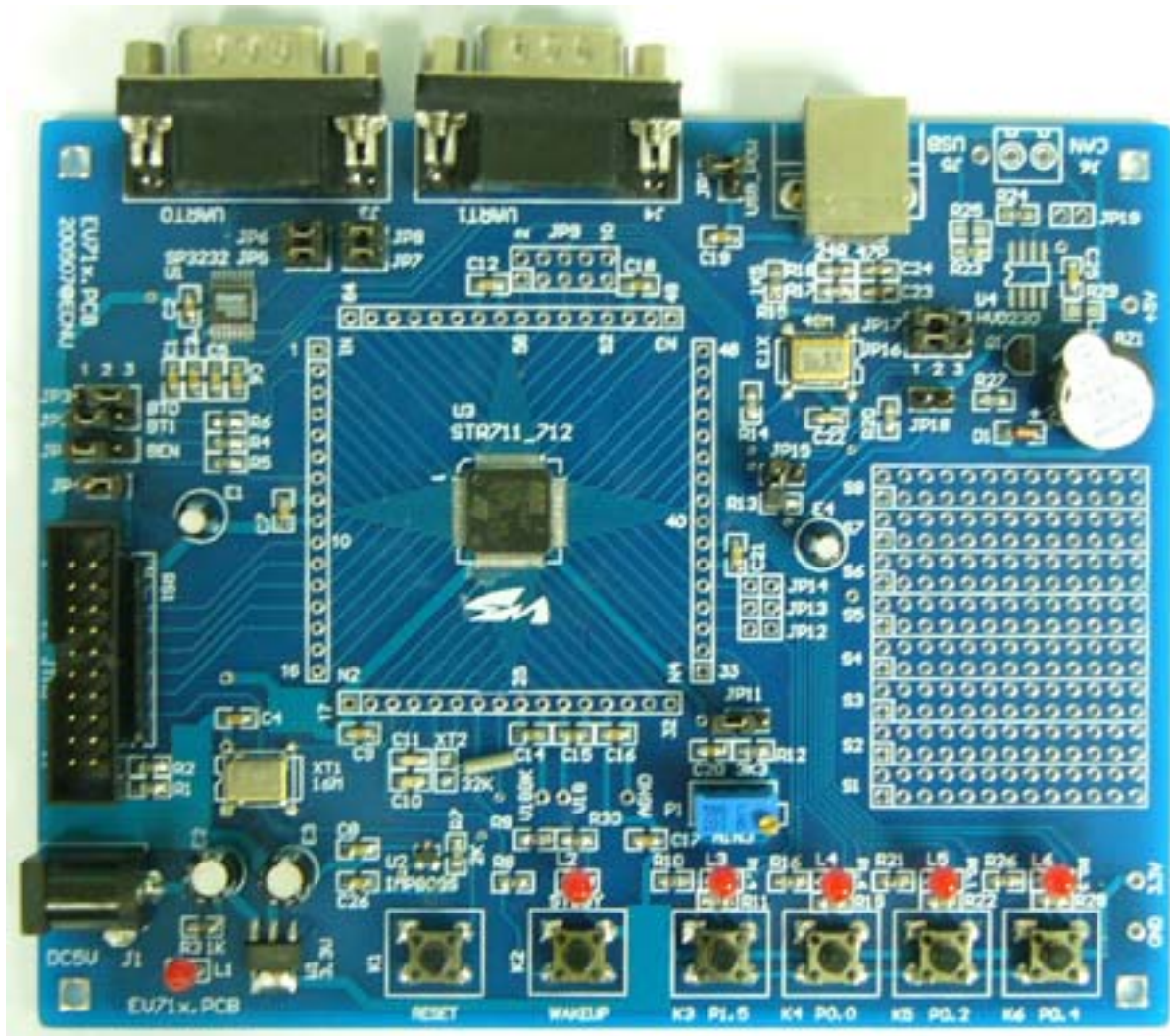


STDV711F Evaluation Board

- ARM7TDMI Evaluation Board based upon STMicroelectronics STR711FR2T6
- RS232, USB, SPI, I²C, A/D, RTC, WDG, LED, Buzzer...
- Enhanced I/O Expansion for HDLC, SC...



The STDV711F evaluation board is intended as a low-cost development platform to enable rapid evaluation of the STR71x series of 32-bit 64-pin ARM7 core microcontrollers from STMicroelectronics. The board is based on STR711FR2T6 microcontroller with on-chip 256+16Kbyte high-speed single voltage flash memory and 64Kbyte high-speed RAM. It is a highly integrated microcontroller with an embedded ARM7TDMI core and are compatible with all ARM tools and software. Serial peripheral interfaces include 2 SPIs, 2 I²C interfaces, 4 UARTs, and HDLC, SC, MMC interfaces. The device provides a USB interface and a 4-channel 12-bit A/D converter, 4 16-bit standard timers, RTC (Realtime Clock), WDG (Watchdog) and enhanced I/O ports and supports JTAG with debug mode trigger request.

The STDV711F evaluation board takes all features of STR711FR2T6 and has several boot mode selections. It integrates on board 2 RS232 UARTs, LEDs, test buttons, an ADC input and speaker to create a stand-alone versatile test platform. A 20-pin JTAG interface is also provided on this board to support high-speed download, in-circuit debugging and flash programming. It integrates a high-speed USB2.0 interface and 30 I/Os of the CPU are fully expanded on the board to support HDLC, SC interfaces and etc.

The board comes with documentation, schematics and plenty of example programs in source code to support the hardware platform. This is an idea platform for applications such as biometric chip card readers, point-of-sale and vending machines, testing equipment, USB memory sticks, PC keyboards and fingerprint transponders.

Hardware Description

The STDV711F Evaluation Board is with an embedded ARM7TDMI core and has on-chip 256+16Kbyte flash memory and 64Kbyte RAM. Serial peripheral interfaces include 2 SPIs, 2 I²C interfaces, 4 UARTs, and HDLC, SC, MMC interfaces. It has a 4-channel 12-bit A/D converter, 4 16-bit standard timers, RTC (Realtime Clock), WDG (Watchdog) and 30 enhanced I/O ports and supports JTAG with debug mode trigger request.

Embest STDV711F evaluation board exposes many of these features to the user in support of developing specific solutions. This board is characterized as follows:

- Dimensions: 135x108mm
- Working temperature: -40~+85 Celsius
- Power supply: +5V
- Processor: STMicroelectronics STR711FR2T6 (ARM7TDMI core with on-chip 256+16Kbyte flash memory and 64Kbyte RAM)
- 1 USB2.0 interface
- 2 RS232 UARTs (UART0, UART1)
- 6 LEDs (one for POWER, one for STANDBY and the other four are general used)
- 4 channel ADC and 1 regulator (for ADC test)
- 1 buzzer (for PWM test)
- 1 Reset button
- 1 Wake-up button
- 4 general-used buttons
- CPU I/Os expansion (HDLC, SC, etc.)
- IAP (In Application Programming) function
- A standard 20-pin Debug-JTAG connector

Software

Included with this development board are software modules written in C.

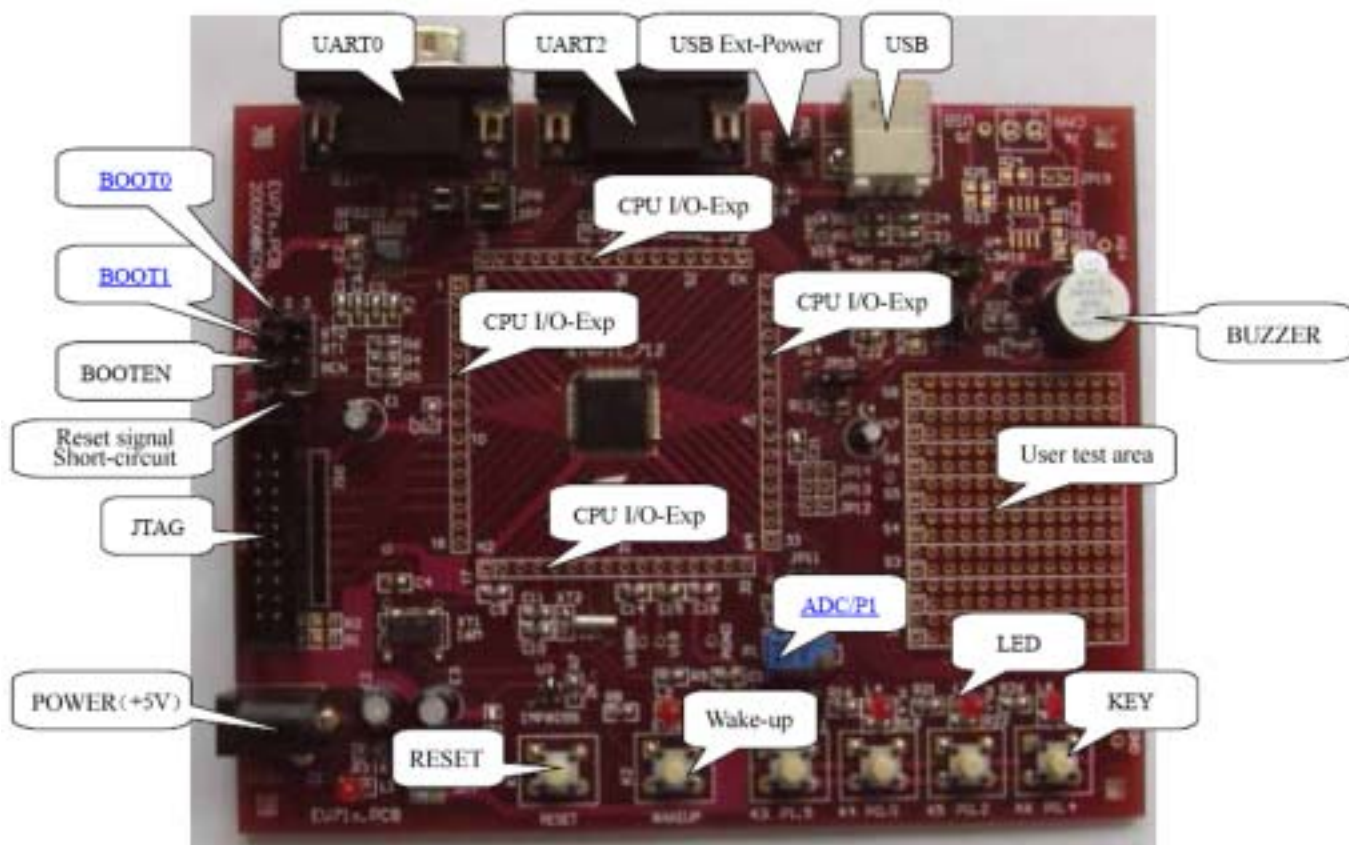
Source code provided includes the following test modules:

Note: Before downloading programs through emulator, please set the evaluation board using internal RAM boot mode.

Directory	Content
ADS	All source codes under ADS environment
--ADC	ADC test program
--COMMON	Common file including driver modules of main peripheral equipments
--str71x	Driver modules of STR71x on-chip peripherals
--uCOS_II	μC/OS-II source code for STR71x
__USB	STR71x USB software library (including a USB mouse demonstration)
--Flash	Flash burning test program
--I2C	I ² C test program
--Key	Key test program
--LED	LED test program
--PRCCU	Low-power mode and wake-up test program
--PWM	PWM test program
--SPI	SPI test program
--TestIO	Integrated test program
--Timer	Timer test program
--UART	UART test program
--uCOS_II	μC/OS-II porting test program
--USB	USB test program
__WDG	Watchdog timer test program
Embest IDE	Program source code under Embest IDE environment (structure of sub-directories similar to that under ADS environment)

Header Interfaces

There are a number of header connectors that are provided to the designer allowing them to access important areas of the processor I/O.

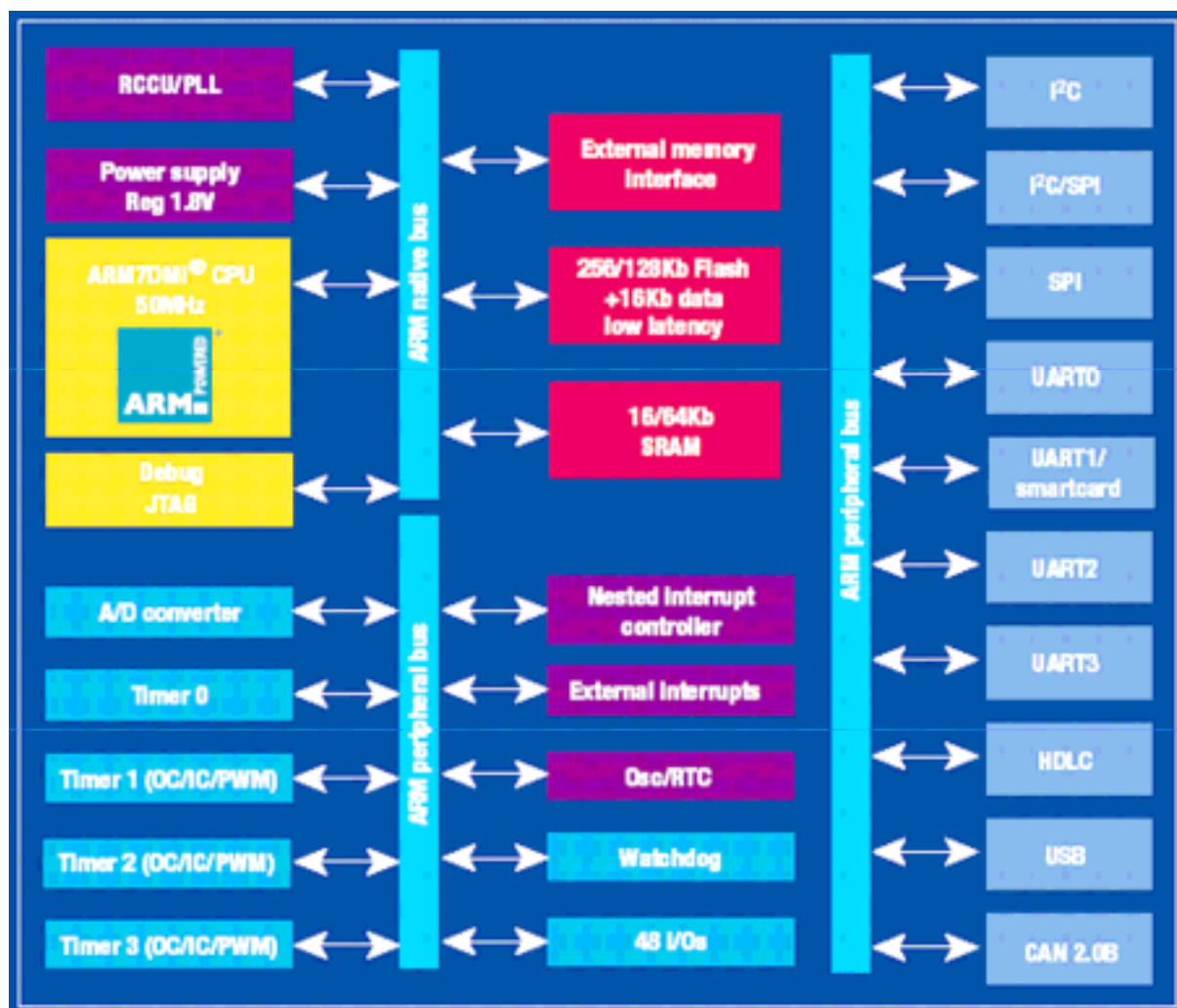


Embest STDV711F Evaluation Board

STR710F Series Device Summary

Features	STR710		STR711		STR712	
	Z1T6	Z2T6	R1T6	R2T6	R1T6	R2T6
FLASH memory (bytes)	128 K	256 K	128 K	256 K	128 K	256 K
RAM (bytes)	16 K	64 K	16 K	64 K	16 K	64 K
Peripheral Functions	CAN, EMI, USB, 48 I/Os		USB, 30 I/Os		CAN, 32 I/Os	
Operating Voltage	3.0V to 3.6V (optional 1.8V core)					
Operating Temperature	-40°C to +85°C					
Package	TQFP144 14x14		TQFP64 10x10			

STR710F Series Microcontroller Function Block Diagram



Order Information

Embest STDV711F™ Evaluation Board Kit contains a STDV711F target board, development tools listed in below table, examples software and some other accessories in a low price.

Order No.	EBD3
Item	Embest STDV711F Evaluation Board
CD-ROM	<ul style="list-style-type: none"> ✓ test software as outlined in the Software section ✓ user manual ✓ circuit schematic drawing ✓ parts datasheet ✓ STR7xx development documentations

Others	<ul style="list-style-type: none">✓ Serial cable✓ DC5V/1000mA Power Adapter✓ USB cable
Development Tools	- Embest IDE for ARM (IDE, editor, GNU ARM Compiler and Linker, debugger), evaluation version no need license. With a Jtag cable connecting evaluation board with PC via the parallel port of PC.

**Emb best Info&Tech Co., LTD.**

Room 509, Luohu Science&Technology Building,
#85 Taining Rd., Shenzhen, Guangdong, China 518020

Tel: +86-755-25635656/25636285

Fax: +86-755-25616057

Email: market@embedinfo.com

<http://www.embedinfo.com>

<http://www.armkits.com>