Opensuse arm on Allwinner A10

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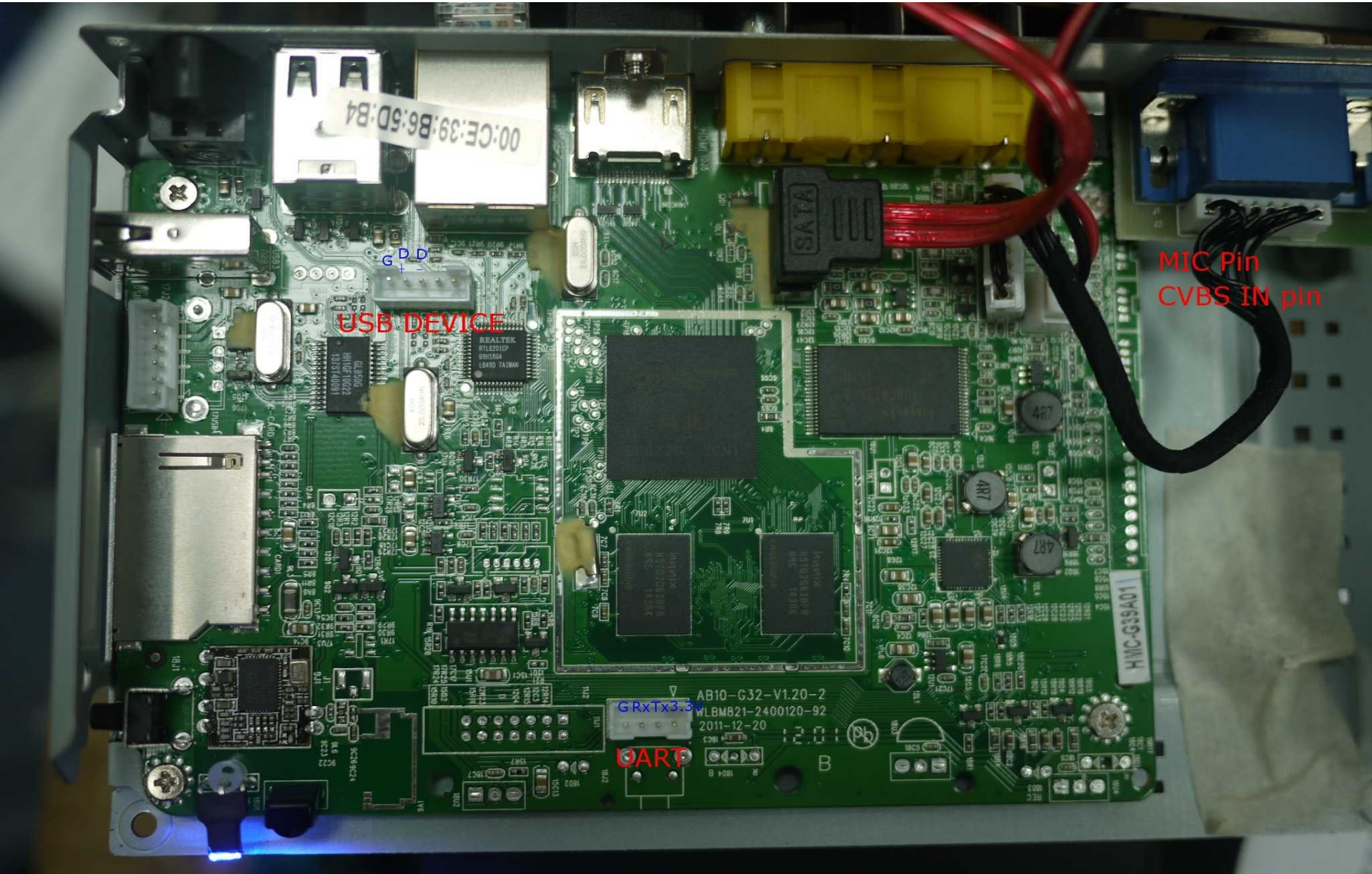
Introduction

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


MeLE

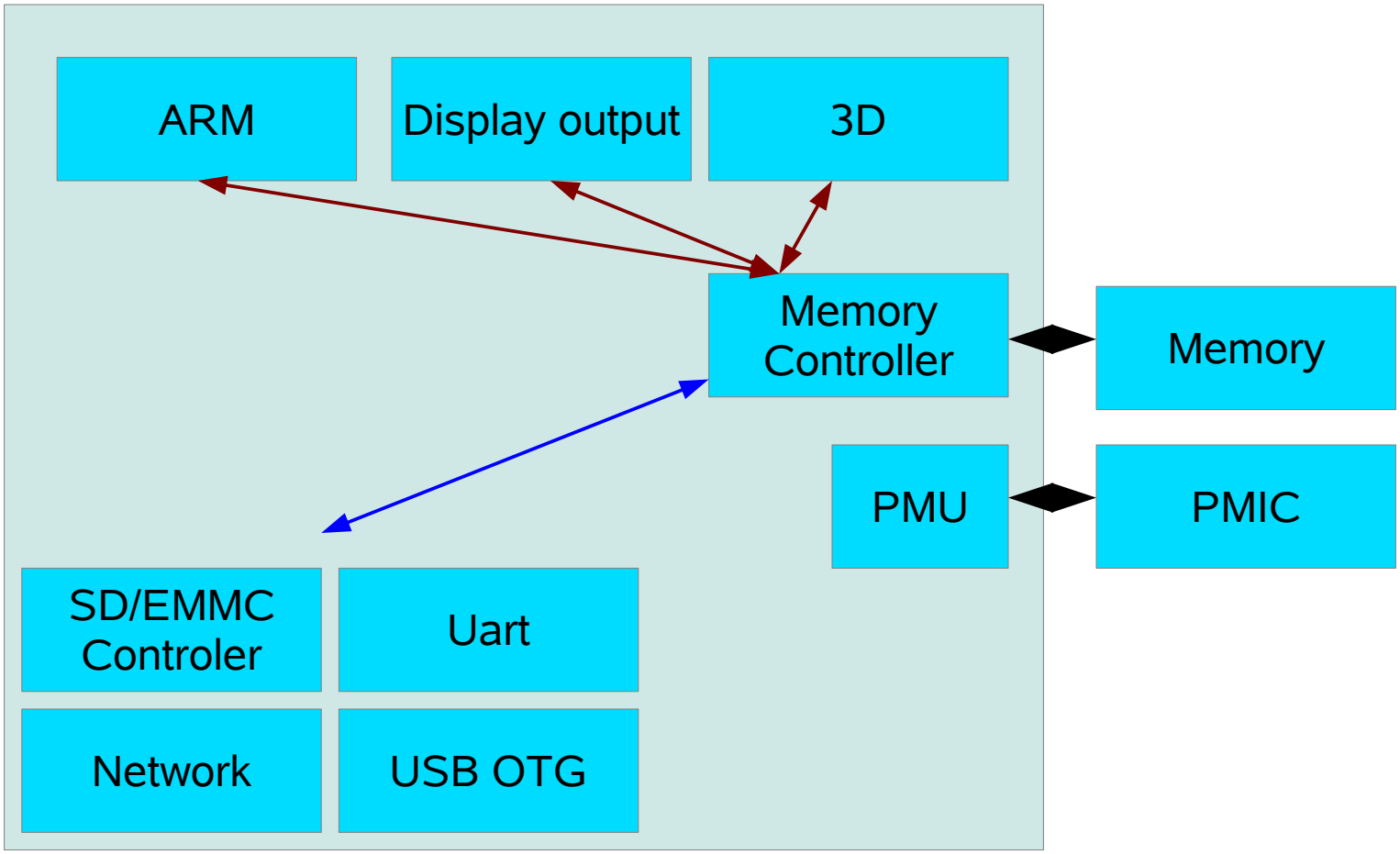

A10


00:CE:39:B6:5D:B4
G D D
+ −
USB DEVICE
REALTEK
RTL8201CP
SATA
MIC Pin
CVBS IN pin
GRxTx3.3V
UART
AB10-G32-V1.20-2
WLBM821-2400120-92
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

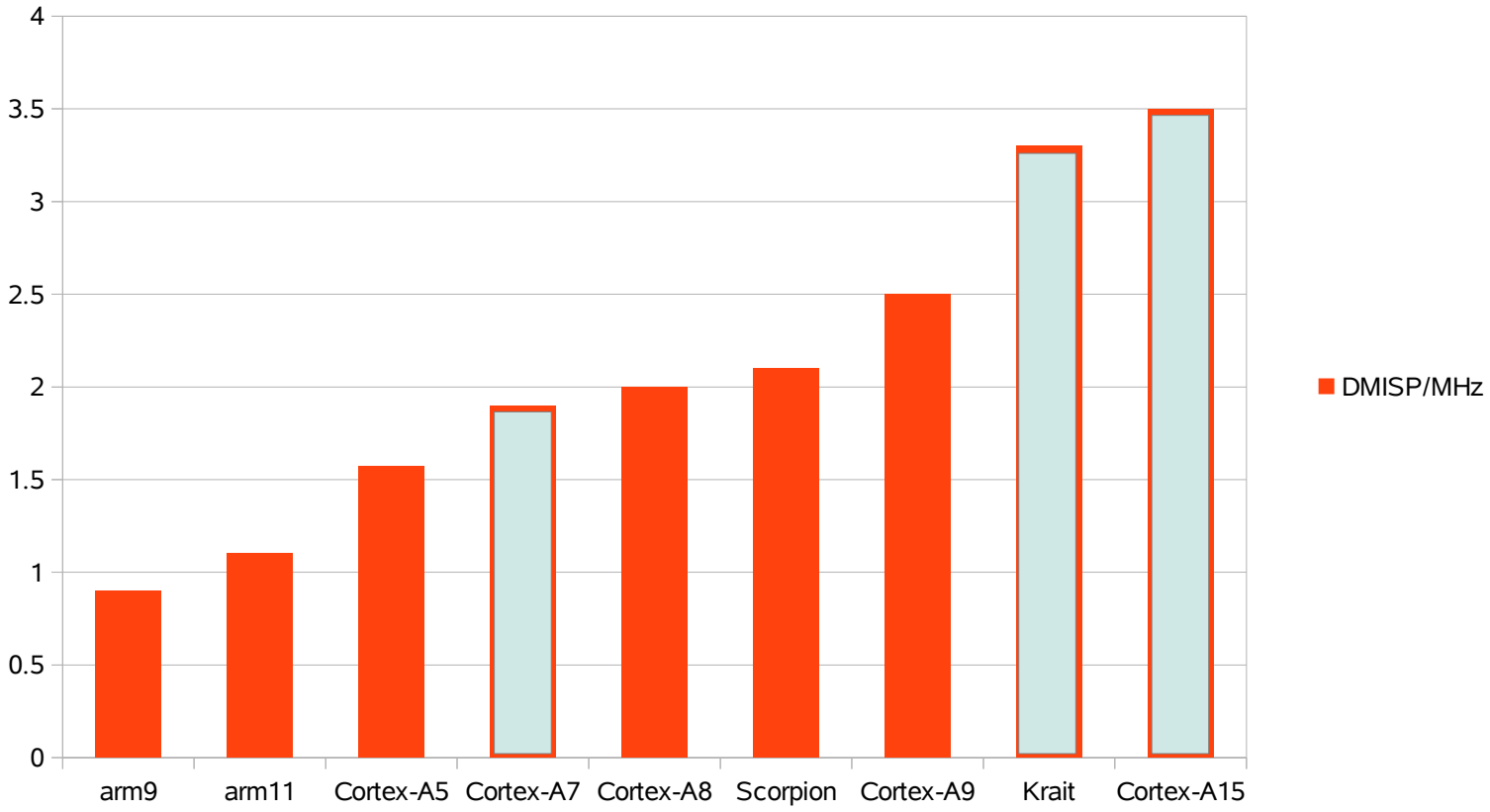


- Arm processor
- Display adaptor
  - 3D: arm mali
  - Output: hdmi, vga, AV, YPbPr
- “hard disk”: sd, emmc
- Uart: 8250 or 16650 compatability.

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

Panda board: TI OMAP4

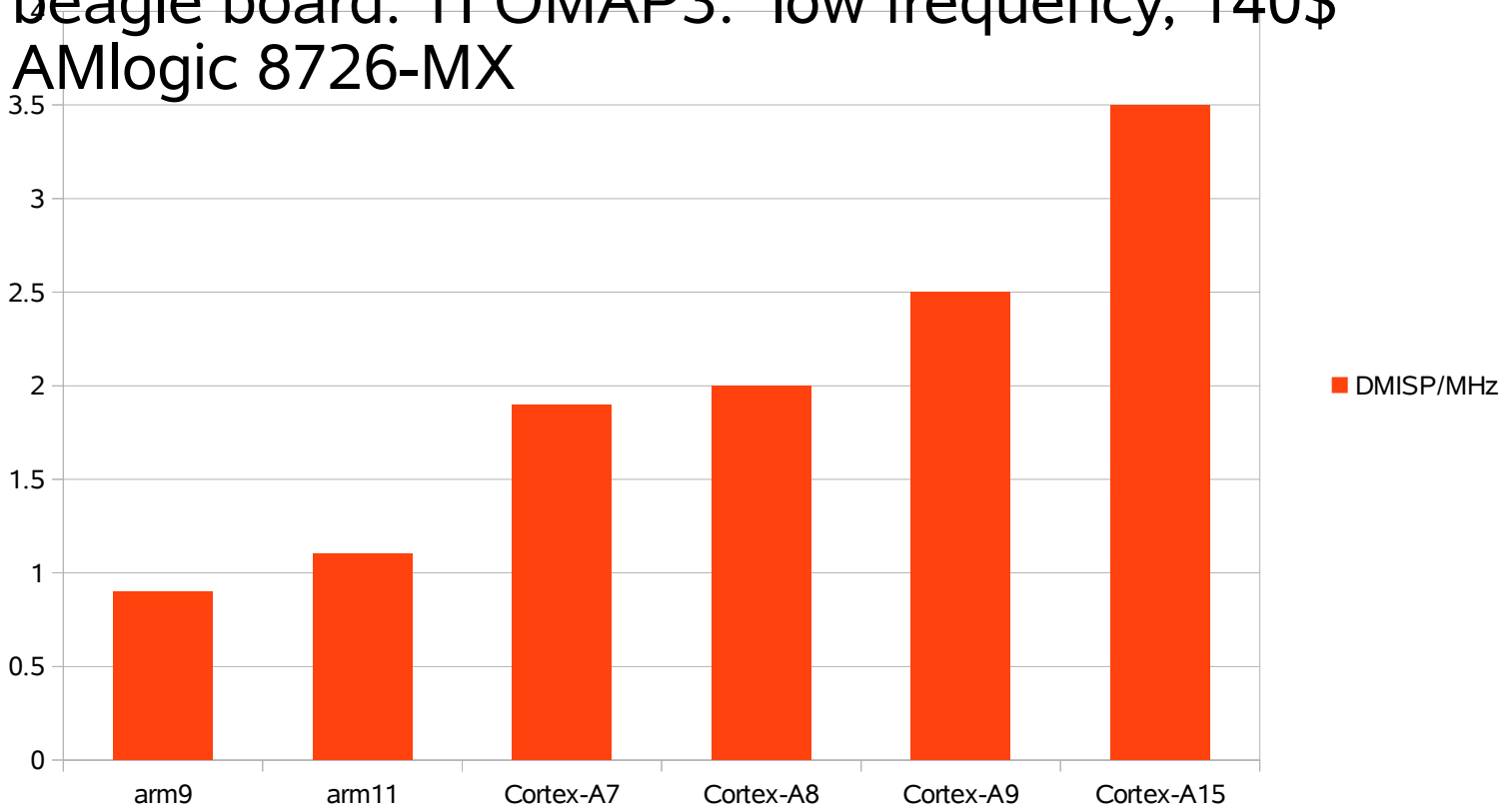
AMlogic 8726-MX

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(fexible)

Display adaptor(Display output + 3D acceleration)

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