嵌入式系统联谊会
www.esbf.org.cn

ARM物联网课程开发介绍

—帮助今日学生，掌握未来科技

陈炜 博士
ARM 亚太区大学计划经理
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ARM的第一天:“We’re going to be the Global Standard”

- ARM Founded 27th Nov 1990
- In a barn with nothing except some energy, experience and strong belief
- 12 engineers and a CEO
- Goal to design low power embedded 32bit processors, but to never build them

- Day Now:
- ~3,500 employees;
- ~60B shipments;
- ……

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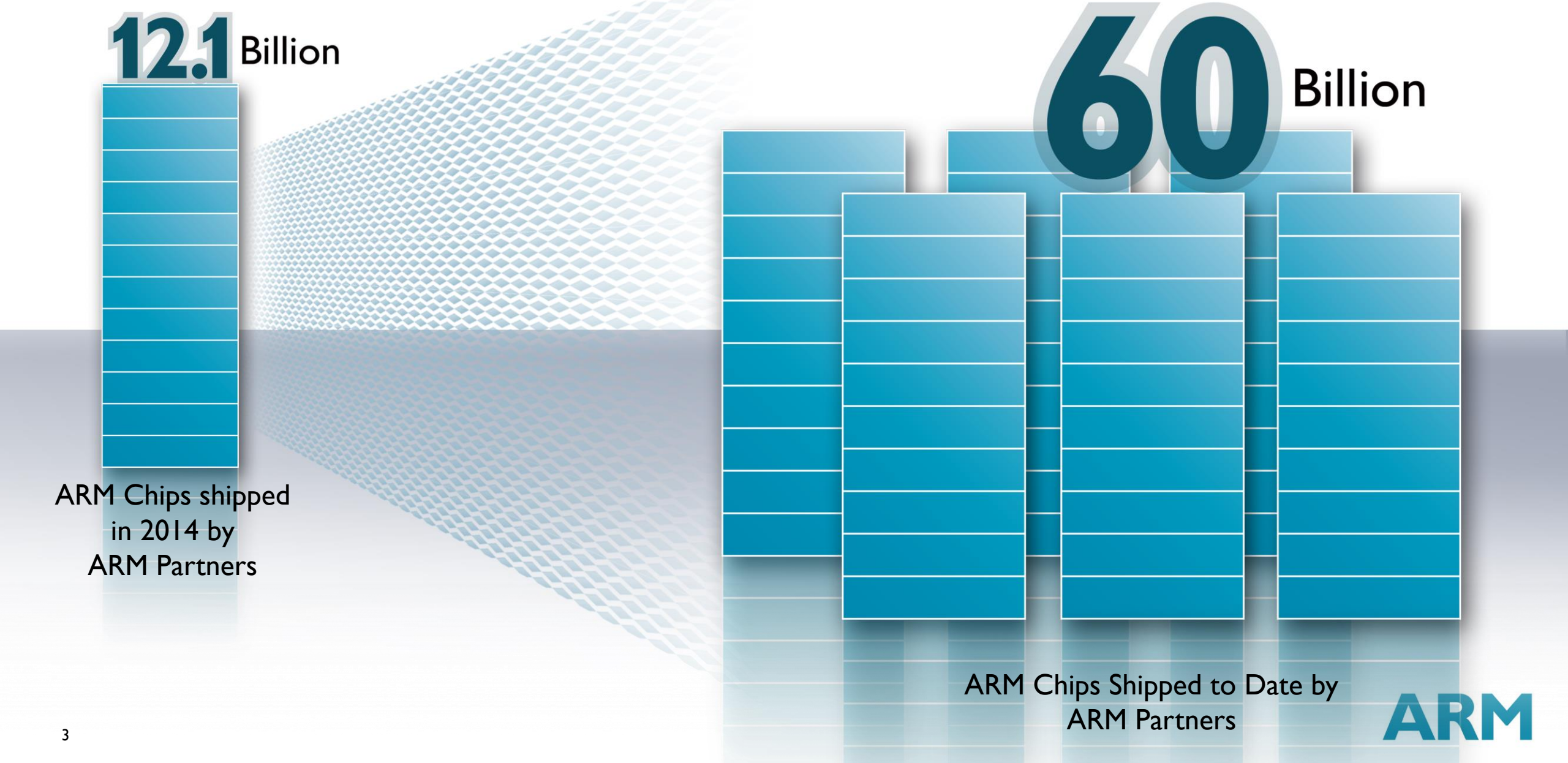
ARM的第二十五年： Building for the Long Term



ARM的愿景： Enabling Innovation Across the Entire Industry

Leading in wearables and the IoT

>70% of smart TVs and >95% of portable game consoles

Enabling the transformation of the network infrastructure and data center

First ARM-based servers now shipping

>80% of digital cameras

>95% of smartphones and tablets

Driving smart energy, automotive, home networking

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IOT – Internet of Things 下一个浪潮

智慧城市:

- Smart Parking
- Street Lighting
- Smart Roads
- Congestion control
- Noise reduction
- Air Pollution
- Waste management
- Water leakage
- Smart meters / Grid

智慧星球:

- Environmental Sensing
- Water Quality
- Global warming
- Forest fire Detection
- Irrigation / Farming
- Resource preservation

工业互联	可穿戴	智能医疗	智能家居	车联网	企业IoT
Logistics Tracking Smart Motors	Quantified self Context awareness Assisted shopping	Remote monitoring Smart medication Diagnosis	Connected appliances Automation Personalization	Car to car Car to highway Self driving cars	Access control Asset tracking Smart facilities

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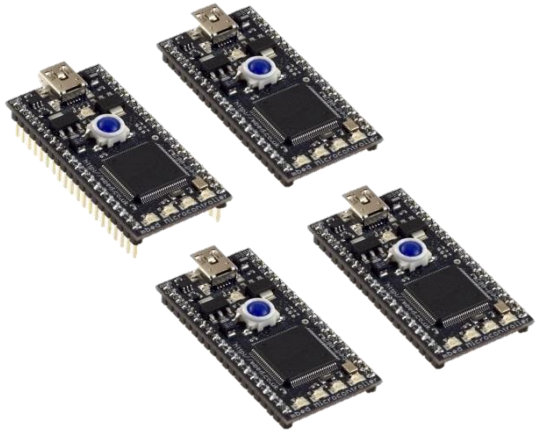
ARM课程创新

打造实用型实验课程体系(Lab-in-a-Box)

硬件 + 软件 + 教材



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课件共享

合作伙伴	高效嵌入式系统设计	快速嵌入式系统设计	数字信号处理设计 (DSP)	操作系统设计 (OS)	片上系统设计 (SoC)	高级片上系统设计 (SoC)	物联网 (IoT)
Freescale 飞思卡尔	FRDM-KL25Z 版本	FRDM-KL25Z 版本	FRDM-K64F 版本	FRDM-KL25Z 版本			
STMicroelectronics 意法半导体	Discovery-F4 版本	Nucleo-F401RE 版本	Discovery-F4 版本	Discovery-F4 版本			Nucleo-F401RE 版本
NXP 恩智浦	LPC4088 版本 LPC1115 版本	LPC4088 版本 LPC1768 版本	LPC4088 版本	LPC4088 版本			
Cypress 赛普拉斯	PSoC4 版本						
Xilinx 赛灵思					Nexys3/4 版本	Zynq (Zybo) 版本	
Nordic Semiconductor							nRF51288 版本

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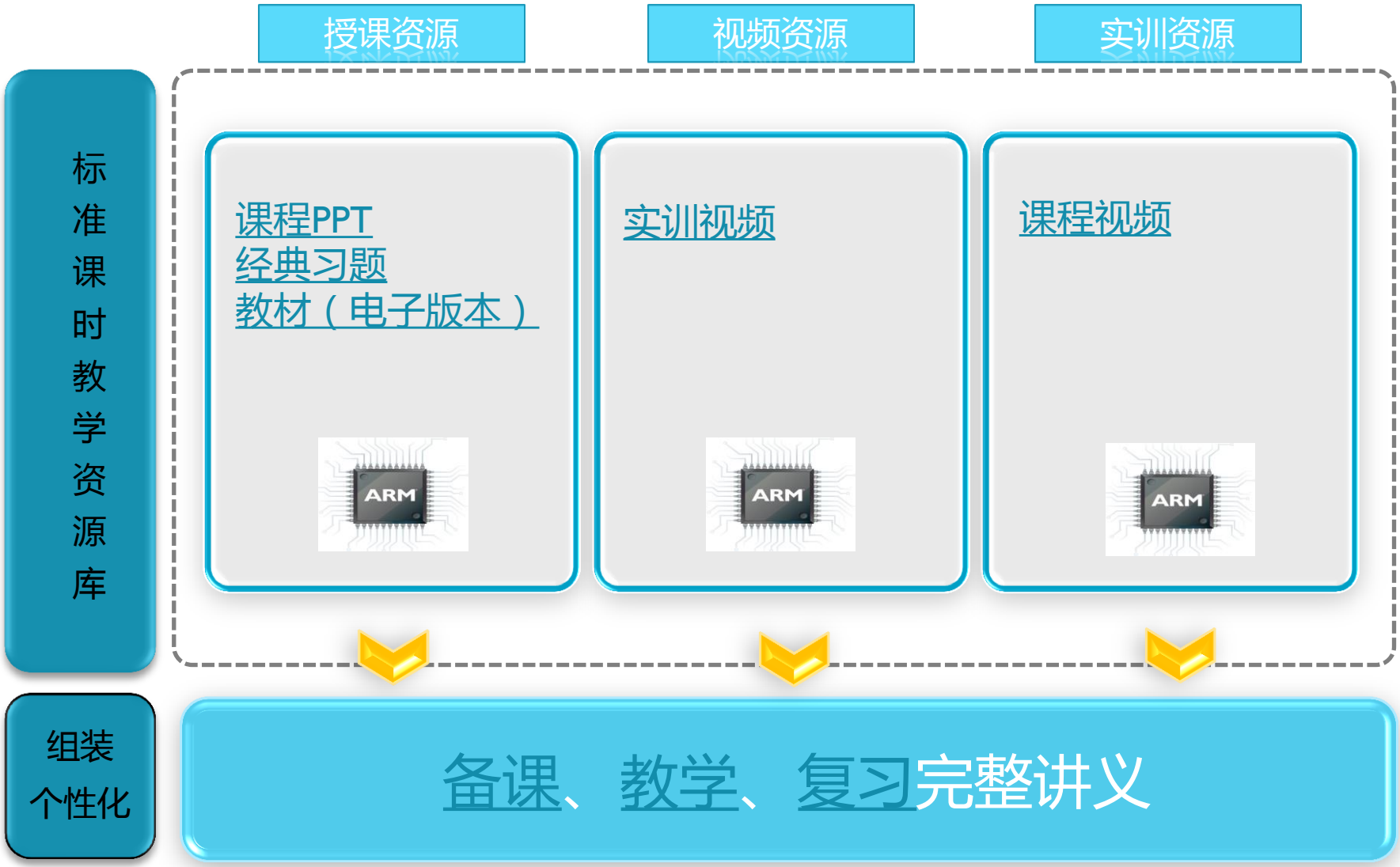
教材开放


授课资源
视频资源
实训资源
标准课时教学资源库
课程PPT
经典习题
教材（电子版本）
实训视频
课程视频
ARM
ARM
ARM
组装个性化
备课、教学、复习完整讲义

移动互联/物联网课程安排

Mobile Computing

ARM® CORTEX®
Processor Technology

ARM® Cortex-A

Little Devices and Little Data

ARM® CORTEX®
Processor Technology

ARM Cortex-M

Devices + Applications + Big Data

Internet of Things

IEEE 802.15.4

Wi Fi

Bluetooth® SMART

LTE

ZigBee

3G

Standards that enable INTERNET scale

ARM® MBED™

IoT Device Development

1,000,000s

Platform

Web and community based development

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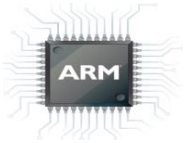
Key Contents of IOT - Nordic



Segments	Modules
Embedded Computing	ARM based embedded systems
	ARM Cortex-M processor Architecture
	Interrupt and Power Consumption
Mobile Computing	ARMv7 Architecture
	ARM Cortex-A9 processors
	Smartphones and Appcessory Programming
Network	Bluetooth Smart Connectivity
	RF Design Basics
	nRF51-series SoC Architecture
Community based Development	Embedded programing using mbed
	High-level Programming using mbed SDK
	System Integration

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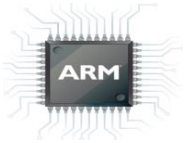
Key Contents of IOT – ST Nucleo



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	Smartphones and Appcessory Programming
Network	Bluetooth Smart Connectivity
	High-level Programming using mbed SDK
	BlueNRG-series SoC Architecture

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“如果我看得更远的话，那是因为我站在巨人的肩膀上”
(If I have seen further it is by standing on ye shoulders of Giants)。

期待合作，共创未来！

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