

Linux Boards

Peter Babič

Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Net

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue

# Linux boards and their use

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Technical University of Košice, Slovakia  
Computer Modelling, Masters

26.11.2015

# Introduction

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## Introduction

### Boards

Single Board

Computers

Pioneers

Projects

Embedded

Common Boards

GL-Net

### Operating system

Linux

OpenWRT

### The Future

IoT

### Epilogue

What is a Linux board? Where did it come from?



I don't have time for this!

# Single Board Computer

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue



A "single board" computer

# SBC Pioneers

## Linux Boards

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## Introduction

## Boards

Single Board  
Computers

### Pioneers

Projects

Embedded

Common Boards

GL-Inet

## Operating system

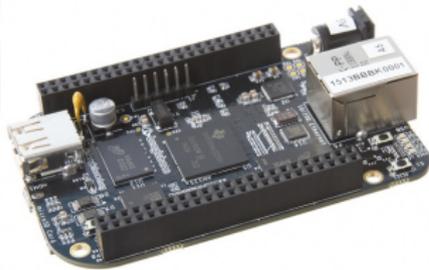
Linux

OpenWRT

## The Future

IoT

## Epilogue



# Why are SBC useful?

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

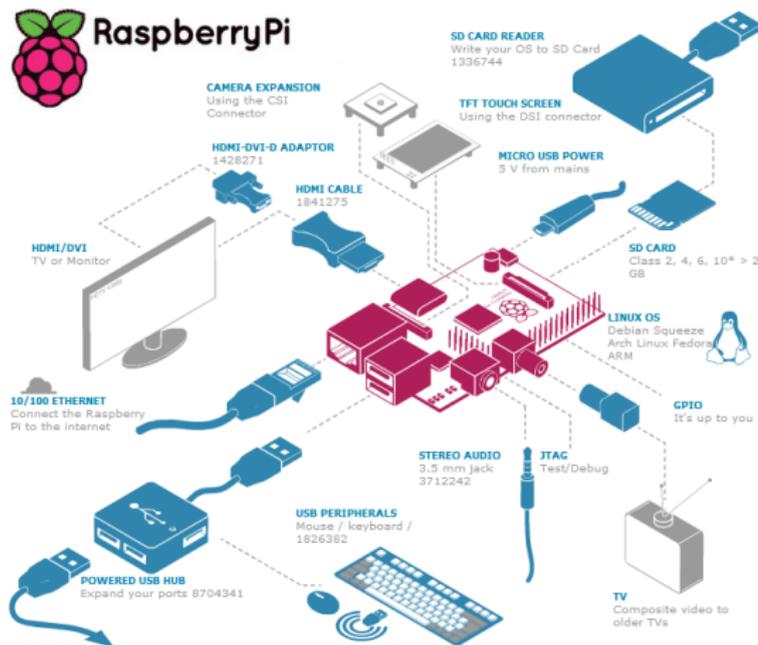
Linux

OpenWRT

The Future

IoT

Epilogue



Raspberry Pi with a range of available peripherals

# Done by others

## Linux Boards

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## Introduction

### Boards

Single Board  
Computers

Pioneers

**Projects**

Embedded

Common Boards

GL-Inet

### Operating system

Linux

OpenWRT

### The Future

IoT

### Epilogue

- CNC and 3D printer controllers
- Clusters, parallel computers
- Handheld game devices
- Computer console emulators (MAME)
- Vending machine controllers
- Various robots
- Bitcoin miners
- Educational tools

# Embedded Computing

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

**Embedded**

Common Boards

GL-Inet

Operating  
system

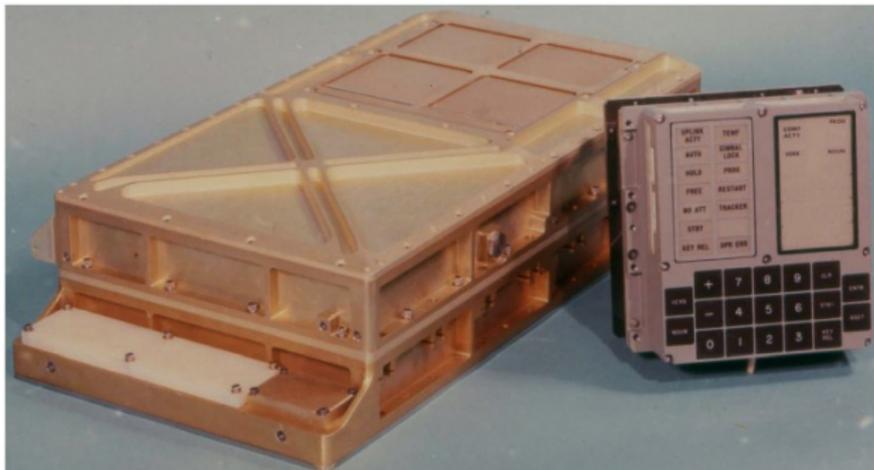
Linux

OpenWRT

The Future

IoT

Epilogue



Apollo Guidance Computer and Numeric Display with a Keyboard

# Cheap and Common Embedded Boards

## Linux Boards

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## Introduction

## Boards

Single Board  
Computers

Pioneers

Projects

Embedded

## Common Boards

GL-Inet

## Operating system

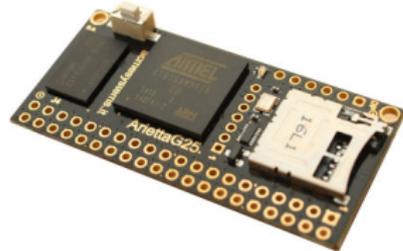
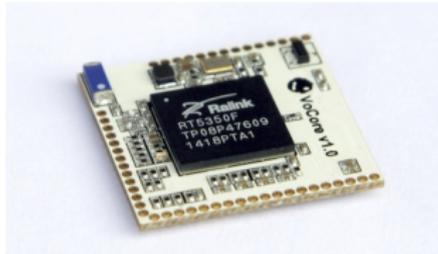
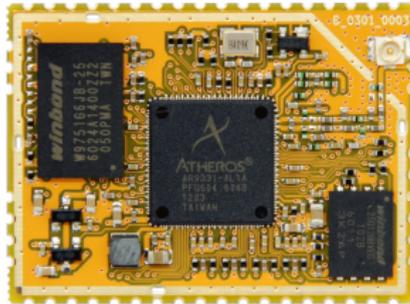
Linux

OpenWRT

## The Future

IoT

## Epilogue



# GL-Inet Smart Router

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Introduction

Boards

Single Board

Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue



The personal favorite number 1

# TP-Link WR703n

Linux Boards

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue



The predecessor of a GL.Inet

# Why Linux?

Linux Boards

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Net

Operating  
system

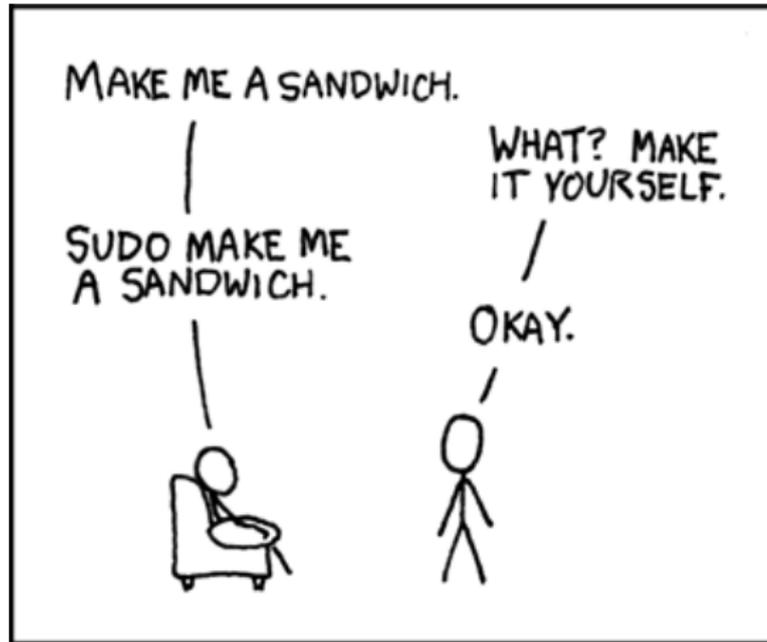
Linux

OpenWRT

The Future

IoT

Epilogue



Randall Munroe knew it before

# The Linux Ecosystem

Linux Boards

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue



Marketing says: IT'S ALL FREE!

# OpenWRT

Linux Boards

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Introduction

Boards

Single Board

Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

Linux

**OpenWRT**

The Future

IoT

Epilogue

## Question

What can you do with a full blown Linux, given only 16MB, 8MB or even 4MB RAM or Flash is available?



BusyBox (+ uClibc)

# Where is it all going?

Linux Boards

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue



**KEEP  
CALM  
you have been  
hacked**

# Internet of Things

Linux Boards

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards  
GL-Inet

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue

## Definition

A network of physical objects or “things” embedded with electronics, software, sensors and connectivity to enable it to achieve greater value and service by **exchanging data with the manufacturer**, operator and/or other connected devices.

# Epilogue

Linux Boards

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Introduction

Boards

Single Board  
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Inet

Operating  
system

Linux

OpenWRT

The Future

IoT

Epilogue

Thank you

Peter Babič