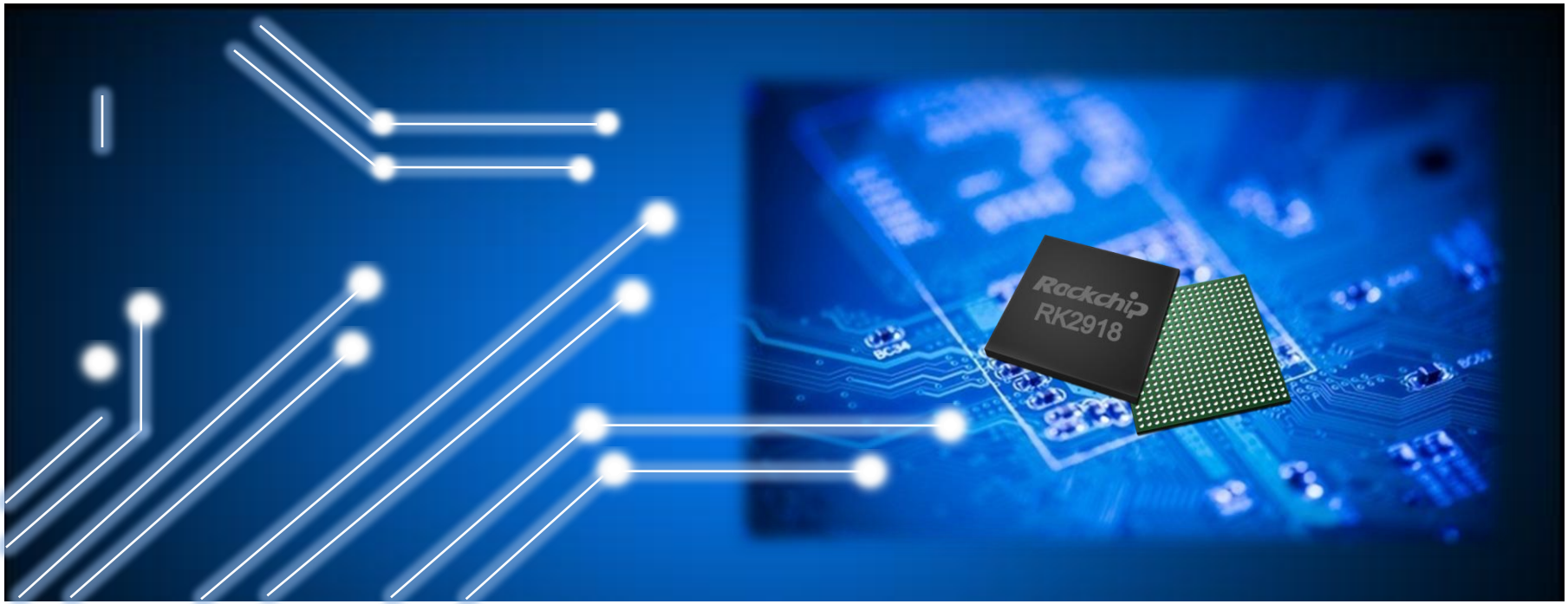


Rockchip RKnano-C Audio Processor

2011-10

www.rock-chips.com
TEL: 86-591-83991906 FAX: 86-591-83951833

RKnanoC Processor

►Specifications

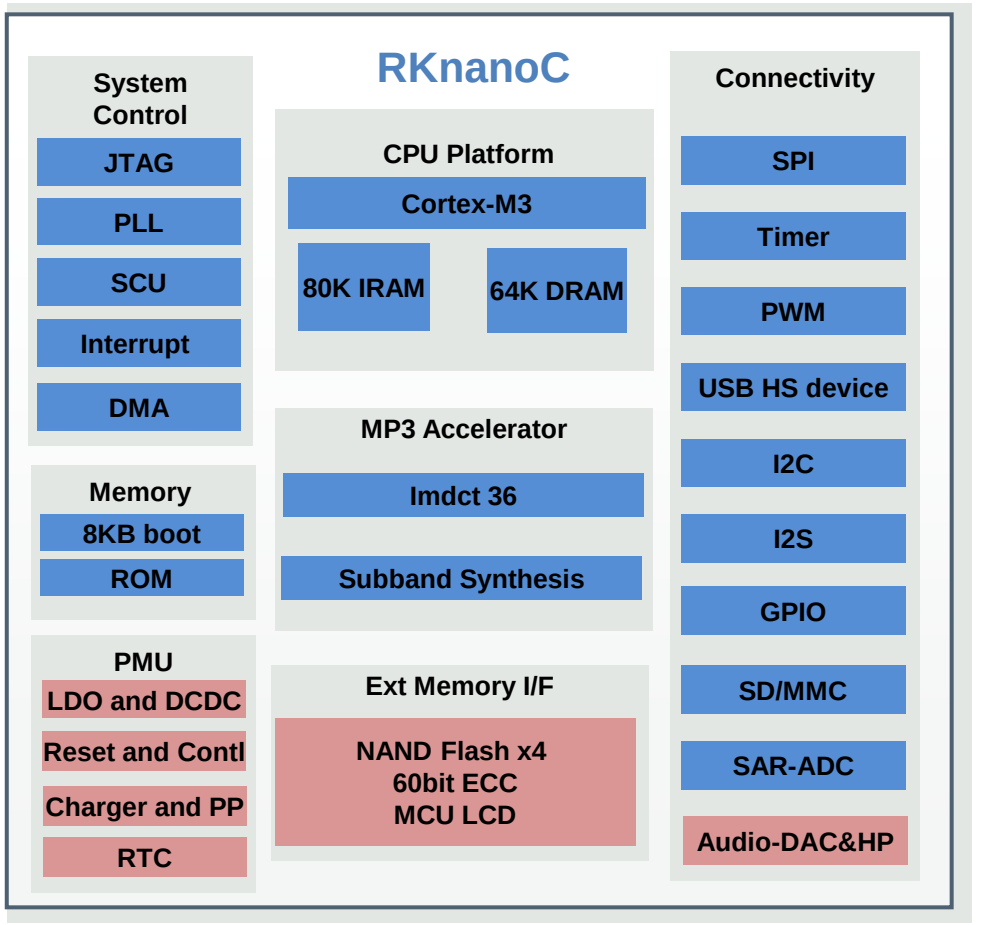
- CPU : Cortex-M3 100Mhz
- Process: CMOS 0.11um
- Core Voltage: 1.10~1.275, type 1.2V
- Tamp Range : -10°C to +85°C
- Package: LQPF 64 or BGA100

►Key Features and Advantages

- Low power ARM Cortex-M3 core 100Mhz
- High efficiency DCDC and LDO
- Max 200mA charger
- Power path management
- Hardware ECC up to 60bit
- Boot from SPI Nor flash and MLC NAND
- Lower power cap-less Audio-DAC and HP driver
- RTC function (BGA only)
- Target down to 20mW @MP3 playback

►Availability:

- CS 2011 Q1



Update IP form RKanoB

Rockchip Audio Processor Roadmap

	NanoB	NanoC
Target Market	MP3	MP3
CPU	M3	M3
CPU Frequency	100M	100M
IRAM	80KB	80KB
DRAM	64KB	64KB
ROM	98KB	TBD
Display solution	Max to 176x128	Max to 176x128
AUDIO CODEC	√	√
PMU	√	√
MLC NAND	24 bits	60 bits
Booting Storage	NAND	NAND/Serial FLASH
USB	HS device	HS device
MP3 Decoder	HW	HW
WMA Decoder	SW	SW
AAC Decoder	-	-
Power consumption	40mW	20mW
Package	LQFP64	LQFP64

RK-NanoC Audio decoder Benchmark

MP3 AUDIO

[Codec]: MPEG1/2/2.5 Audio Layer 3, Layer2
[Channel]: 2
[Bitrate]: 8~320Kbps, CBR and VBR
[Sample]; 8-48KHz
[Exceptional]: No

WMA AUDIO

[Codec]: Version 7, 8, 9，
[Channel]: 2
[Bitrate]: 8Kbps~320kbps
[Sample]; 8-48KHz
[Exceptional]: WMA Pro and WMA lossless

AAC AUDIO

[Codec]: AAC-LC
[Channel]: 2
[Bitrate]: N/A
[Sample]; 8-48KHz
[Exceptional]:
[Container]: AAC, M4A

APE AUDIO

[Codec]: Ver. 3.95, 3.97, 3.98, 3.99, normal and fast
[Channel]: 2
[Bitrate]: <1.2 Mbps
[Sample]; 8-48KHz
[Container]: APE

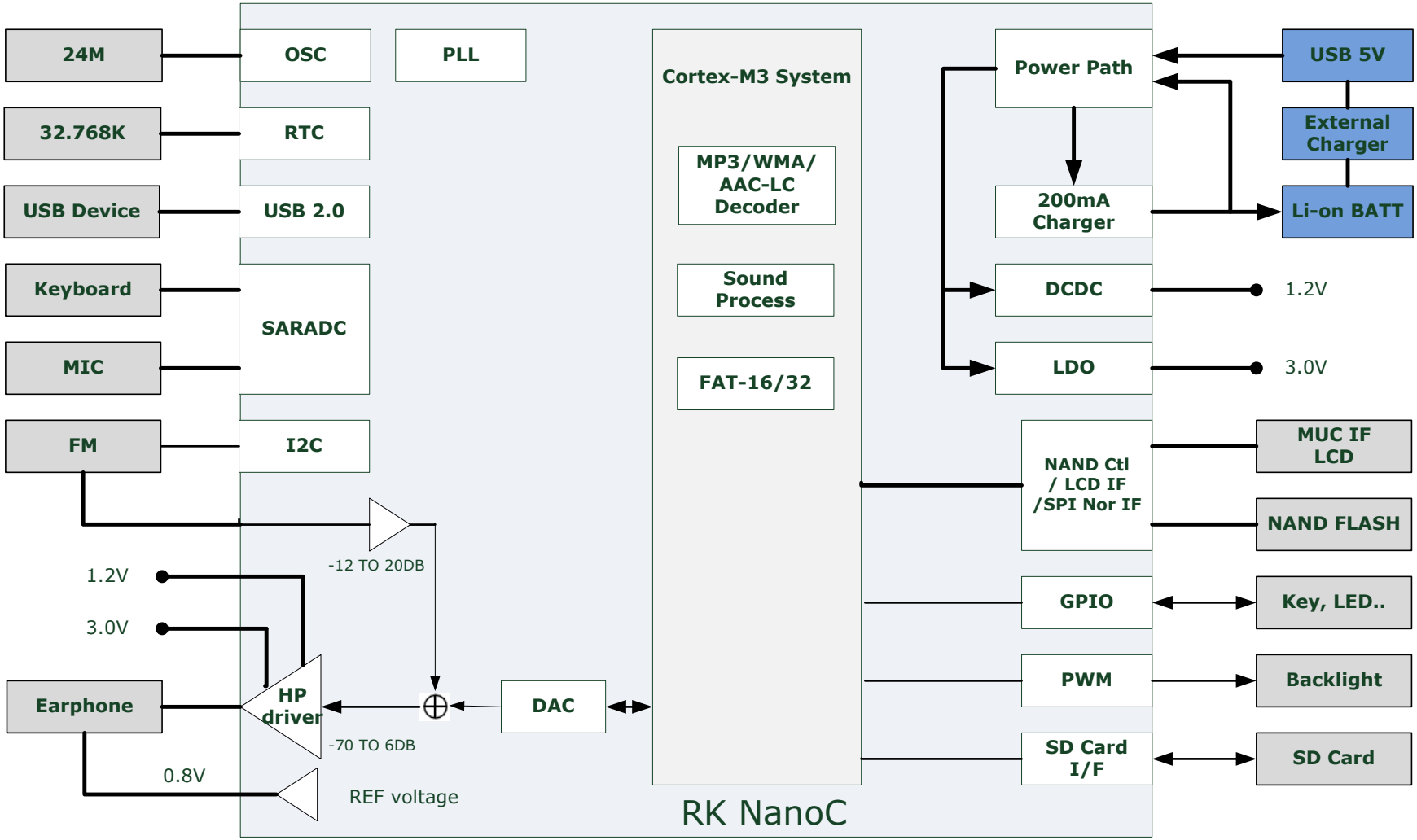
FLAC AUDIO

[Codec]: FLAC
[Channel]: 2
[Bitrate]: <1.2 Mbps
[Sample]; 8-48KHz
[Exceptional]: No
[Container]: FLA

WAV AUDIO

[Codec]: MS-ADPCM，IMA-ADPCM，PCM
[Channel]: 2
[compressed]: 4bit MS-ADPCM,IMA-ADPCM
[Sample]; 8-48KHz
[Exceptional]: No
[Container]: WAV

RK-NanoC solution Diagram



Thank You!

Contact Us
Building No.18, A District,
Fuzhou Software Park,
89 Soft Avenue, Tongpan Road,
Gulou District, Fuzhou, Fujian, China
P.C: 350003
TEL: 86-591-83991906 FAX: 86-591-83951833