

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**



00:CE:39:B6:5D:B4

G D D

USB DEVICE

SATA

MIC Pin
CVBS IN pin

HMC-G39A01

GRxTx3.3

UART

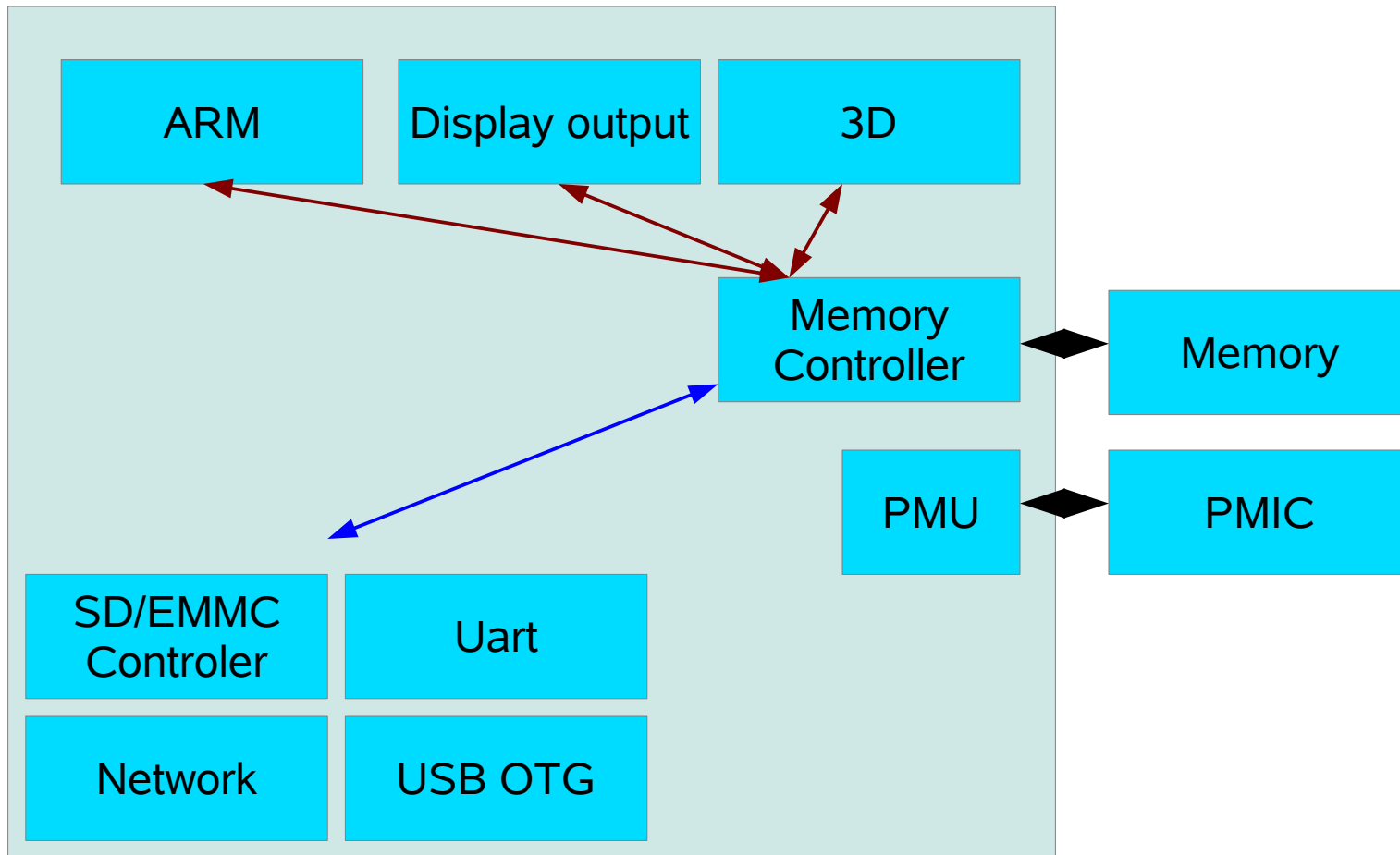
AB10-G32-V1.20-2
WLBMB21-2400120-92
2011-12-20

B

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

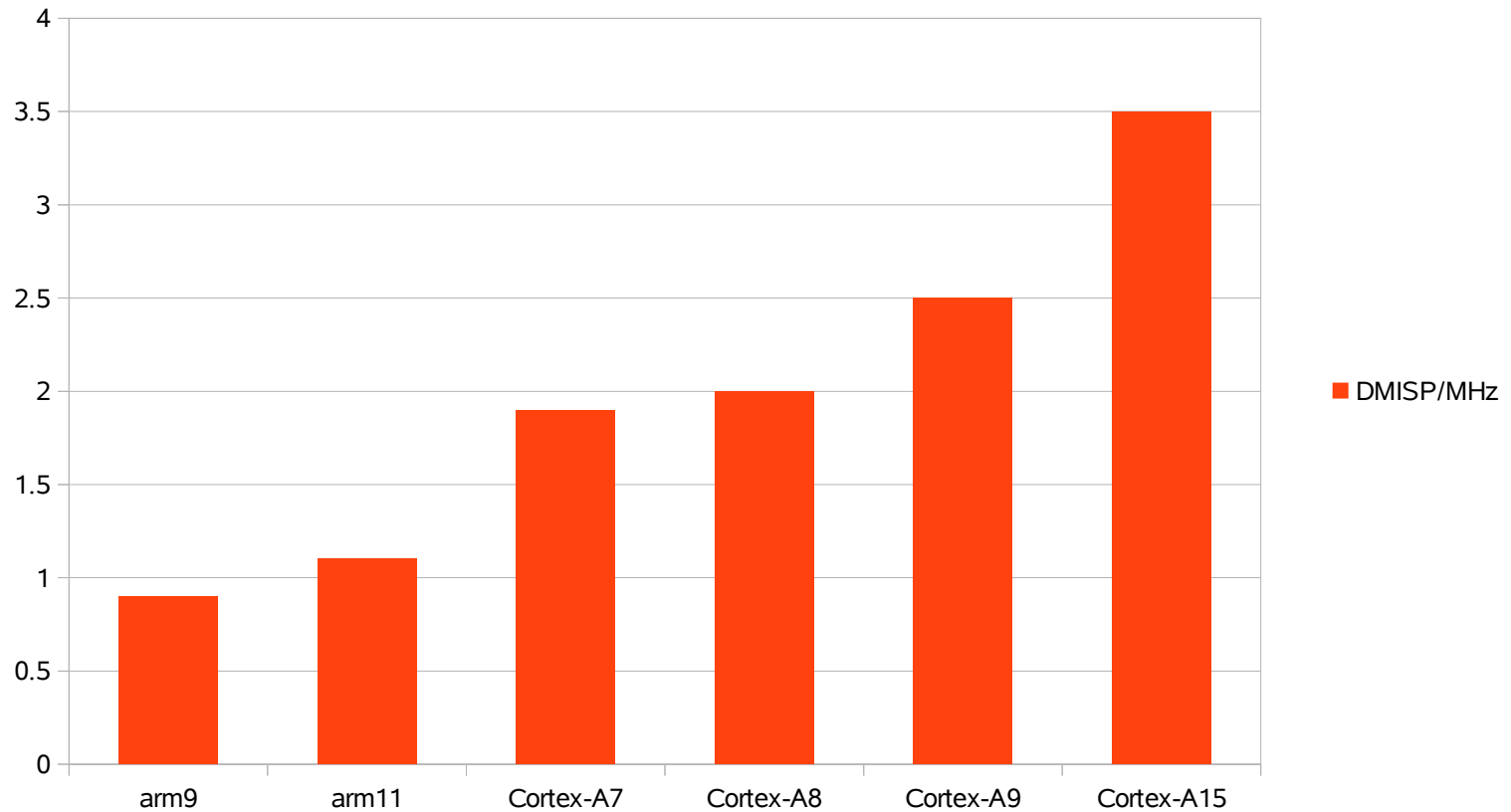


- Arm processor
- Display adaptor
 - 3D: arm mali
 - Output: hdmi, vga, AV, YPbPr
- “hard disk”: sd, emmc
- Uart: 8250 or 16650 compatability.

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

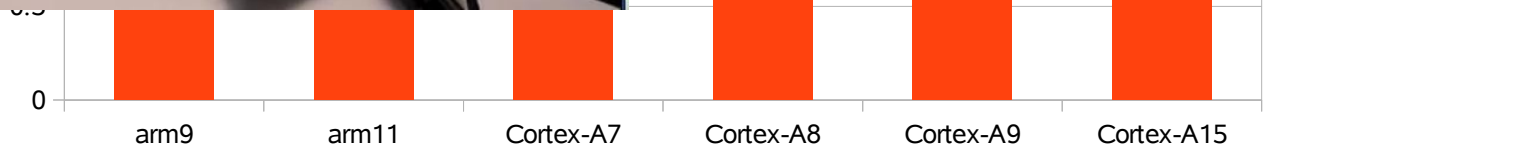
Arm processor Performance Comparison



Arm processor Performance Comparison



Arm11
25\$ raspberry pi

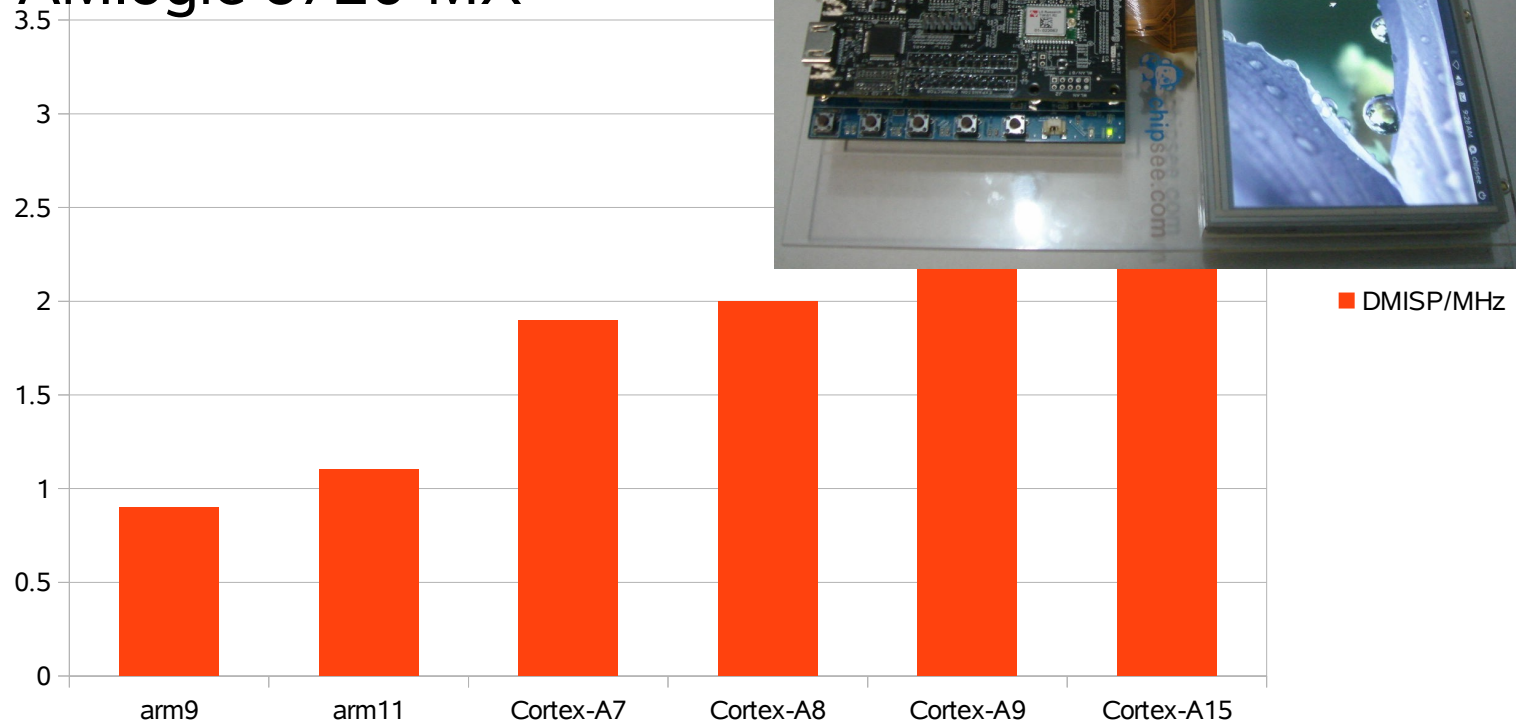


Arm processor Performance Comparison

Cortex-A9

Randa board: TI OMAP4

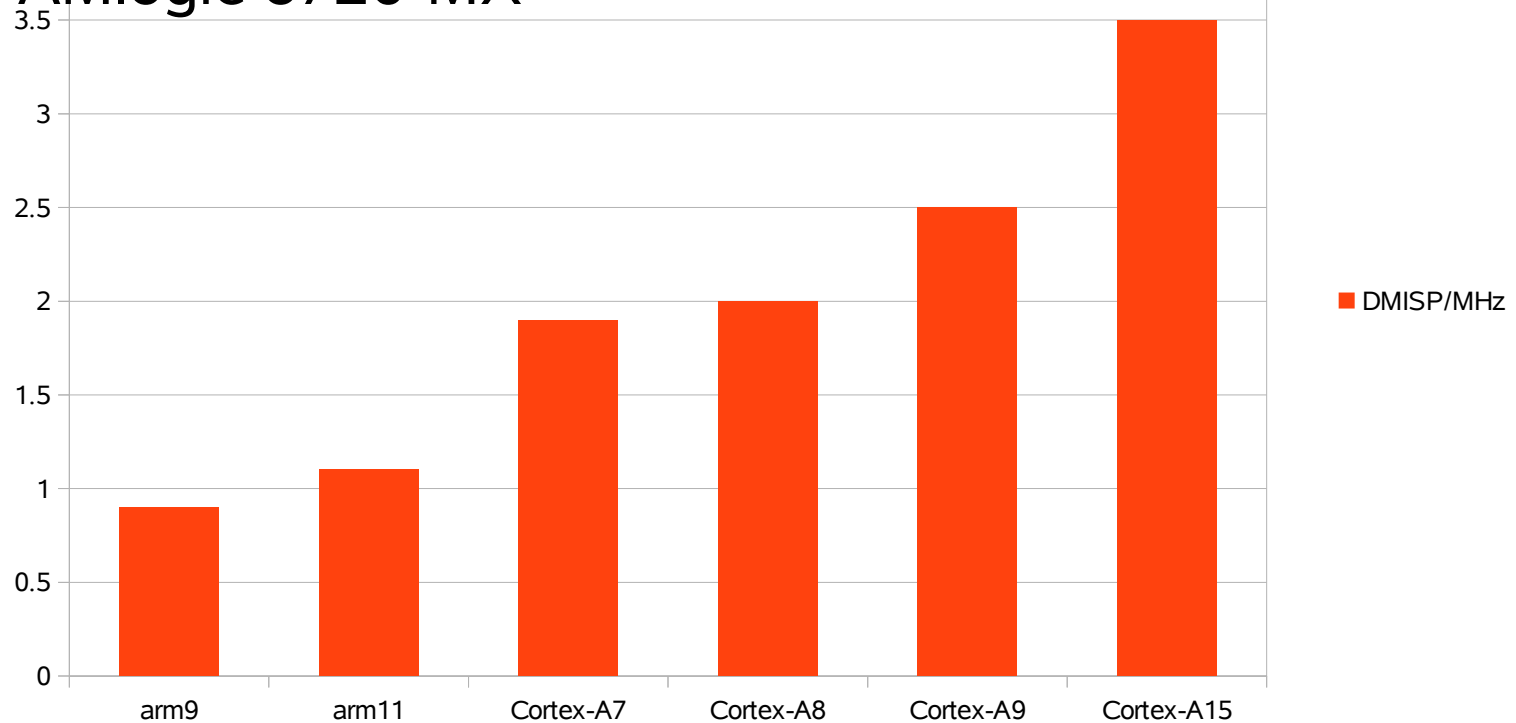
AMlogic 8726-MX



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

Unpublished Work of SUSE. All Rights Reserved.

This work is an unpublished work and contains confidential, proprietary, and trade secret information of SUSE. Access to this work is restricted to SUSE employees who have a need to know to perform tasks within the scope of their assignments. No part of this work may be practiced, performed, copied, distributed, revised, modified, translated, abridged, condensed, expanded, collected, or adapted without the prior written consent of SUSE. Any use or exploitation of this work without authorization could subject the perpetrator to criminal and civil liability.

General Disclaimer

This document is not to be construed as a promise by any participating company to develop, deliver, or market a product. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. SUSE makes no representations or warranties with respect to the contents of this document, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. The development, release, and timing of features or functionality described for SUSE products remains at the sole discretion of SUSE. Further, SUSE reserves the right to revise this document and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes. All SUSE marks referenced in this presentation are trademarks or registered trademarks of Novell, Inc. in the United States and other countries. All third-party trademarks are the property of their respective owners.

