Single-chip 32-bit microcontrollers; 128 kB ISP/IAP flash with 16/32/64 kB RAM

LPC2106FHN48

Not Recommended for New Designs

This page contains information on a product that is not recommended for new designs.

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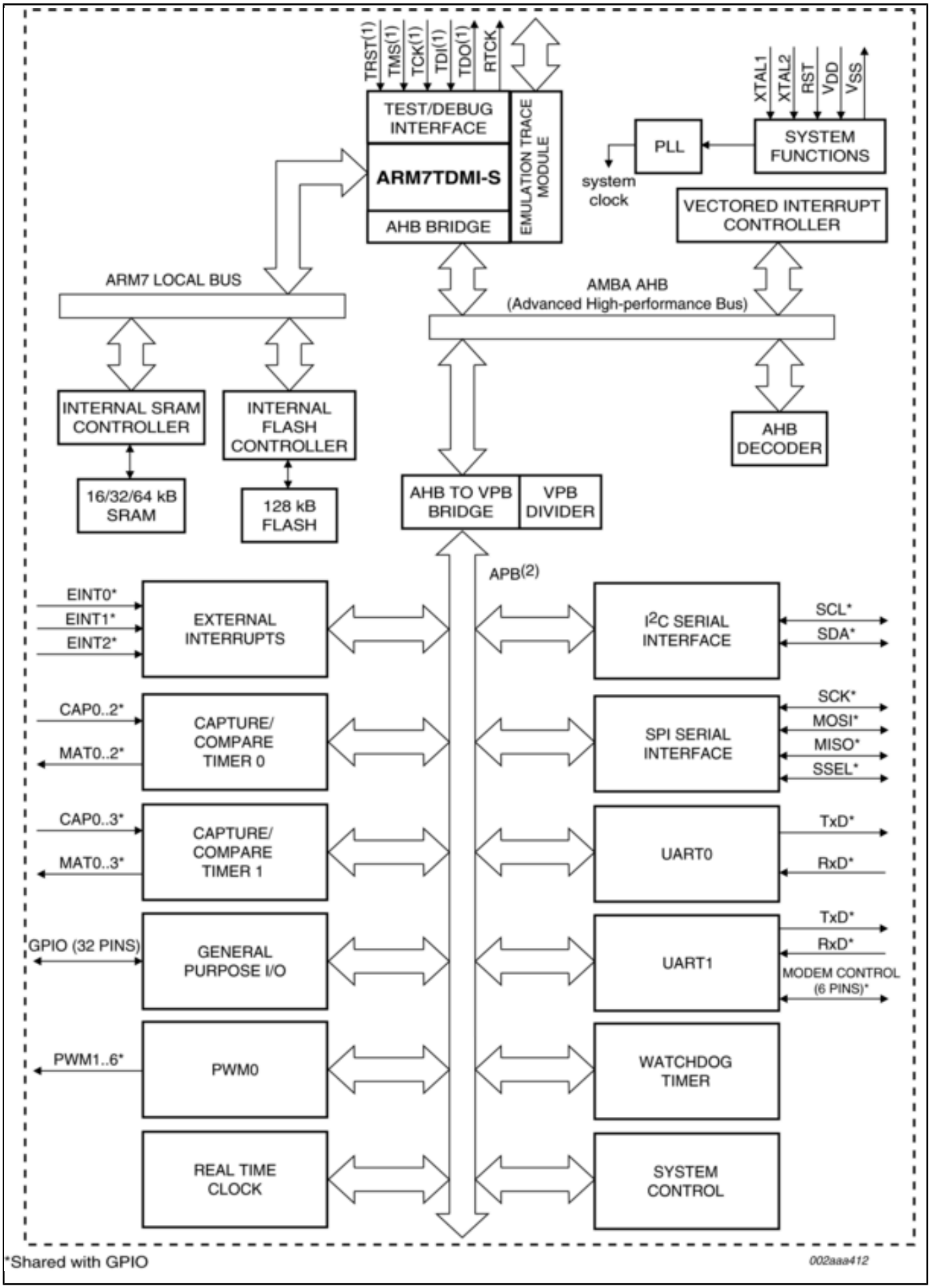
The UART are based on a 16/32-bit Arm7TDMI-S™ CPU with real-time emulation and embedded trace support, together with 128 kB of embedded high speed flash memory. A 128-bit wide memory interface and a unique accelerator architecture enable 32-bit code execution at maximum clock rate. For critical code size applications, the alternative 16-bit Thumb mode reduces code by more than 30 pct with minimal performance penalty.

Due to their tiny size and low power consumption, these microcontrollers are ideal for applications where miniaturization is a key requirement, such as access control and point-of-sale. With a wide range of serial communications interfaces and on-chip SRAM options up to 64 kB, they are very well suited for communication gateways and protocol converters, soft modems, voice recognition and low end imaging, providing both large buffer size and high processing power. Various 32-bit timers, PWM channels, and 32 GPIO lines make these microcontrollers particularly suitable for industrial control and medical systems.

Remark:Throughout the data sheet, the term LPC2104/2105/2106 will apply to devices with and without /00 and /01 suffixes. Suffixes will be used to differentiate devices whenever they include new features.

Block diagram: LPC2104FBD48, LPC2105FBD48, LPC2106FBD48, LPC2106FHN48 Block Diagram


TRST(1)
TMS(1)
TCK(1)
TDI(1)
TDO(1)
RTCK
TEST/DEBUG INTERFACE
ARM7TDMI-S
AHB BRIDGE
EMULATION TRACE MODULE
XTAL1
XTAL2
RST
VDD
VSS
PLL
SYSTEM FUNCTIONS
system clock
VECTORED INTERRUPT CONTROLLER
ARM7 LOCAL BUS
AMBA AHB
(Advanced High-performance Bus)
INTERNAL SRAM CONTROLLER
INTERNAL FLASH CONTROLLER
AHB DECODER
16/32/64 kB SRAM
128 kB FLASH
AHB TO VPB BRIDGE
VPB DIVIDER
APB(2)
EINT0*
EINT1*
EINT2*
EXTERNAL INTERRUPTS
I2C SERIAL INTERFACE
SCL*
SDA*
CAP0..2*
MAT0..2*
CAPTURE/ COMPARE TIMER 0
SPI SERIAL INTERFACE
SCK*
MOSI*
MISO*
SSEL*
CAP0..3*
MAT0..3*
CAPTURE/ COMPARE TIMER 1
UART0
TxD*
RxD*
GPIO (32 PINS)
GENERAL PURPOSE I/O
UART1
TxD*
RxD*
MODEM CONTROL (6 PINS)*
PWM1..6*
PWM0
WATCHDOG TIMER
REAL TIME CLOCK
SYSTEM CONTROL
*Shared with GPIO
002aaa412

View additional information for Single-chip 32-bit microcontrollers; 128 kB ISP/IAP flash with 16/32/64 kB RAM.

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