

Opensuse arm on Allwinner A10

Bamvor Jian Zhang <bjzhang@suse.de>



Introduction

- **DEMO: Opensuse arm on mele A1000**
- **Open source on unbrickable/open/fexible device**
- **Arm family and ecosystem**



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G D D

USB DEVICE

SATA

MIC Pin
CVBS IN pin

HMC-G39A01

GRxTx3.3

UART

AB10-G32-V1.20-2
WLBMB21-2400120-92
2011-12-20

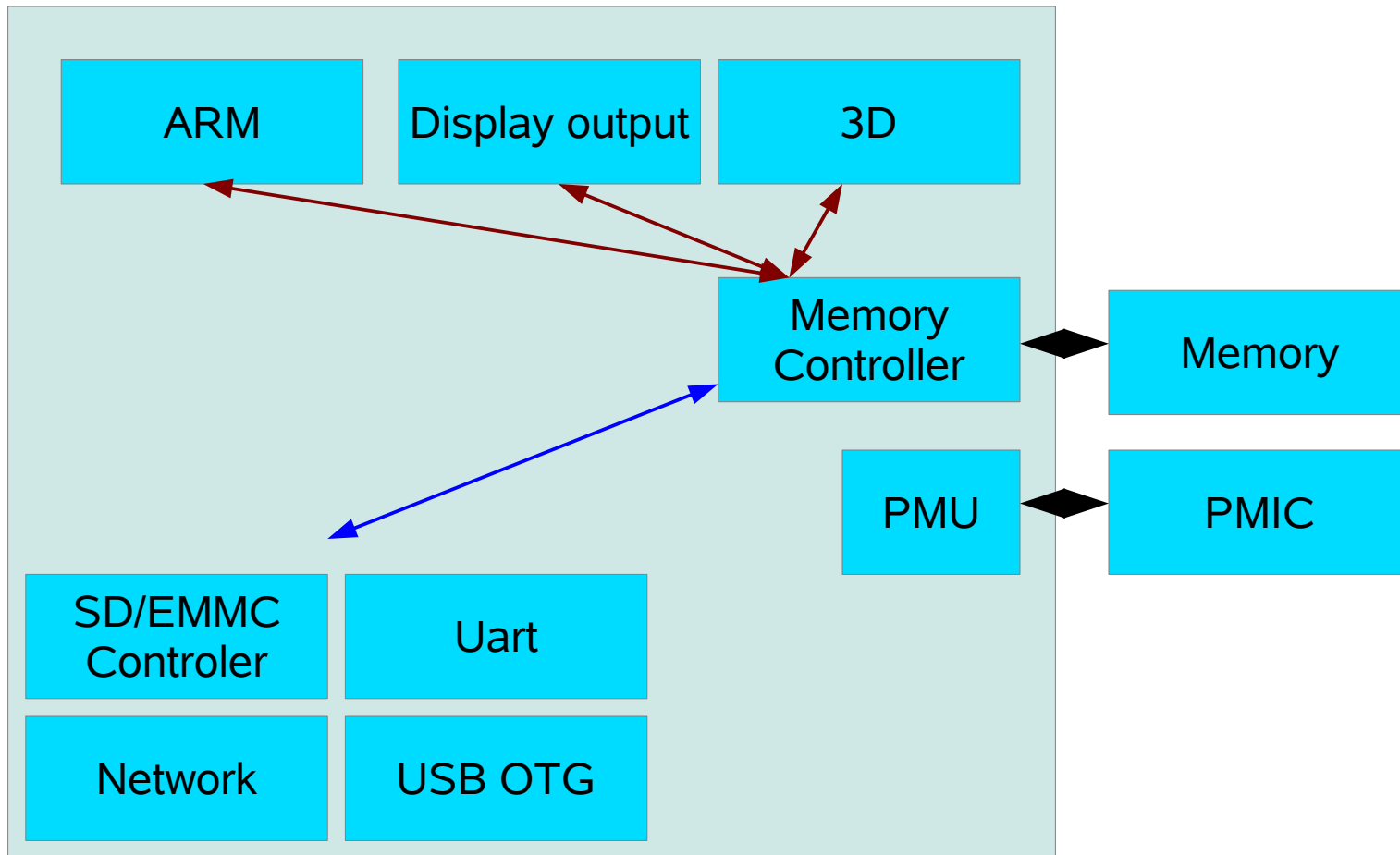
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Open source on embedded device

- Thanks to CyanogenMod, XMBC, XDA
- Unbrickable
- Open and Standard hardware
- Fexible
 - Varies display device support
 - Multi-purpose GPIO. GPIO configuration file.

Open source on arm soc

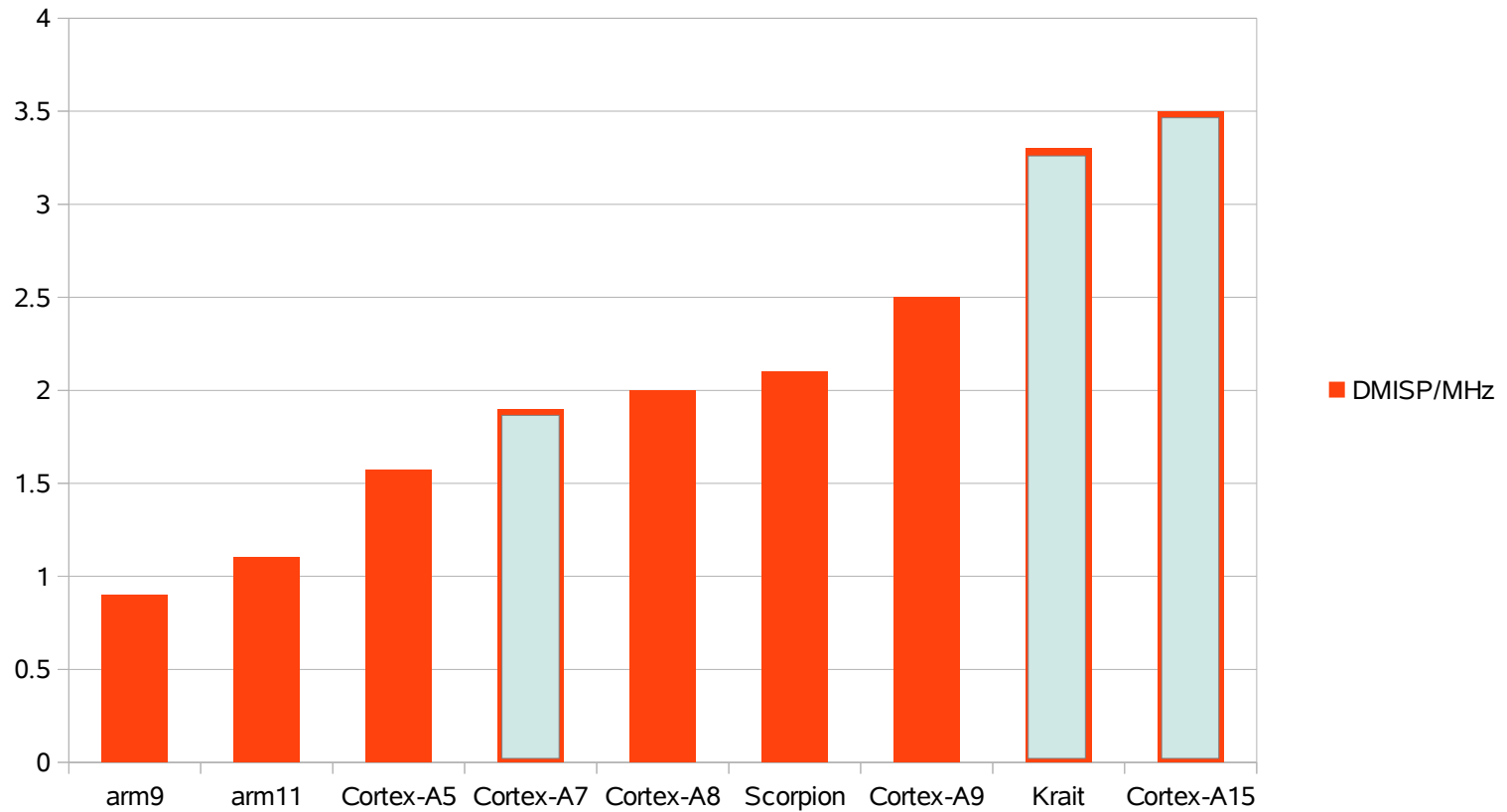


- Arm processor
- Display adaptor
 - 3D: arm mali
 - Output: hdmi, vga, AV, YPbPr
- “hard disk”: sd, emmc
- Uart: 8250 or 16650 compatability.

Compare with ARM and X86

•	ARM	INTEL	MIPS
name	Cortex	Pentium	
pipeline	Supperscaler	Supperscaler	?
SIMD multimedia	NEON	MMX, SSE, 3D NOW	ASE
Data width	64bit	64bit	
Smaller code size	Thumb-2		microMIPS

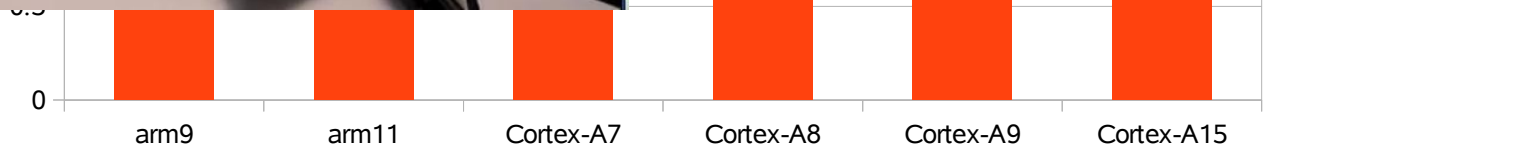
Arm processor Performance Comparison



Arm processor Performance Comparison



Arm11
25\$ raspberry pi

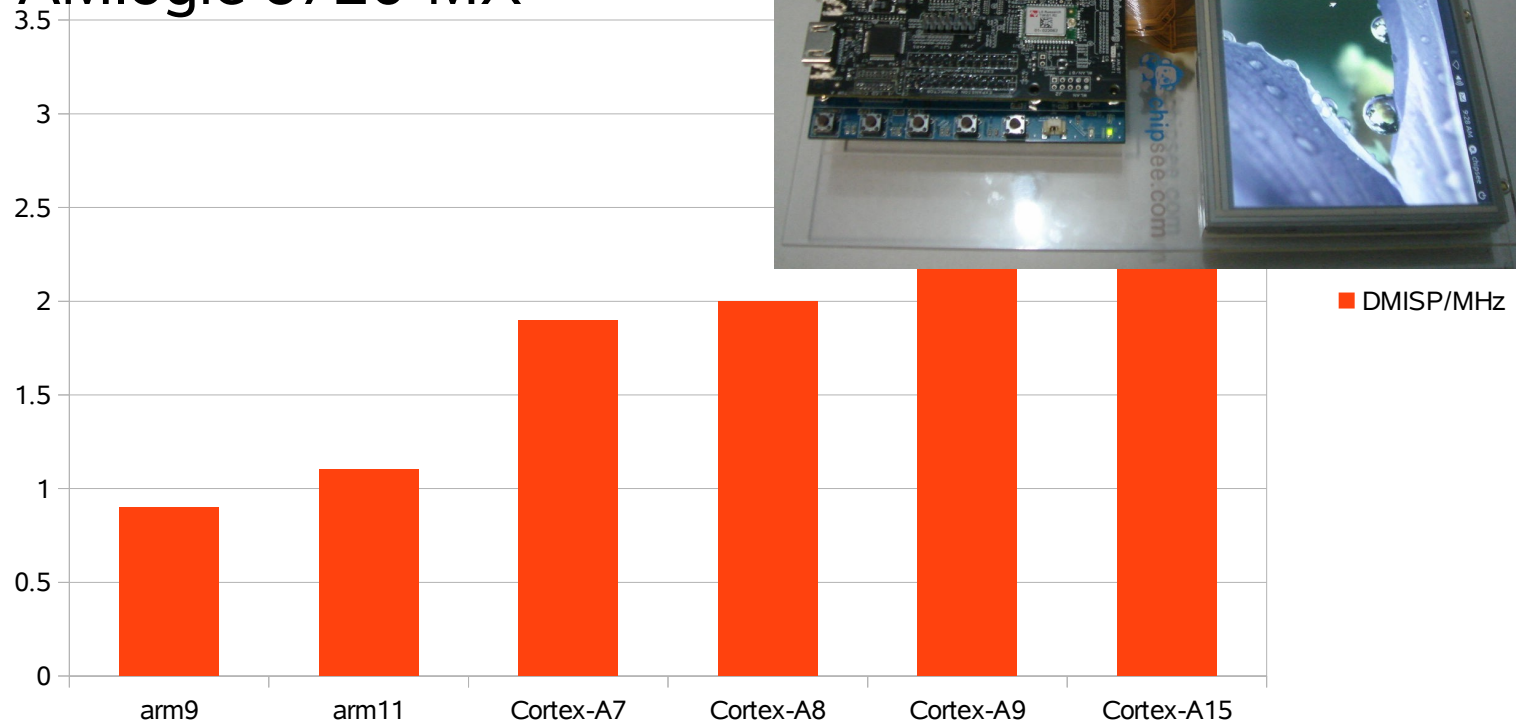


Arm processor Performance Comparison

Cortex-A9

Randa board: TI OMAP4

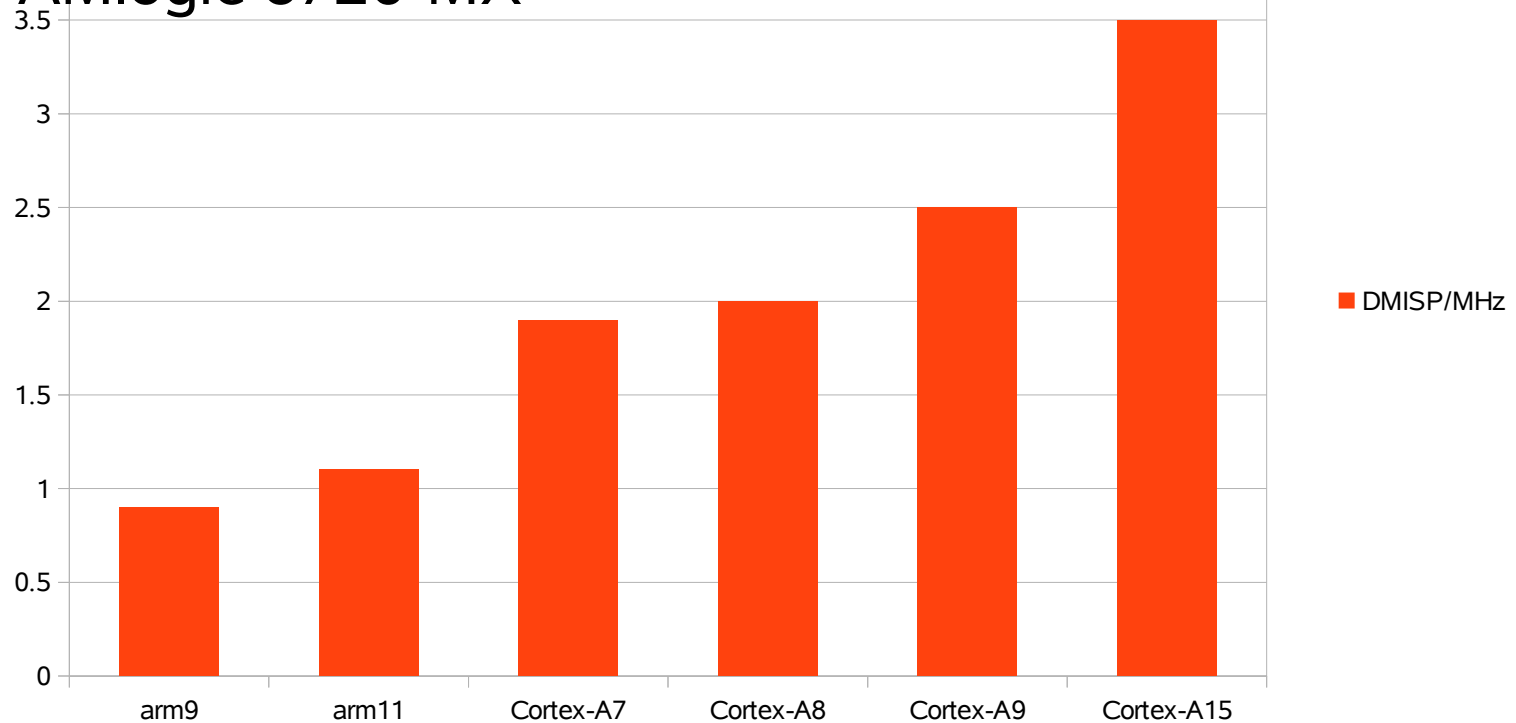
AMlogic 8726-MX



Arm processor Performance Comparison

Cortex-A8

beagle board: TI OMAP3: low frequency, 140\$
AMlogic 8726-MX



- bootloader(specific boot and u-boot)

-

-

	kernel	rootfs
	sdx1	sdx2

-

-

- Kernel and configuration(flexible)

Display adaptor(Display output + 3D acceleration)

- Arm Mali:
 - Samsung, Rockchip, Allwinner.
 - Partial Open source
- Imagination PowerVR: TI.
- Vivenate GCxx: freescale.
- Geforce: Nvidia
- Adreno: Qualcomm





Corporate Headquarters
Maxfeldstrasse 5
90409 Nuremberg
Germany

+49 911 740 53 0 (Worldwide)
www.suse.com

Join us on:
www.opensuse.org

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