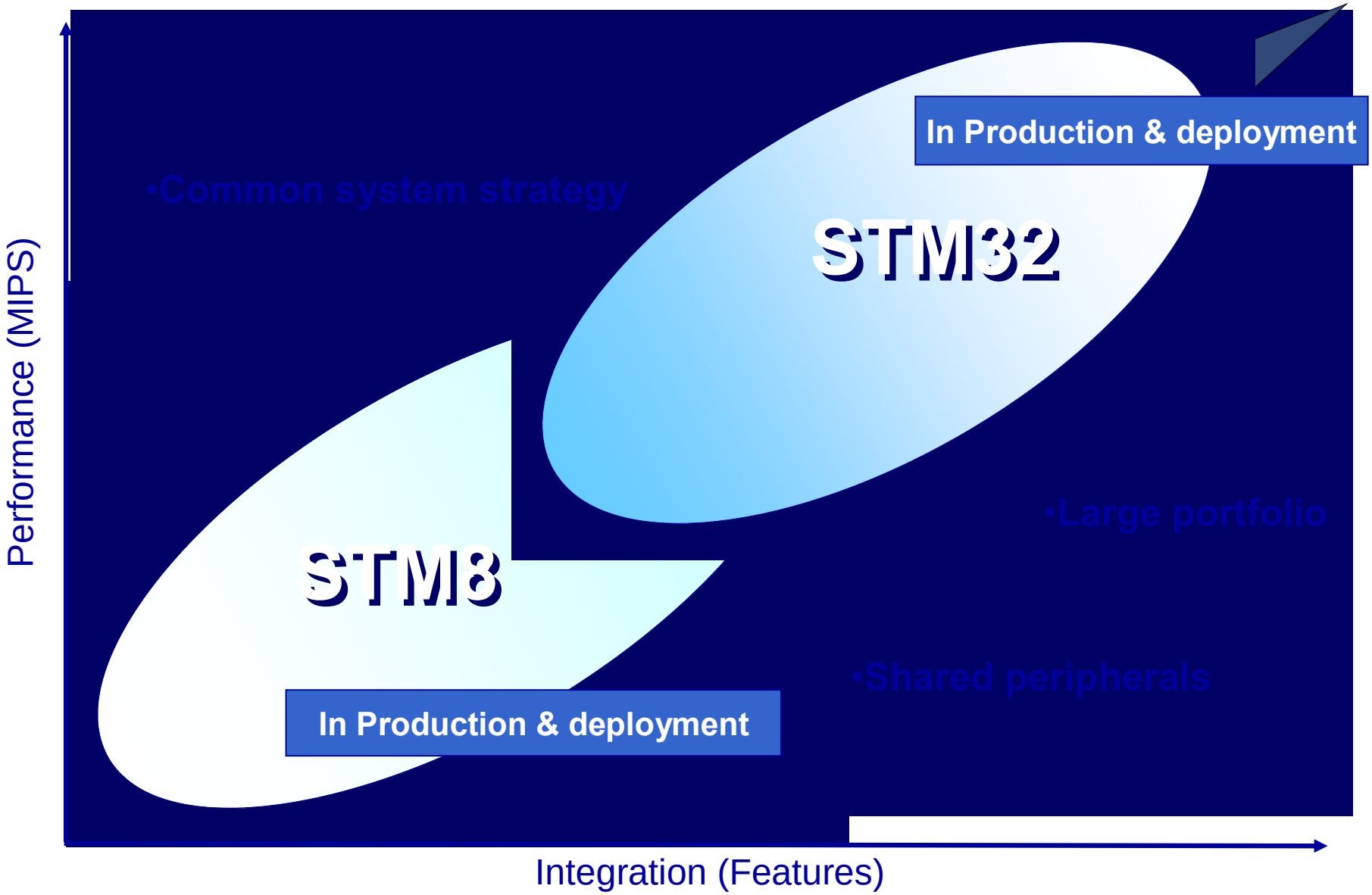
STM32 ARM® Cortex™-M3 Based Product Introduction

STM32 Releasing your creativity

Agenda

- STM32 General Purpose
  - ARM Cortex M3
- STM32 Connectivity Line
  - Ethernet, USB OTG, 2 x CAN
- STM32 Roadmap

8-32bit Continuum



STM32 ARM® Cortex™-M3 Based Product Introduction

Microcontroller

Division of MMS Group

STMicroelectronics Builds Leadership with STM32 Family

- **ST announced its first 32K-128K Cortex-M3 based 32-bit MCU STM32 family in June 07**
  - **More than 200 global design seminars, More than 16,000 tools sold Worldwide**
  - **Fast ramp of design-ins**
    - **More than 3000 customers have chosen STM32**

STM32, An MCU Without Constraints

- **High performance "Cortex-M3" core from ARM**
  - ***1.25 Dhrystone MIPS/MHz*** vs 0.95 for ARM7TDMI
- **First-class peripherals**
  - 1µs triple ***12-bit ADC***, 4.5Mbit/s USART, 18Mbit/s SPI, ***SDIO, I2S, DAC, FSMC***
- **Low power / Low voltage**
  - ***As low as to 27mA at 72MHz*** and down to ***1.4µA in backup mode***
  - ***Single supply 2.0V to 3.6V***
- **Maximum integration**
  - Reset circuitry, LVD, voltage regulator, accurate RC oscillator

- **Simple architecture and easy-to-use tools**
  - From ST, IAR, Keil, Micrium, ThreadX, Greenhills, DataI/O, etc
- **Accessible**
  - ***Access Line*** 256KB Flash, 64 pins, resale price ***: $3.72 (10Ku)***
  - ***Performance Line*** 512KB, 144 pins, resale price ***: $6.51 (10Ku)***
  - ***Access Line*** 16KB Flash, 36 pins, resale price ***: $1.68 (10Ku)***

STM32F10x : product lines

All lines include:

- Multiple communication peripherals Up to 5 x USART, 3xSPI, 2xI²C
- ETM*
- FSMC*
- 2-channel x 12-bit DAC*
- Up to 6 x 16-bit Timers
- Main Osc 4-16MHz
- Internal 8 MHz RC and 40 kHz RC
- Real Time Clock with Battery domain & 32KHz ext osc
- 2 x Watchdogs
- Reset circuitry and Brown Out Warning
- Up to 12 DMA cnls

+

Performance Line: STM32F103

72MHz CPU	Up to 512 KB Flash / 64KB SRAM	2/3x12-bit ADC (1µs) Temp Sensor	USB–FS Device	SDIO*	I2S*	CAN	PWM timer

USB Access Line: STM32F102

48MHz CPU	Up to 128KB Flash / 16KB SRAM	1x12-bit ADC (1µs) Temp sensor	USB–FS Device

Access Line: STM32F101

36MHz CPU	Up to 512KB Flash / 48KB SRAM	1x12-bit ADC (1µs) Temp sensor

* Only with 256KB, 384KB, or 512KB devices

STM32 connectivity line
ETHERNET , USB OTG, 2 X CAN

Both lines include up

- Up to 256KB FLASH
- Multiple com. Peripherals
  USART, SPI, I2C
- Multiple 16-bit TIMERS
- Dual DAC
- ETM
- Main Osc 3-16MHz
- Internal 8 MHz RC and 40 kHz RC
- Real Time Clock
- 2 x Watchdogs
- Reset circuitry
- 2 x 12-bit ADC 1µs Temp sensor
- PWM Timer
- Up to 12 channels DMA
- 80% GPIO ratio

Samples : June 09
More info page 34

STM32F107

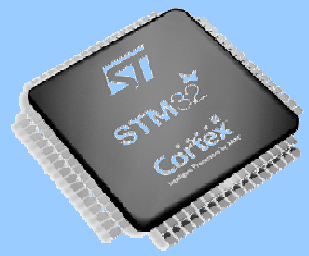
STM32F105

STM32 Portfolio

Performance Line
USB Access Line
Access Line

- **72MHz Cortex™-M3 CPU**
  - 4KB to 64KB SRAM
  - Three lines
  - **FULL compatibility** across 60 part numbers

Flash Size (bytes)	36 pins QFN	48 pins LQFP	64 pins LQFP	100 pins LQFP/BGA*	144 pins LQFP/BGA*
512 K			STM32F103RE STM32F101RE	STM32F103VE STM32F101VE	STM32F103ZE STM32F101ZE
384 K			STM32F103RD STM32F101RD	STM32F103VD STM32F101VD	STM32F103ZD STM32F101ZD
256 K			STM32F103RC STM32F101RC	STM32F103VC STM32F101VC	STM32F103ZC STM32F101ZC
128 K		STM32F103CB STM32F102CB STM32F101CB	STM32F103RB STM32F102RB STM32F101RB	STM32F103VB STM32F101VB	
64 K	STM32F103T8 STM32F101T8	STM32F103C8 STM32F102C8 STM32F101C8	STM32F103R8 STM32F102R8 STM32F101R8	STM32F103V8 STM32F101V8	
32 K	STM32F103T6 STM32F101T6	STM32F103C6 STM32F102C6 STM32F101C6	STM32F103R6 STM32F102R6 STM32F101R6		
16 K	STM32F103T4 STM32F101T4	STM32F103C4 STM32F102C4 STM32F101C4	STM32F103R4 STM32F102R4 STM32F101R4		

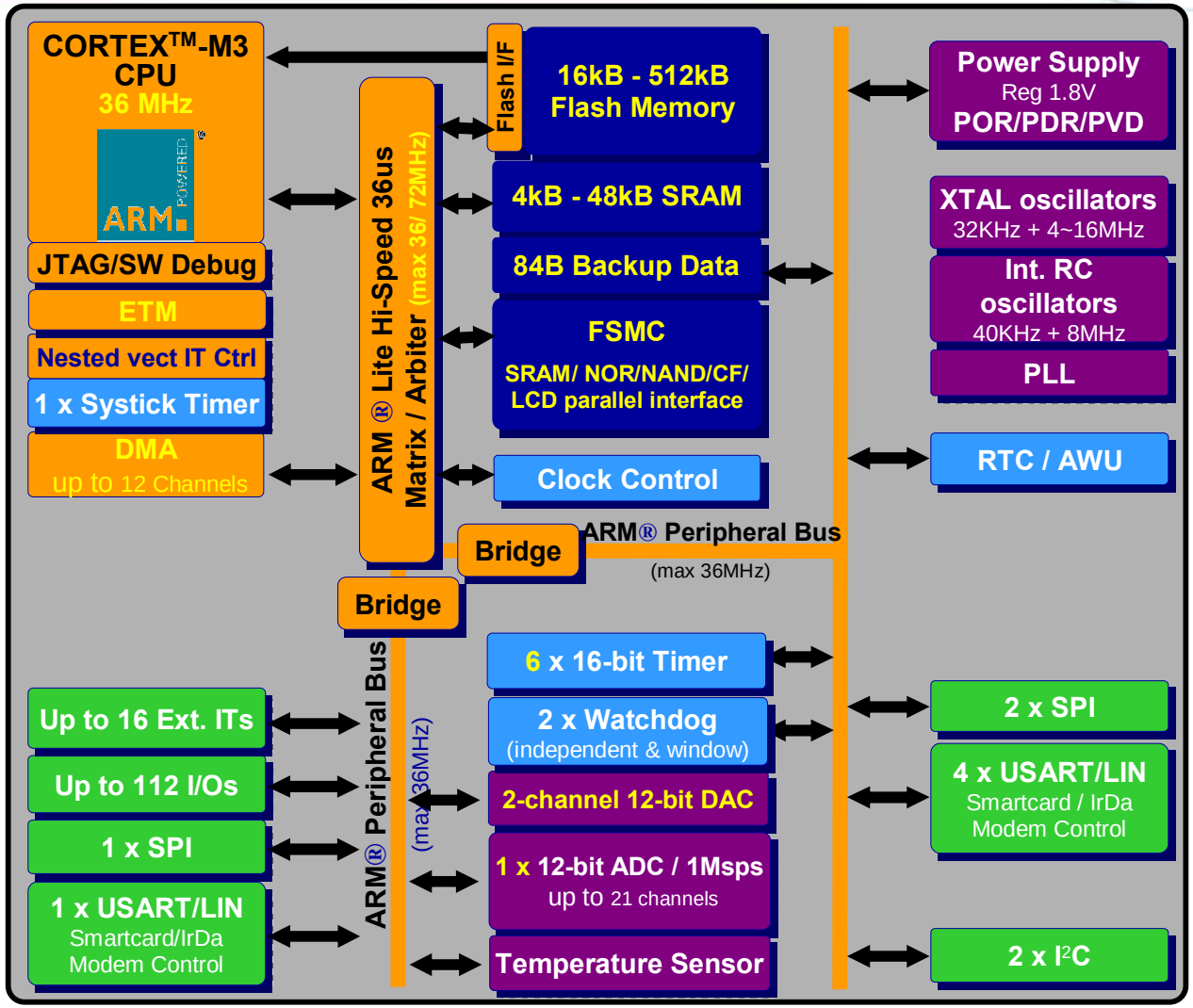


All in Full Production

*BGA package for Performance line only

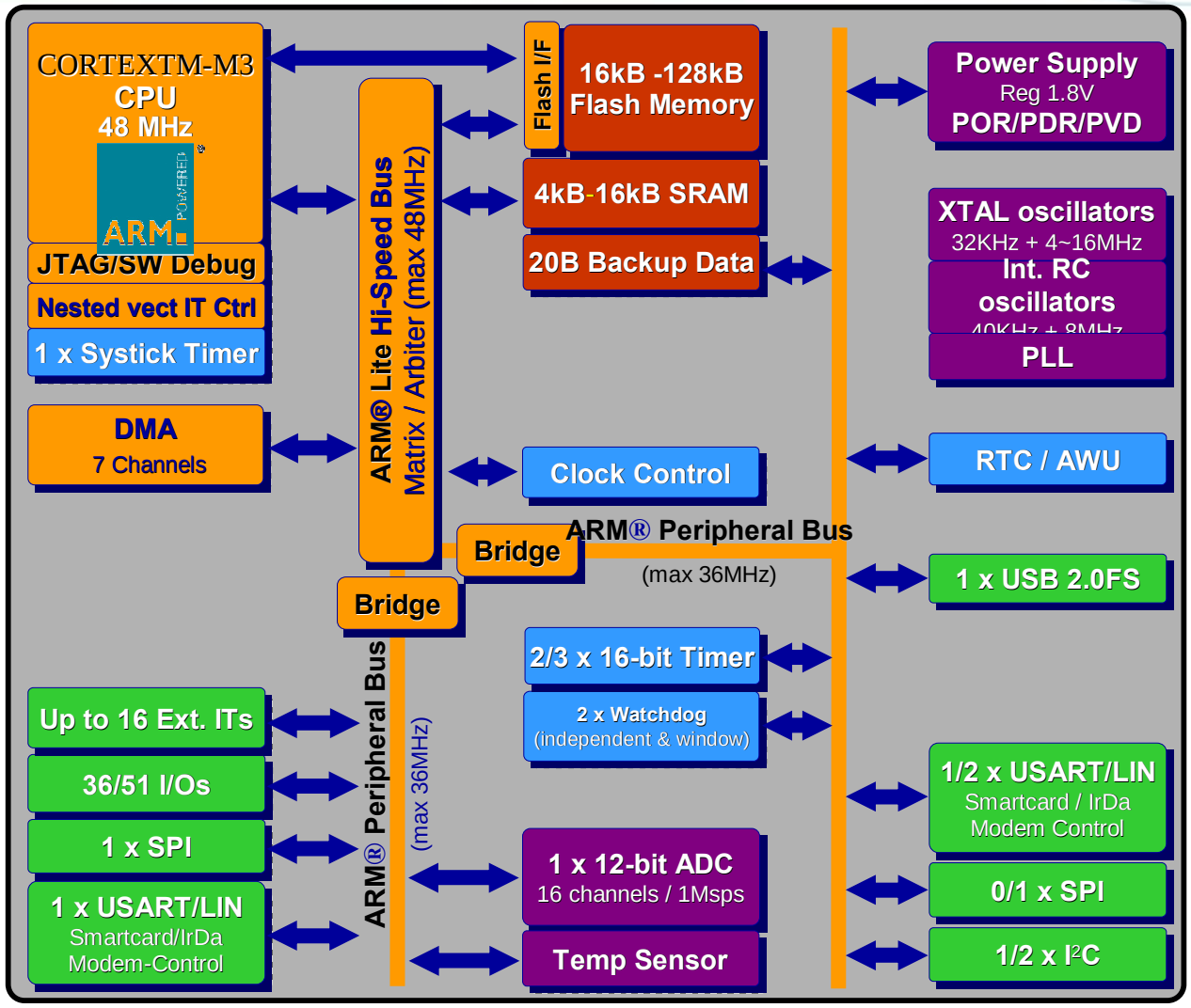
STM32F101 Access Line 16-512Kb Flash (super set)

- 2-channel 12-bit DAC
- FSMC
- ETM
- 12 channels DMA
- Up to 112 I/Os (144 pins package)



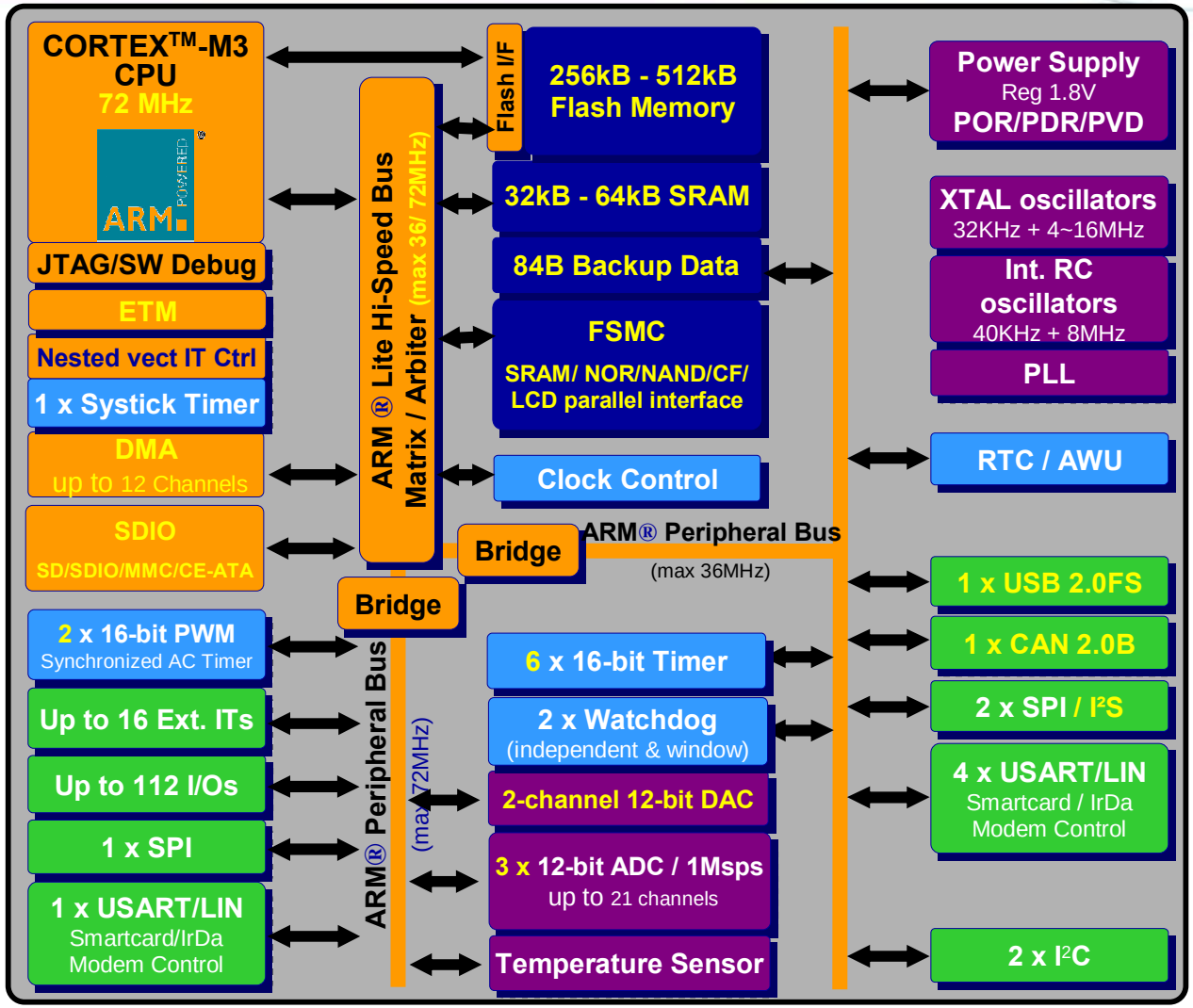
STM32F102 USB Access Line

- 48 MHz
- 1xADC
- SRAM up to 16K
- -40/+85°C

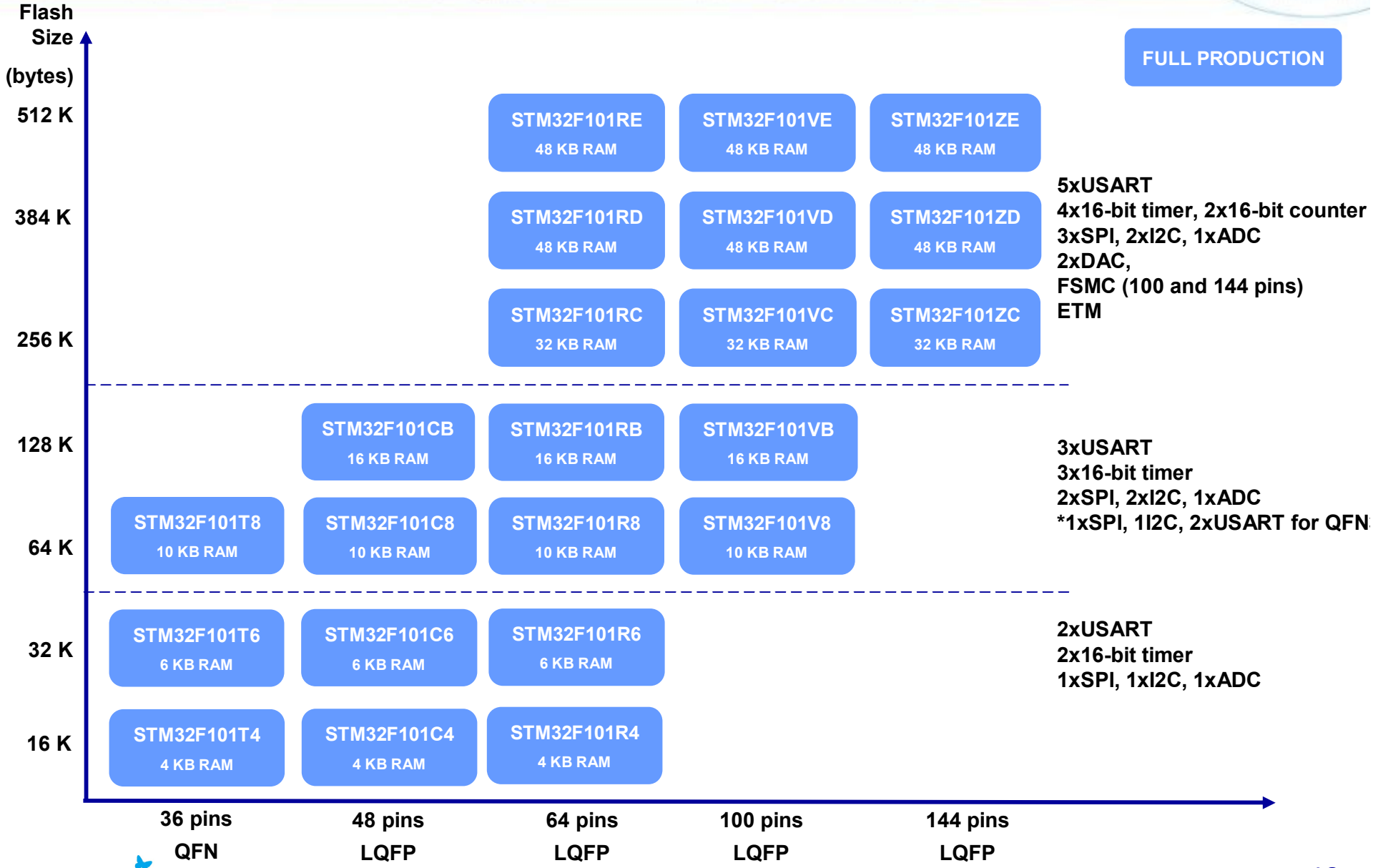


STM32F103 Performance Line 16-512Kb Flash (High Density series)

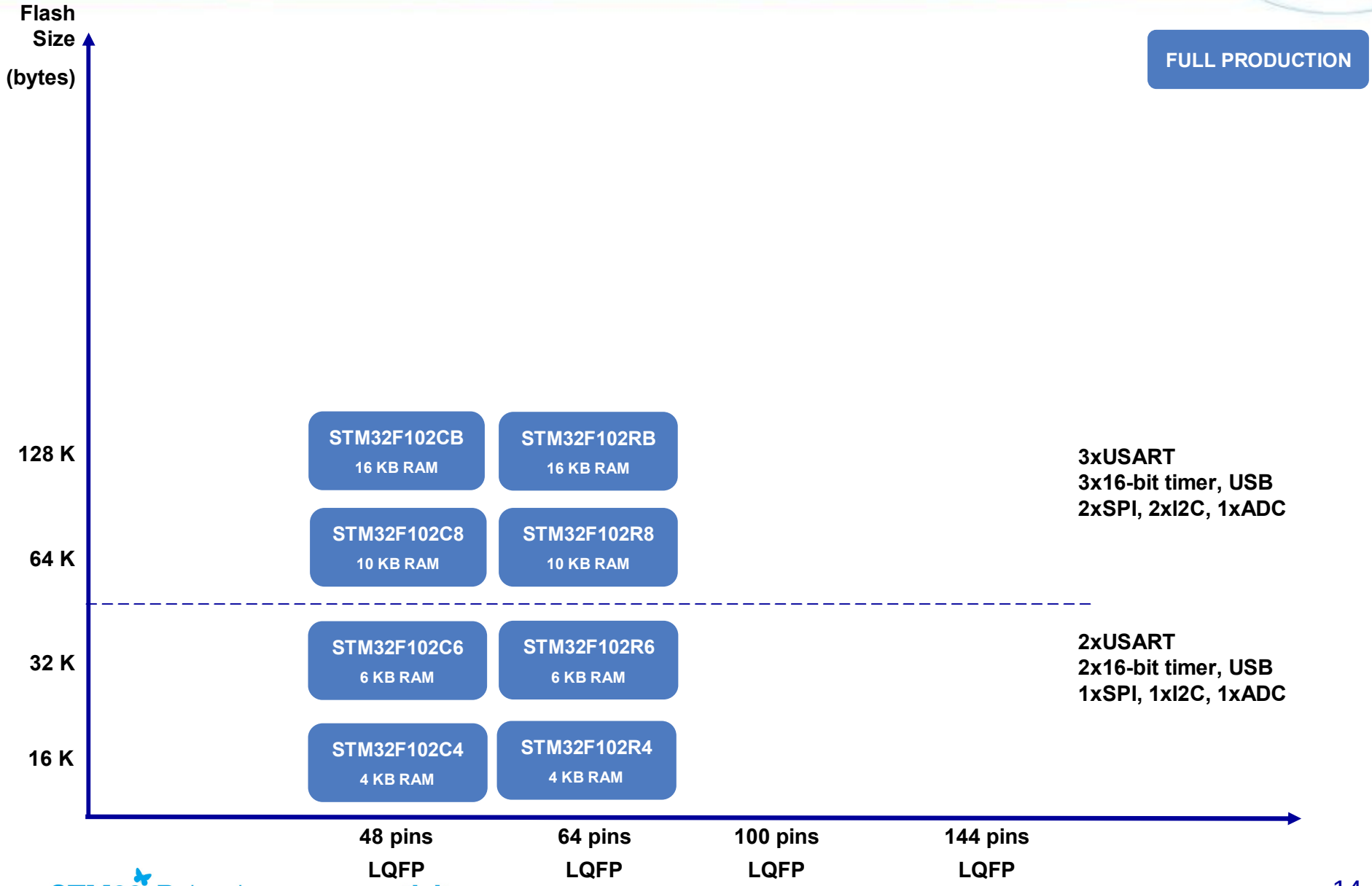
- 2-channel 12-bit DAC
- FSMC
- ETM
- SDIO
- I²S
- 12 channels DMA
- 2xPWM timers
- 3xADCs
- Up to 112 I/Os (144 pins package)



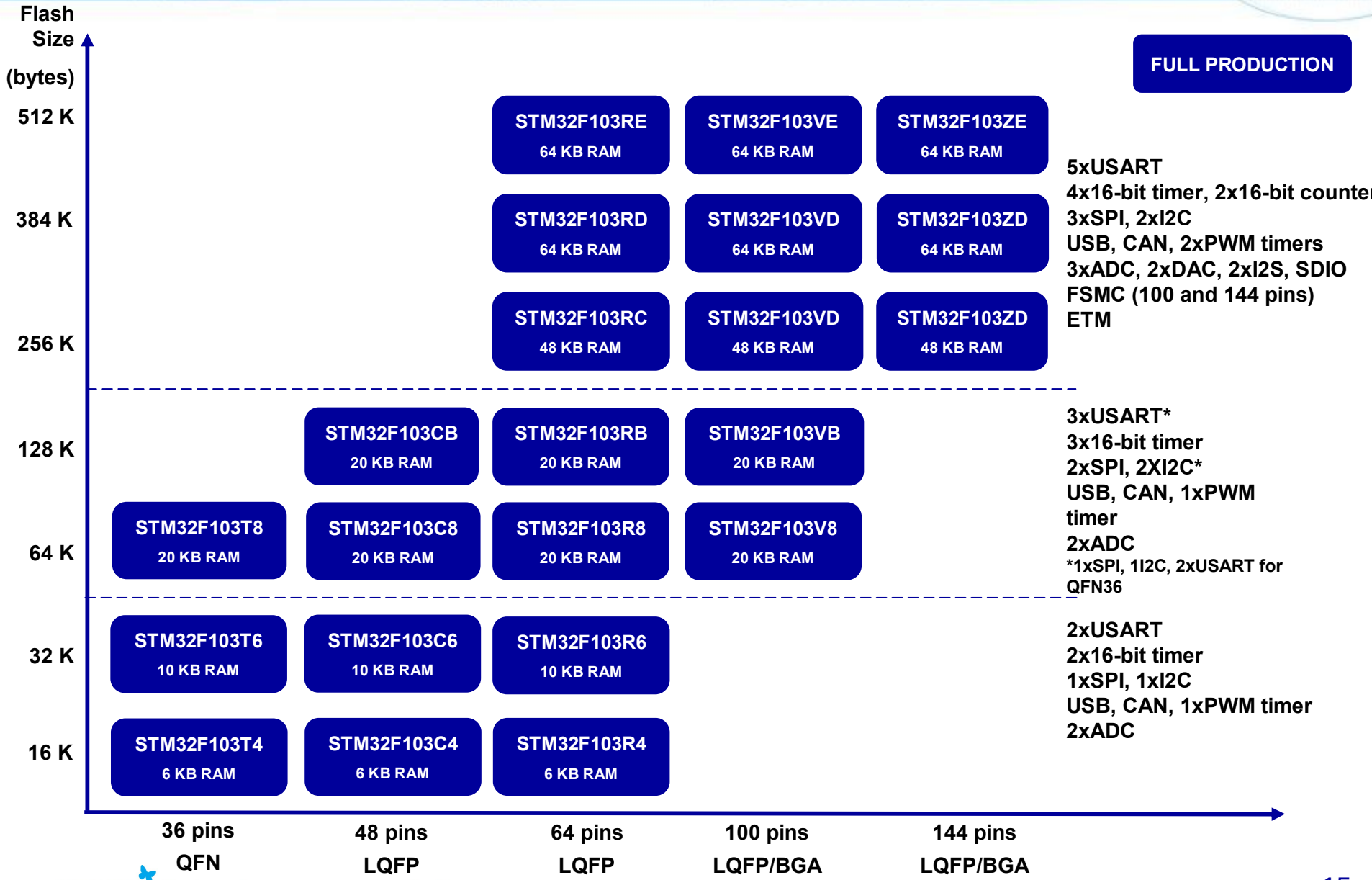
STM32F101 Access Line



STM32F102 USB Access Line



STM32F103 Performance Line



STM32 Releasing your creativity

Connectivity

PERIPHERALS

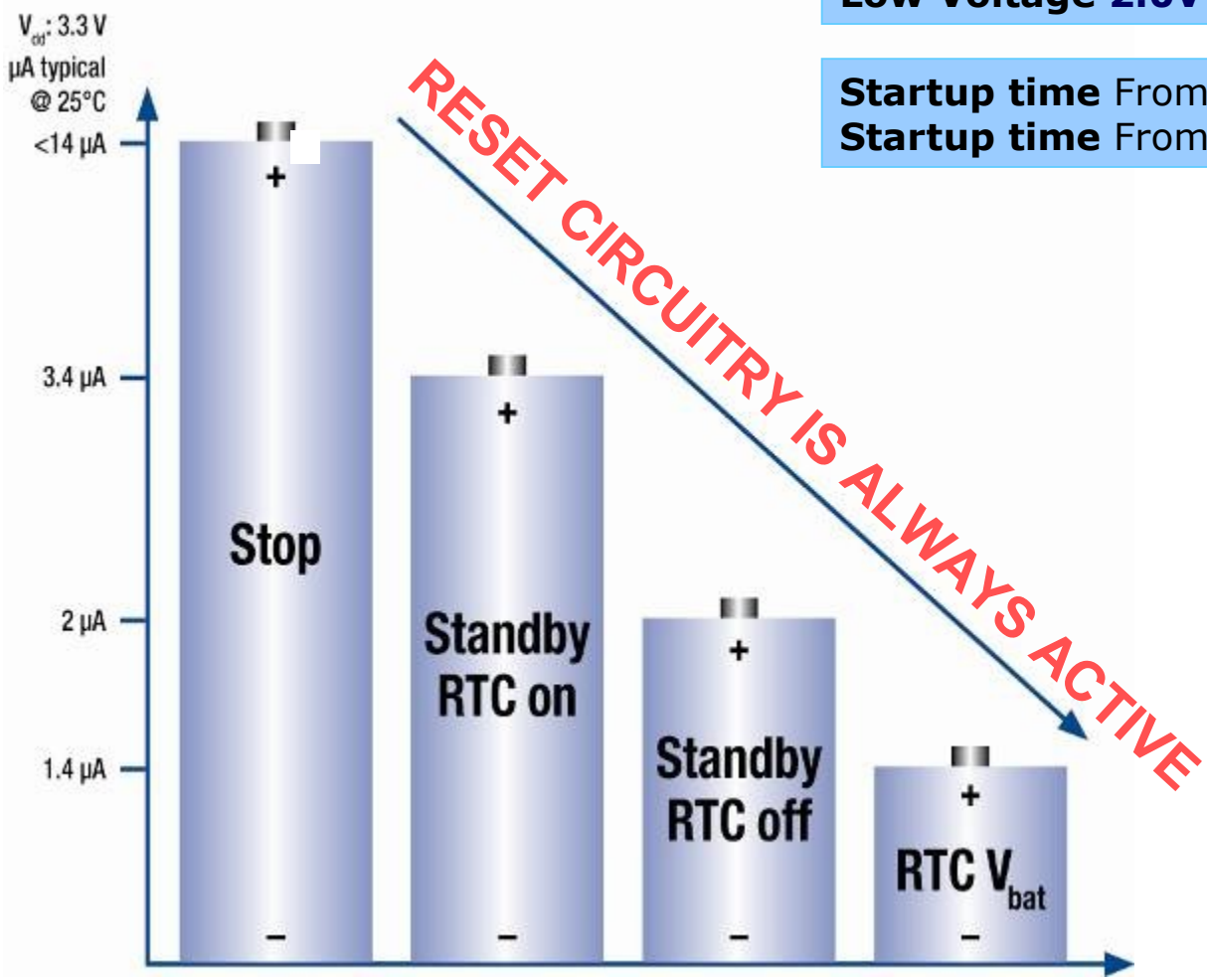
- **Communication, the need for speed**

•USB FS 2.0 device: USB certified	•12Mbit/s
•USART/LIN (Smartcard, IrDa, Modem Control)	•Up to 4.5Mbit/s
•SPI (SD/MMC support)	•18MHz Master and Slave
•I²C (SMBus/PMBus support)	•400KHz
•SDIO (SD/SDIO/MMC/CE-ATA)	•Up to 48MHz
•I²S	•8 to 48KHz sampling frequencies

- FSMC: SRAM, NOR, NAND, CompactFlash memories support. LCD Parallel interface

STM3210x Low Power diagram

STM32F10x: Low power



Low Voltage 2.0V to 3.6V operation

Startup time From STOP **<6µs**
Startup time From STANDBY **50µs**

STOP
- All clocks off, Reset Active, RAM ON (registers' content preserved)

STANDBY
- All clocks off, Reset Active, RAM OFF but 20 bytes available for backup

FSMC (Flexible Static Memory Interface)

PERIPHERALS

- 4 independent banks to support external memory with frequency up to 36 MHz when system is at 72 MHz
- SRAM, PSRAM, NOR, NAND, CompactFlash memories support. Graphic LCD interface.
- Programmable timings to support a wide range of devices
- Code execution from external memory
- LCD parallel interface, 8080/6800 modes

STM32 debug capabilities

EASE OF USE

STM32

JTAG

Standard Development & Test Tools
- Standard **JTAG** connection for debug and embedded memory programming
- **Boundary Scan** capability

SW
Serial Wire

Optimized resources for in-situ debug
Only **2 pins**:
- To program embedded memory
- To run advanced debugging session with trace capability

ETM

Advanced real time in-situ debugging
- Data and instruction **TRACE** capability
- **Profiling** and **code coverage**

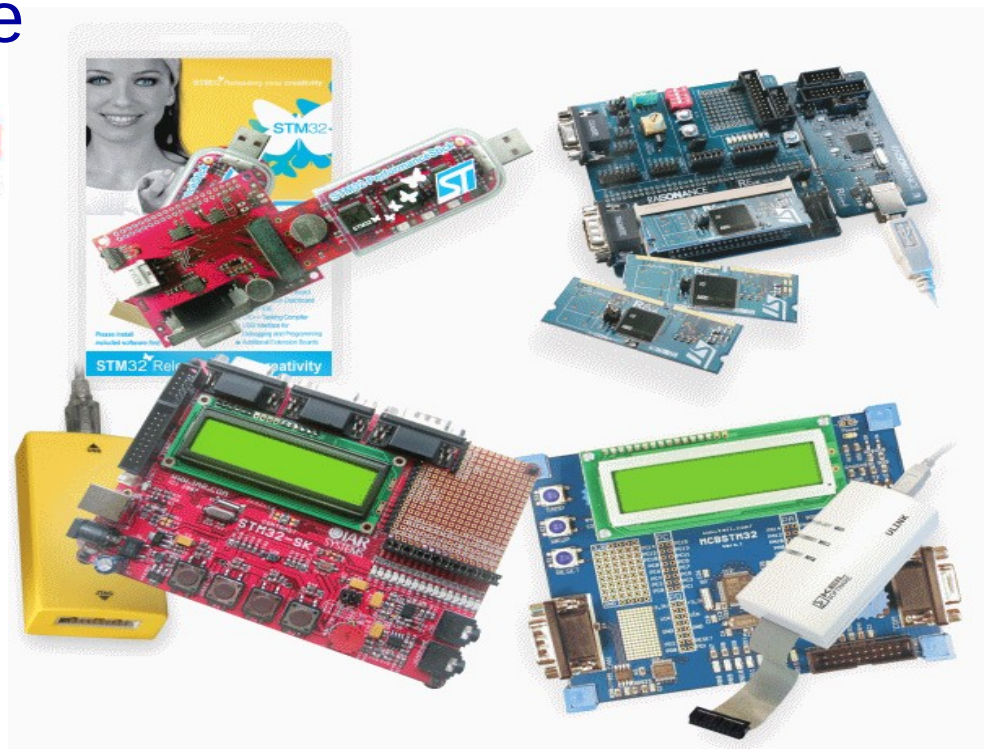
STM32 Starter kits from ST

EASE OF USE

- Kits supply all that is needed to start a design
- JTAG debugger and programmer included
- Available

hitex DEVELOPMENT TOOLS

$109



RAISONANCE

$209

IAR SYSTEMS

$239

KEIL™ An ARM® Company

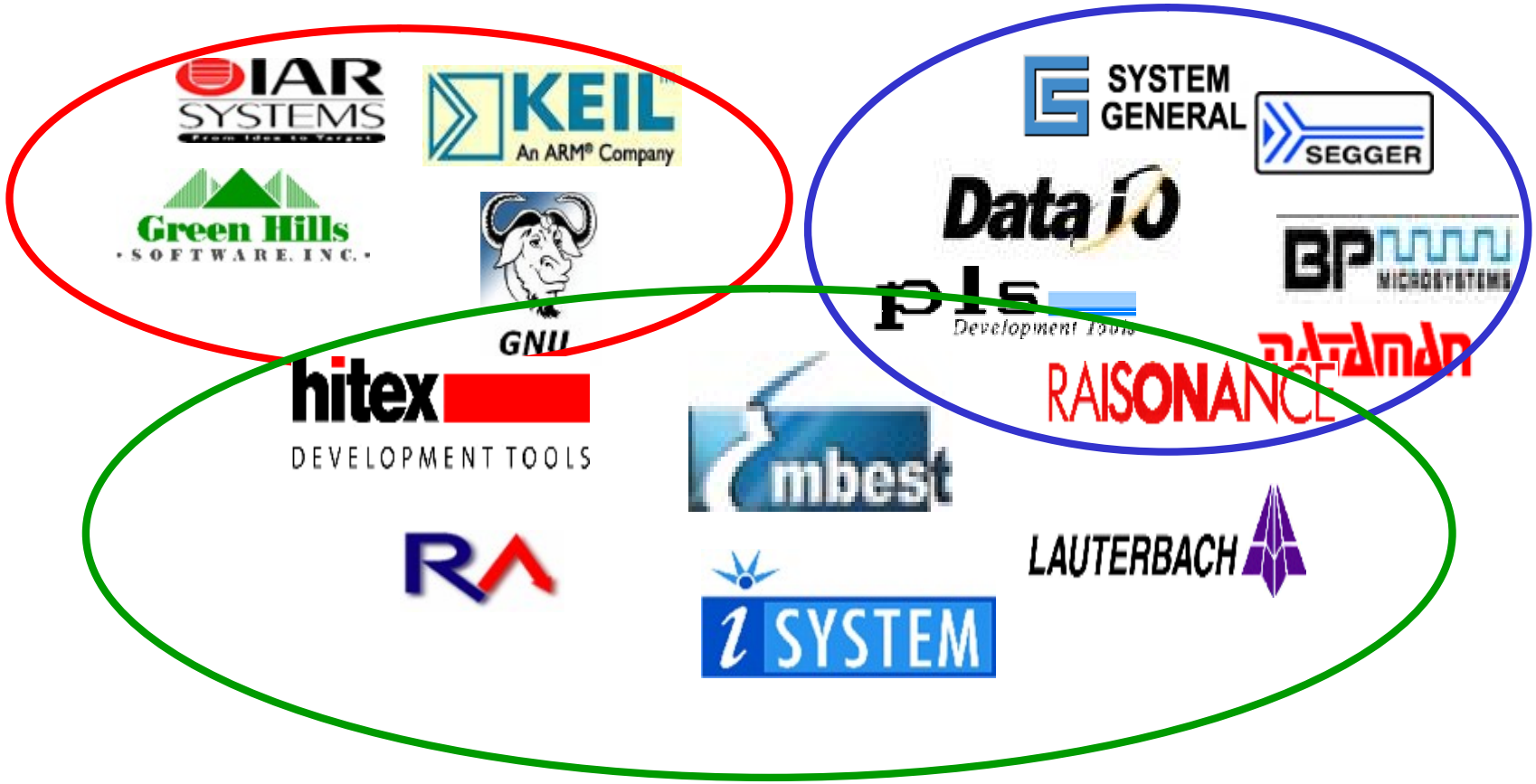
$189

Easy-to-Use Tools

EASE OF USE

Compilers and IDE

Device Programming



IDE and debuggers, GNU compilers

Software Libraries –

- **ST software libraries free at www.st.com/mcu**
- C source code for easy implementation of all STM32 peripherals in any application
  - **Standard library** – source code for implementation of all standard peripherals. Code implemented in demos for STM32 evaluation board
  - **USB software library** – software kit for easy implementation of any USB transfer type. Is already www.usb.org certified
  - **Motor Control library –** Sensorless Vector Control for 3-phase brushless motors

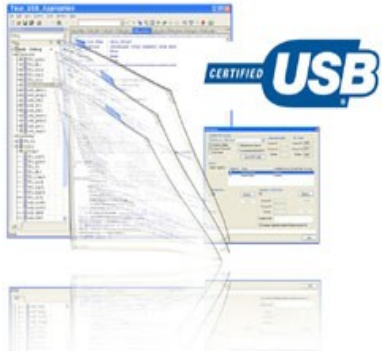
ST engineered, tested, documented and free

- **Get the most out of STM32 with an RTOS**
- Royalty-free, real-time operating systems (RTOS) for embedded applications
- Wide range of choices from leading RTOS providers
  - CMX, FreeRTOS, IAR, Keil, Micrium, Segger

Support from ST

TIME SAVING

- **STM32 Firmware Library**
  - Complete Firmware Library in C (MISRA compliant)
  - Standard ANSI-C, compatible with Third Party compilers
  - Free distribution to customers from ST (www.st.com/mcu)
  - Insulates from having to deal with low-level registers and bits of peripherals and functions



- **STM32 USB developper kit**
  - Complete source file with documented, thoroughly tested C source code, compatible with major IDE toolsets for ARM
  - Supports any flavor of USB firmware.

Free from ST web

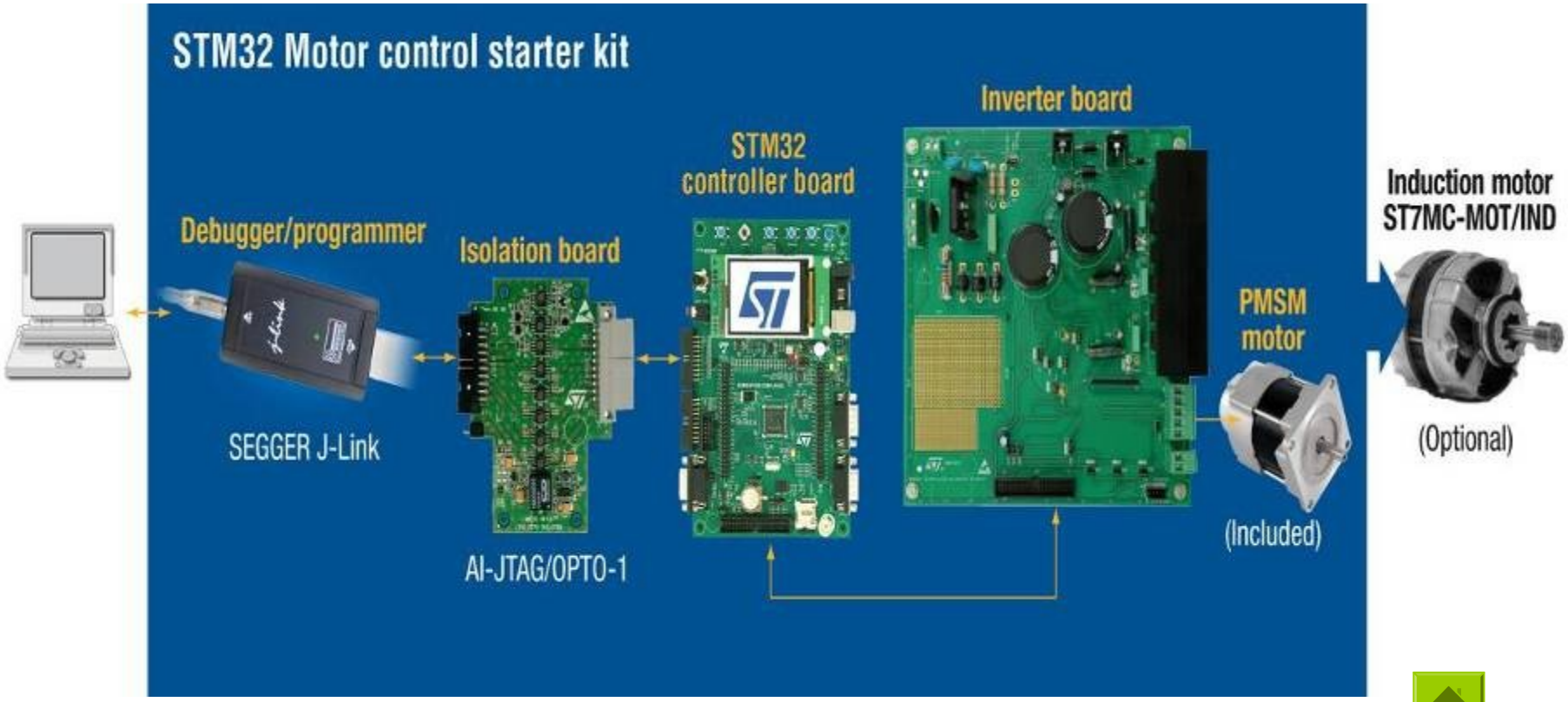
- **STM32 Motor Control Firmware library**
  - Complete source files for **Vector Control (FOC)** of 3-PH Induction and PMSM motors

- **STM32 Free example C source code** (CAN Example, External Interrupt Example, General-Purpose I/O, Independent Watchdog, PWM (1), Realtime Clock, SVC, Tamper, USART (interrupt mode), USART (polling mode), USB HID (Human Interface Device), USB Mass Storage Device.
  http://www.keil.com/download/list/all.htm

Now Available:
Motor Control Kit & Library

- Sensored/Sensorless FOC Vector Drive for 3-phases
  - AC Induction and PMSM motors

VECTOR DRIVE



Click here to return to “menu” slide

NEW STM32 Motor control Library 2.0

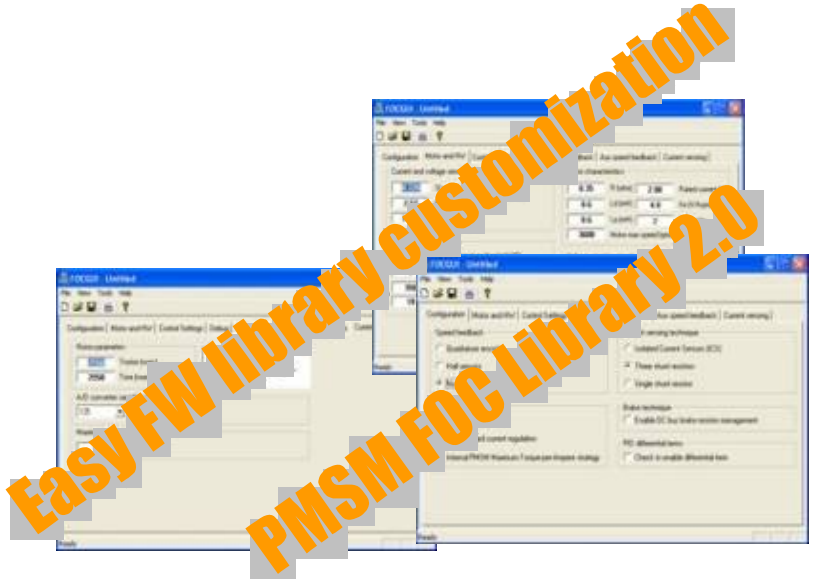
- Motor control
  - New Library 2.0 available NOW.
    - STM32 Motor Control Single Shunt support
    - STM32 FOC support
    - STM32 3 phase motor support
    - STM32 library to manage 2 different motor
      Internal Permanent Magnet motors firmware
  - New STM3210B-MCKIT Brochure updated with STM32 512K/single shunt (BRSTM32MC0808)
- New developments
  - Demo double motor control in development.

NEW FOCGUI utility New Version 2.0

EASE OF USE

- FOCGUI vers 2.0.0 is a code generator tool that reduces the designer effort and time in the firmware development for the PMSM FOC Library 2.0 (STM32 FOC Library).

- The GUI generates parameters header files of the PMSM FOC Library 2.0:
  - MC_Control_Param.h
  - MC_encoder_param.h
  - MC_Hall_prm.h
  - MC_PMSM_motor_param.h
  - MC_pwm_1shunt_prm.h
  - MC_pwm_3shunt_prm.h
  - MC_pwm_ics_prm.h
  - MC_State_Observer_param.h
  - STM32F10x_MCconf.h



Key Features:

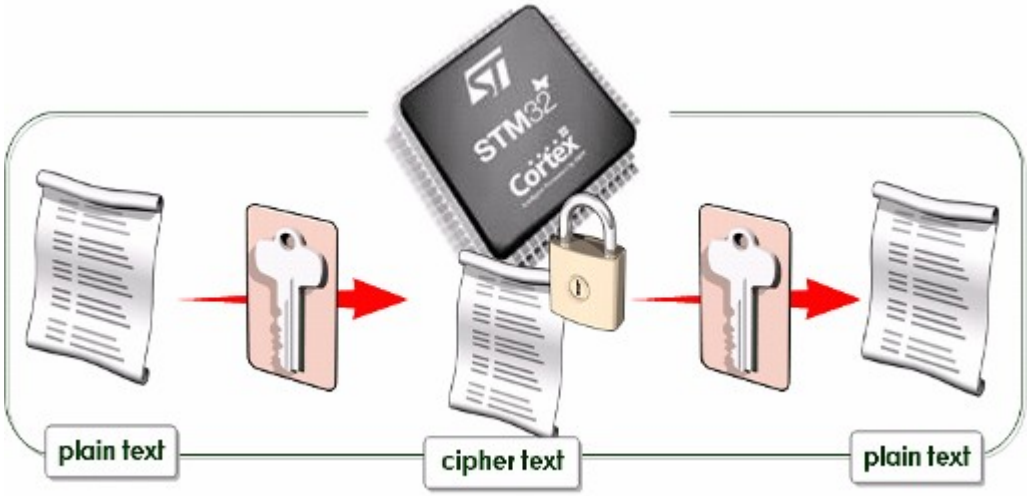
- **Three shunt, single shunt, ICS current reading supported**
- **Sensor-less, encoder, Hall sensors position/speed feedback supported**
- **FW Debug configurations**

The FOCGUI ver. 2.0.0 has got an useful Help to easy start

http://www.st.com/mcu/inchtml-pages-stm32mc.html

NEW Software Libraries – Speed Time to Market

- **Encryption library - AES-ECB 128 encryption for STM32103x**
  - Optimized crypto library for the STM32 32-bit microcontroller
  - Solution is basically done to maintain the security of data
  - AES-ECB 128 bit symmetric key algorithm coupled with STM32 Cortex-M3 provides great performance with strong data protection.



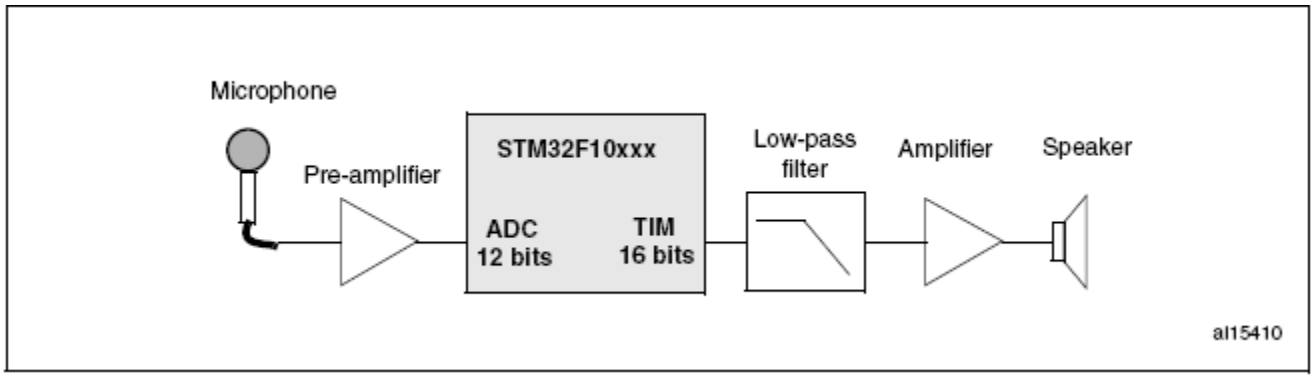
  - The AES-ECB 128 bit benchmark for STM32 is just available upon request with 16,32,64 and 128 byte plaintext for Keil, IAR and Hitex toolchain

NEW Software Libraries – Vocoder : Speech encoding decoding

Introduction

This application note describes how to implement the codec Speex software on the STM32F101xx and STM32F103xx microcontrollers to build a vocoder application.

Speex is a free audio codec dedicated to speech encoding and decoding. It provides a high level of compression with a good quality of sound. That makes it a high-performance solution for any application using message playback or a voice recorder, like answering machines, building and home safety systems, intercoms, smart appliances, voice recorders or walkie-talkies.



User manual and library available on www.st.com/stm32

MP3 Library Available

Library C source code free.

Deliveries	Target date
MP3 mono 44.1Khz/128kbps (EFSL+ libmad)	Now
More optimize one , stereo support	Q4 2009

DSP Library Available

Library C source code free.

Deliveries	Target date
DSP library + license -PID, IIR, FFT, FIR -Compatible IAR, KEIL latest rev -User manual	Now
More development on the library - Matrix operation, front end filters	Q2 2009

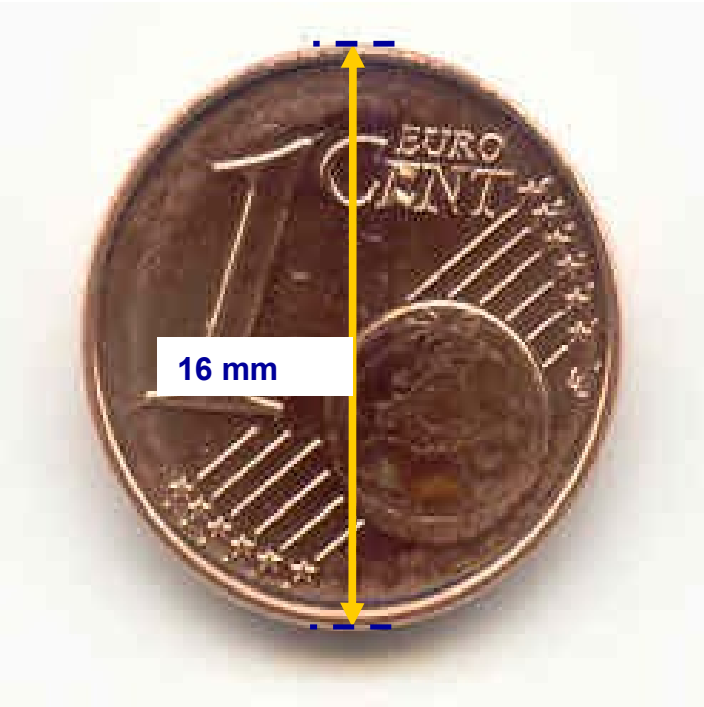
What's new STM32? : Services

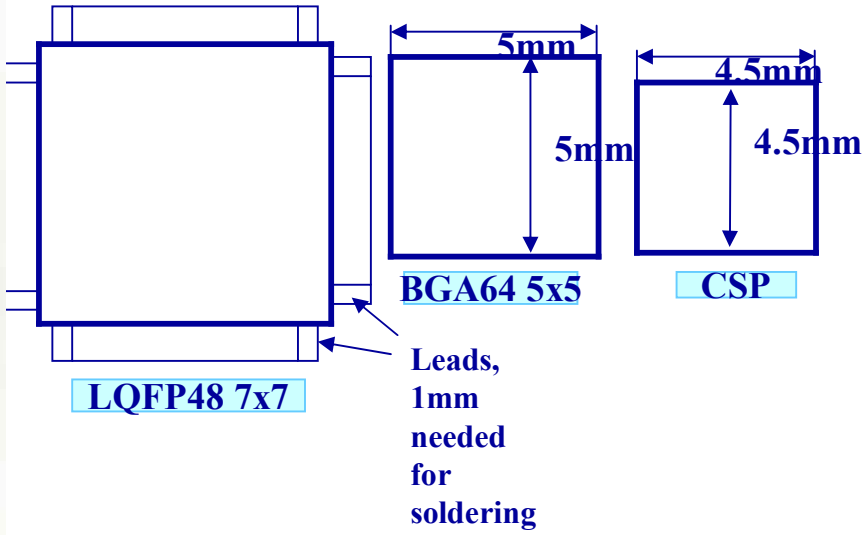
- Performance line 105°c
  - Samples available (sales types: T6-→ T7)
- STM32 256K and 512K BGA 100 and BGA 144
  - Available
- FastROM programming services is starting
  - **volume > 100Ku / Year,** Minimum order quantity per line item is **5KU.**
  - **NRE = 1500$ + 0,10$ to 0,40$ per device**
  - Special Marking option available.

STM32F103C6T6	Standard part (no fastrom)
STM32P103C6T6ABC	FASTROM, code ABC
STM32P103C6ABCTR	FASTROM, code ABC, Tape and Real

STM32 NEW package
New Tiny packages

- New small packages 64pin 5x5
  - from 16KB to 128KB
  - Samples available now
- New small package CSP 64
  - From 256KB to 512KB
  - Samples available in Q4 08





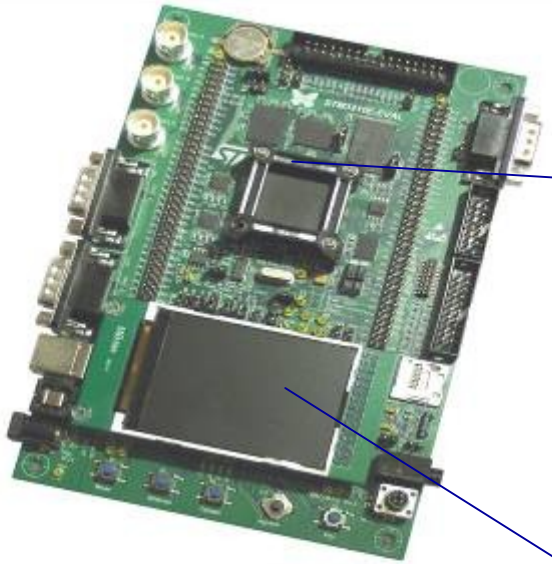
Now Available:
IEC60335-1 approved self diagnostic routines

CLASS B

- ST's self-test library software modules have been approved by the VDE, a WW recognized test house which pioneered software safety inspection http://www.vde.com/vde_en

- A customer having its end-application certified by the VDE will not have to redo Self-diagnostic routines certification, if left unchanged
  - Integration and use of ST's routines will only be evaluated
  - Will decrease evaluation duration and cost
  - Information test report available on internet

STM32 LCD Demo : Hardware



STM3210E-EVAL

Evaluation board

STM32F103ZET6
144 pin 512K flash
Performance Line

Parallel Link
FSMC
36 MHz

Ampire TFT-LCD
240 x 320
with ILI9320 controller

STM32F105/107
Connectivity Line

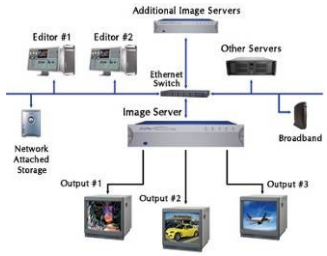
ST introduces the STM32 Connectivity line

- An addition to the wide STM32 portfolio
  - 60 part numbers
  - 3 product lines
- ST introduces the new STM32 Connectivity line, adding 15 new devices
- With new features:
  - Ethernet
  - USB OTG
  - Dual CAN
  - Audio class I²S

STM32 Connectivity Line

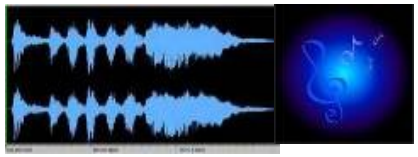
- Fully compatible with the STM32 platform
  - **Pin-to-pin and function compatible with the current STM32 family for easy migration path**
- Outstanding new features
  - **USB 2.0 OTG Full Speed 12 Mbps**

  - **Ethernet MAC 10/100 Mbps with Precise Time Protocol IEEE1588 HW support**



  - **2 x CAN 2.0B Active**

  - **Audio Class I²S**



STM32 Connectivity Line highlights (1/2)

PERIPHERALS

- **Communication**
  - **USB 2.0 Full Speed (12Mbps) OTG controller** with embedded OTG PHY, capable to work simultaneously with dual CAN peripheral
  - **Ethernet 10/100 MAC:**
    - IEEE1588 HW support
    - PHY interface: MII and RMII both supported on all packages
  - **2 CAN 2.0B Active** capable to work simultaneously with USB OTG peripheral
  - **Audio class I²S via advanced PLL schemes**, supporting audio sampling frequencies from 8kHz up to 96kHz with less 0.5% accuracy on the I²S Master Clock
  - USART, LIN Master/Slave, ISO7816 (SmartCard), IrDA, Modem Control, SPI with SD/MMC support,I2C with SMBus/PMBus support

USB FS 2.0	**12Mbit/s**
USART/LIN	**4.5Mbit/s**
SPI	**18MHz**
I²C	**400KHz**

STM32 connectivity line
STM32F105/107

Both lines include up

- Up to 256KB FLASH
- Multiple com. Peripherals
  USART, SPI, I2C
- Multiple 16-bit TIMERS
- Dual DAC
- ETM
- Main Osc 3-16MHz
- Internal 8 MHz RC and 40 kHz RC
- Real Time Clock
- 2 x Watchdogs
- Reset circuitry
- 2 x 12-bit ADC 1µs Temp sensor
- PWM Timer
- Up to 12 channels DMA
- 80% GPIO ratio

+

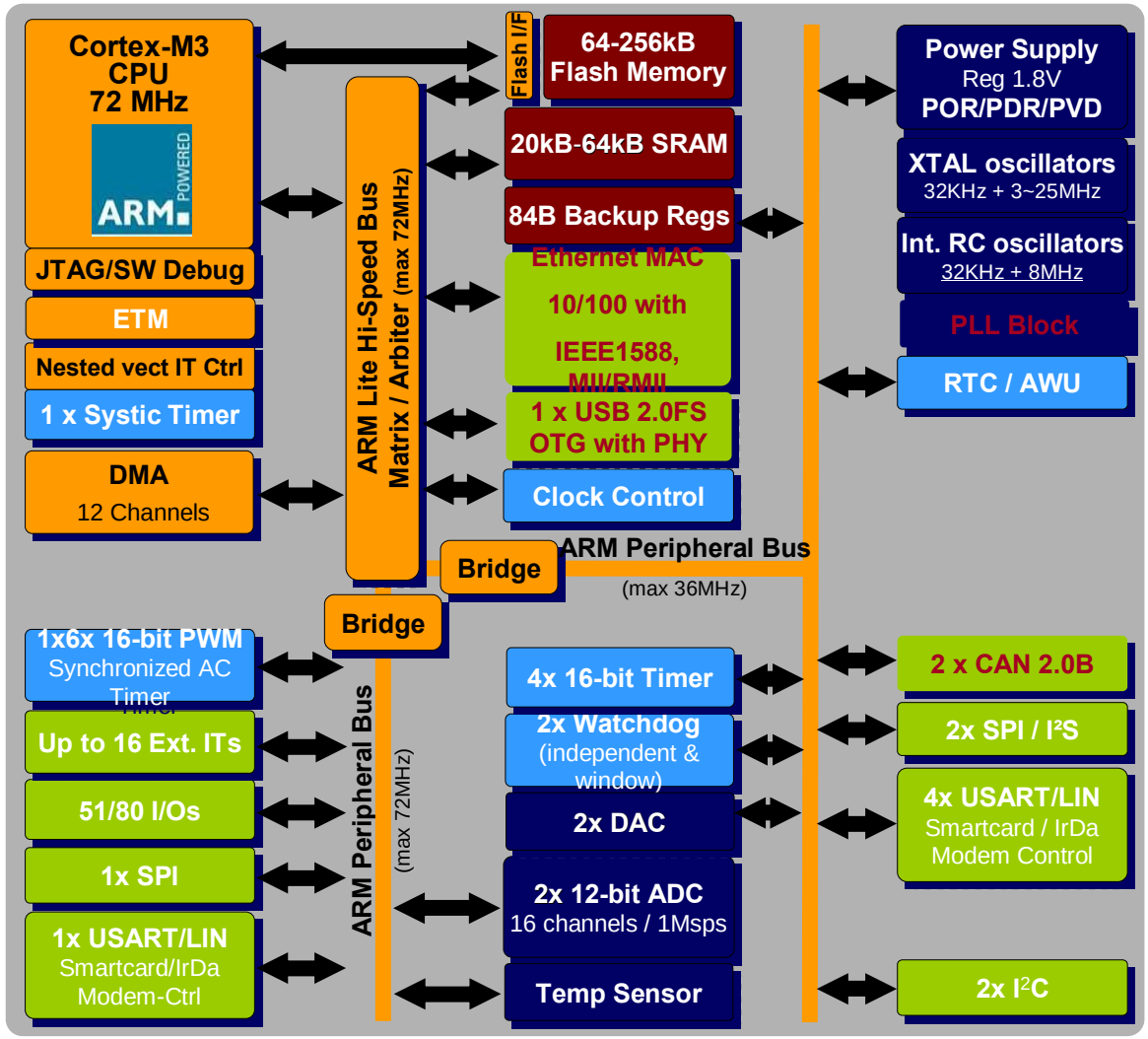
Samples : June 09

STM32F107

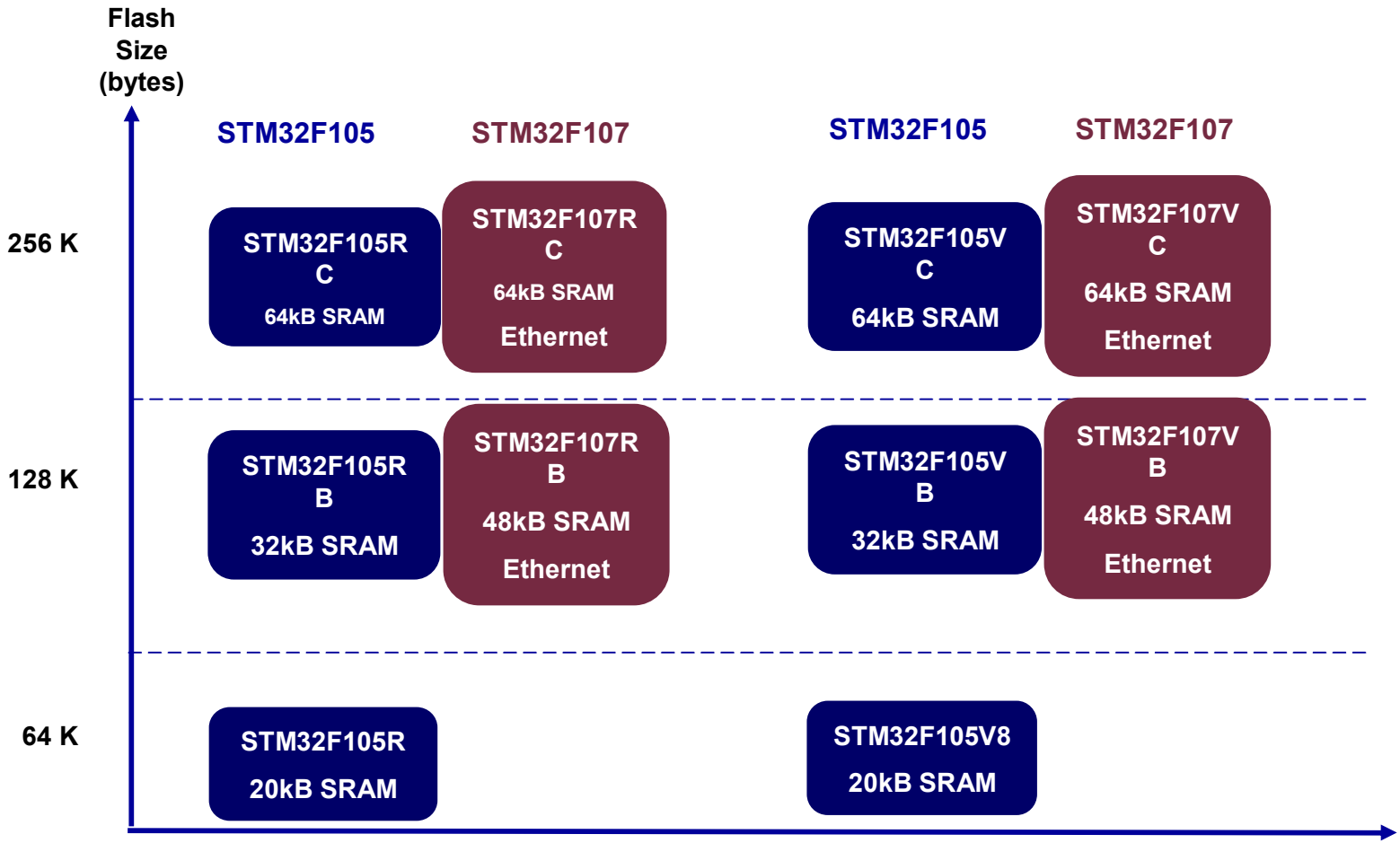
STM32F105

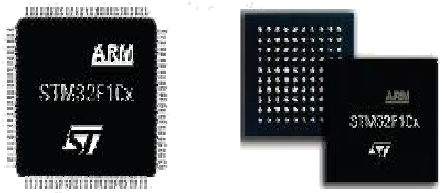
STM32F105/107 block diagram

- Up to 256KB Flash / up to 64KB SRAM
- Ethernet 10/100 MAC with EEE1588, MII & RMII and 4KBytes dedicated SRAM
- USB 2.0 FS OTG with OTG PHY and 1.25KBytes dedicated SRAM
- 2x Audio Class I²S interfaces
- 2x CAN 2.0B with dedicated 512-Byte buffer
- LQFP64, LQFP100, BGA100
- -40/+105°C



STM32F105/107 Connectivity Line





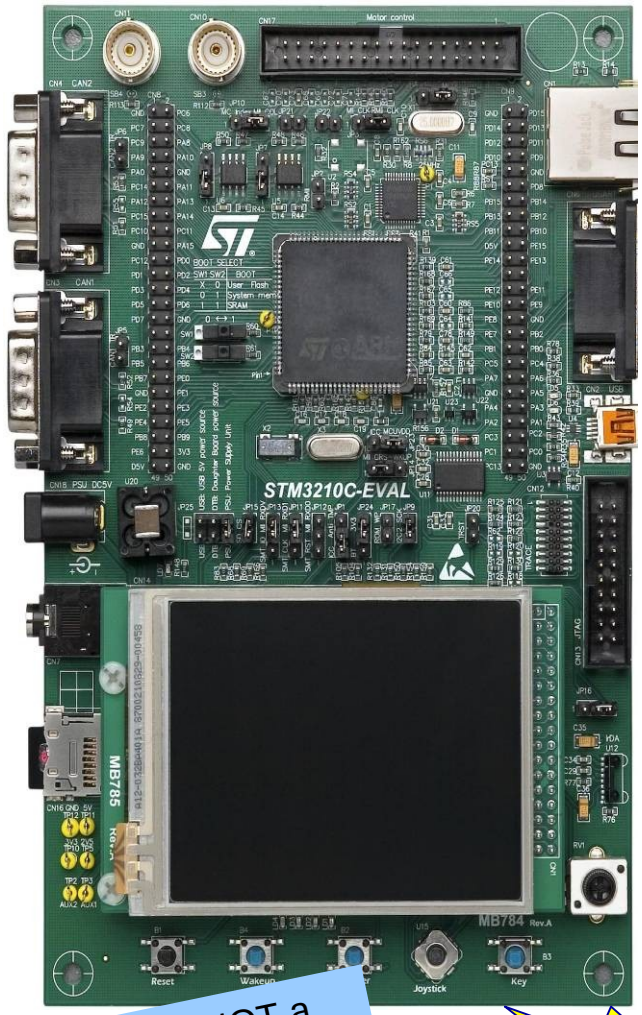
STM32 Releasing your creativity

Resale price for 10k Units
STM32F105R8: $3.28
STM32F107VC: $4.92

STM32-EVAL – From ST

EASE OF USE

- Hardware Evaluation Platform for all interfaces
- Possible connection to all I/Os and all peripherals
- Flash is loaded with self-test firmware, and demos for USB, CAN, SD Card etc.
- Firmware projects available from www.st.com/mcu
- Vendor neutral (comes with no IDE or JTAG cable)



Note: This is NOT a starter kit. Tools must be purchased separately

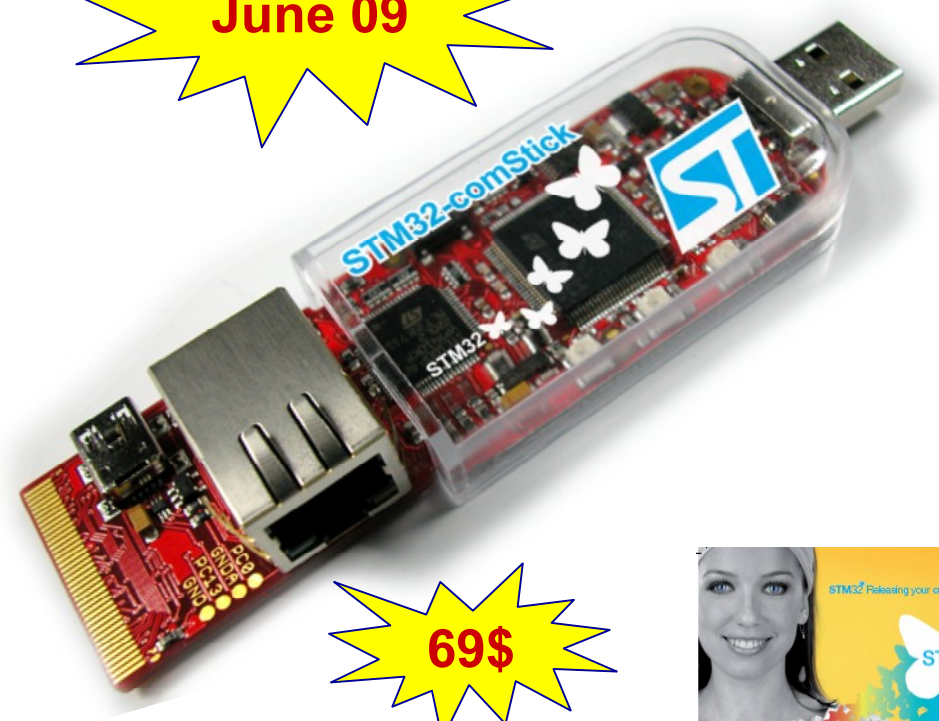
249$

STM32 Compact Dev Kit for Ethernet, USB OTG

- STM32 ComStick
  - *Everything* included
  - Firmware, User's Guide, CD
  - USB bus powered
- Demonstrate and Evaluate Ethernet, USB OTG connectivity
  - Web server with TCP/IP
  - USB mouse, USB host..
- *Full tool-chain* from Hitex*
  - *No limit to code size*
  - Full capability: Editing,compiling, Flash programming, and debugging with HiTop environment
- Access to I/O pins
  - ADC, PWM, GPIO

* For use on one STM32 ComStick dongle

June 09



69$

Order from ST or from Hitex

3rd parties starter kits distributed by ST

Logo	Company	Product	RRP
hitex DEVELOPMENT TOOLS	ComStick (Hitex)	STM32-COMSTICK	$69
IAR SYSTEMS	Starter kit (IAR)	STM3210C-SK/IAR	$249
KEIL An ARM® Company	Starter kit (KEIL)	STM3210C-SK/KEIL	$279
RAISONANCE Embbeded Systems Development Tools	Starter kit (Raisonance)	STM3210C-SK/RAIS	$219
	Reva daughter board (Raisonance)	STM32107C-D/RAIS	$125

Samples availability

Samples : June 09

- STM32F107VCT6
- STM32F107VBT6
- STM32F107RCT6
- STM32F107RBT6
- STM32F105VCT6
- STM32F105VBT6
- STM32F105RCT6
- STM32F105RBT6

(LQFP100 and LQFP64)

STM32 Connectivity Line highlights (2/2)

- Bootloader
  - Default: USART+CAN+USB DFU (Device Firmware Upgrade Class)
  - Option (as programming services):
    - Ethernet or
    - USB Host Mass storage
- Packages:
  - 64-pin: LQFP64 (10x10)
  - 100-pin: LQFP100 (14x14), BGA100 (10x10)

- Up to 80% I/O ratio / 5V tolerant / 25mA sink & source

Software Libraries – Speed Time to Market

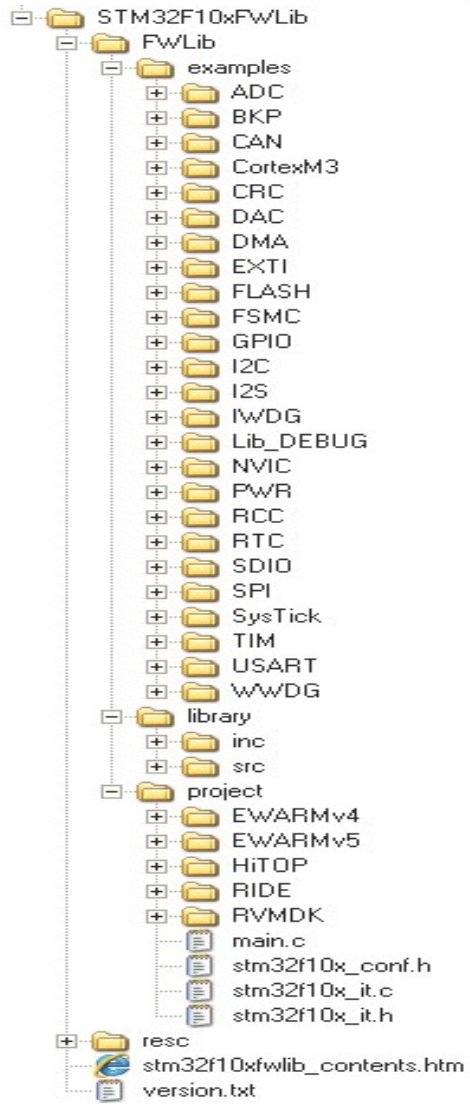
- **ST software libraries free at www.st.com/mcu**

  C source code for easy implementation of all STM32 peripherals in any application

  - **Standard library** – source code for implementation of all standar peripherals. Code implemented in demos for STM32 evaluation board
  - **Motor Control library –** Sensorless Vector Control for 3-phas brushless motors

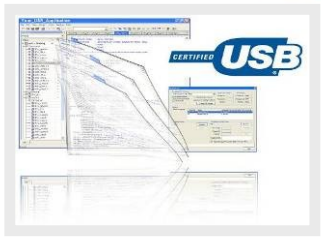
- **DSP library –** PID, IIR, FFT, FIR (free with license agreemer

- **Audio library – MP3/WMA decoder**, volume control, equal (free with license agreement)



USB OTG Software Library

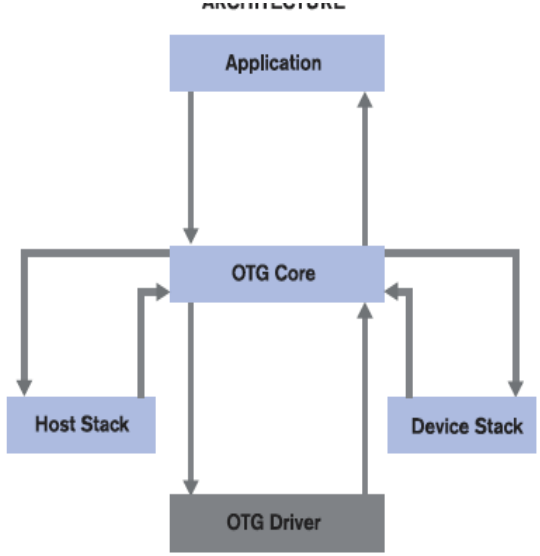
- **Free USB Device Library from ST** (Ansi-C source code available), supporting the many USB classes:
  - Mass storage, HID, DFU, CDC, Audio



Fee USB device library from ST

- **Free USB Host Mass storage solution from ST**

"uC/USB OTG" Micrium stack Architecture



- **More USB OTG classes supported via 3rd parties like Micrium with their "µC/USB-OTG" stack**

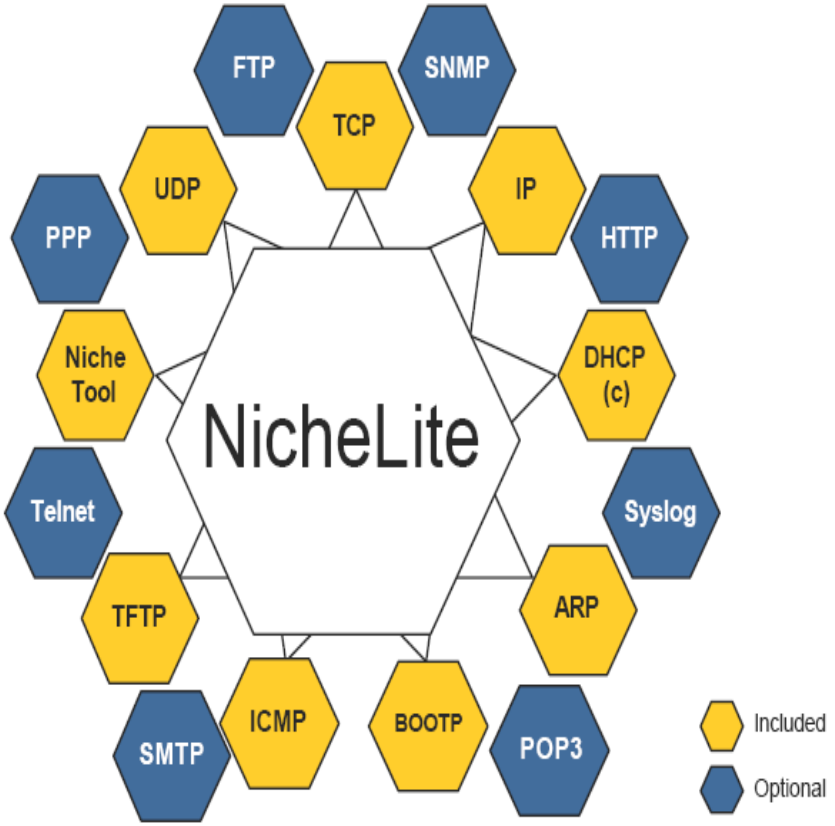
USB OTG Software Solutions

Logo	Company	Product	Website
	HCC-Embedded	USB	www.hcc-embedded.com, /www.hcc-embedded.com/en/solution/st_micro
	IAR	PowerPac USB	www.iar.com, www.iar.com/st
	Micrium	µC/USB Host µC/USB OTG	www.micrium.com, www.micrium.com/st/index.html
	Micro Digital	smxUSBH smxUSBO	www.smxrtos.com, www.smxrtos.com/stmicro.htm
	Quadros Systems	RTXCusb	www.quadros.com
	Segger	emUSB	www.segger.com

Ethernet Software and Hardware solutions

Free TCP/IP stack for STM32:

“NicheLite” from Interniche:



Need More?

Upgrade to “NicheStack” from Interniche ($5000)

- Complete TCP/IP v4 protocol stack
- Optional IPSec / IKE and SSL security
- Compatible with other InterNiche software modules
- Protocols Included:
  - TCP, UDP, IPv4, DHCP client, DNS client & server, ICMP, ARP, SLIP
- Compatible with the latest IPv4 RFCs

Ethernet Software solutions

Logo	Company	Product	Website
	IAR	PowerPac TCP/IP	www.iar.com, www.iar.com/st
	Interniche	NicheLite	www.iniche.com, www.st.com/mcu
	Keil	RL-TCPnet	www.keil.com
	Micrium	µC/TCP-IP	www.micrium.com, www.micrium.com/st/index.html
	Micro Digital	smxNS	www.smxrtos.com, www.smxrtos.com/stmicro.htm
	Quadros Systems	RTXC Quadnet□RTXC Quark	www.quadros.com
	Segger	embOS/IP	www.segger.com

STM32 trainings schedule 2009

H1/2009

	January	February	March	April	May	June
STM32 2-4 days	20.-23. (W4)* MVD - Paris 27.-28. (W5)* Hitex - Karlsruhe (GE)	17.-20. (W8)* Doulos – Munich 17.-19. (W8)* Microconsult - Munich	10.-12. (W11) ST Marlow (UK) 24.-27. (W13)* MVD - Paris	21.-23. (W17) ST Prague (CR) 27.-30. (W18)* Doulos – Hannover/Vienna	12.-13. (W)* Hitex - Karlsruhe 12.-14. (W20)* Tecnologix – Milan	2.-5. (W23)* MVD - Paris 2.-5. (W23)* Doulos – Munich 9.-11. (24) ST Kista (Sweden)
STM32 Motor Control 3 days		24.-25. (W9) Cracow (PL)		6.-8. (W15) ST Prague (CR)		

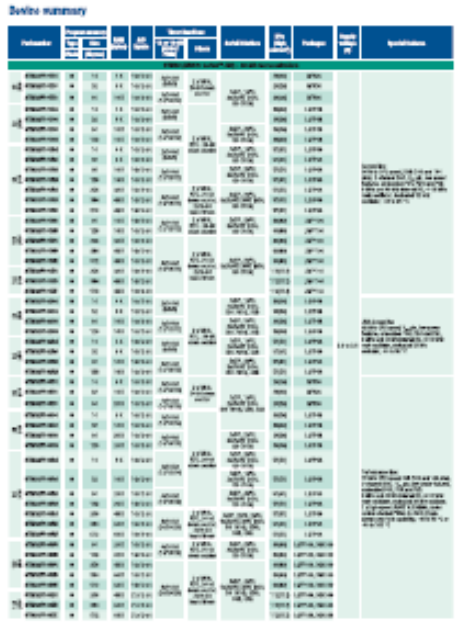
H2/2009

	July	August	September	October	November	December
STM32 2-4 days				6.-8. (W41) ST Marlow (UK)	3.-5. (W45) ST Prague (CR)	
STM32 Motor Control 3 days			22.-24. (W39) ST Castelleto (IT)		10.-12. (W48) ST Prague (CR)	

For latest schedule, sessions and Partners info
please visit www.st.com/learnMCU

New Brochure STM32

- New 16K and USB access line family
- New starter kit and dev tools sales types



Order code: BRSTM320808

STM32 Portfolio

- **72MHz Cortex™-M3 CPU**
  - 4KB to 96KB SRAM
  - Three lines
  - **FULL compatibility** across 60 part numbers

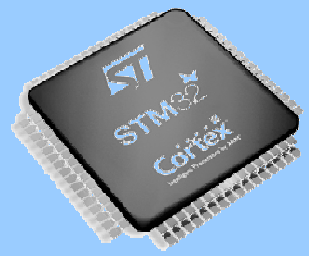
Q1 2010

Next to come :
-Up to 1 MB Flash
-Up to 96 KB Sram

STM32F103
STM32F101ZF

Performance Line
USB Access Line
Access Line

Flash Size (bytes)	36 pins QFN	48 pins LQFP	64 pins LQFP/BGA*	100 pins LQFP/BGA*	144 pins LQFP/BGA*
1MB			STM32F103RE STM32F101RE	STM32F103VE STM32F101VE	STM32F103ZE STM32F101ZE
768 K			STM32F103RD STM32F101RD	STM32F103VD STM32F101VD	STM32F103ZD STM32F101ZD
512 K			STM32F103RC STM32F101RC	STM32F103VC STM32F101VC	STM32F103ZC STM32F101ZC
384 K					
256 K					
128 K		STM32F103CB STM32F102CB STM32F101CB	STM32F103RB STM32F102RB STM32F101RB	STM32F103VB STM32F101VB	
64 K	STM32F103T8 STM32F101T8	STM32F103C8 STM32F102C8 STM32F101C8	STM32F103R8 STM32F102R8 STM32F101R8	STM32F103V8 STM32F101V8	
32 K	STM32F103T6 STM32F101T6	STM32F103C6 STM32F102C6 STM32F101C6	STM32F103R6 STM32F102R6 STM32F101R6		
16 K	STM32F103T4 STM32F101T4	STM32F103C4 STM32F102C4 STM32F101C4	STM32F103R4 STM32F102R4 STM32F101R4		



All in Full Production

*BGA package for Performance line only

STM32 Now & Next : answering 16-32bit trends

NOW

STM32
Access & Performance Q1 10
36/72MHz Cortex
768KB- 1MB Flash
96KB Sram

The world's la
CortexM3 MC r

STM32F10x
16K-512K Flash
Access/Performance
lines

NEXT

Q1 10
HIGH PERFORMANCE
MIPS/MHz/MEMORY
HIGH BANDWITH
PERIPHS

STM32 Plus !
Alarm & Secrurity
Factory automation
Audio, Metering

June 09
CONNECTIVITY
USB OTG , ETHERNET ,
STORAGE MEDIA ,

STM32 Connectivity
Factory automation
Audio, Medical
Gaming, Metering

ULTRA LOW POWER
LCD Q1 10
Ultra low static leakage
Ultra low uA/MHz
Low power analog

STM32L
Gluco meter
Gas & power meter
Portable GPS, DAB
Road Tolling

COST REDUCTIONS
Lower MHz
Simple Peripherals
Q4 09

STM32 Value Line
Printer, Home audio
Toys, 3D remote
Appliance