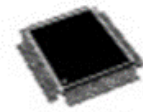


Description

adLuna-T device use the smallest, low power and energy-efficient 32bit RISC CPU core, with a maximum CPU speed of 100Mhz. The portfolio covers from 512Kbyte to 4Mbyte of flash with analog/digital peripherals, memories, USB and Audio Interface. adLuna-T is 32-bit microcontroller for general purpose applications.

Features

- **32bit RISC CPU Core**
 - 5-Stage Pipelining
 - Harvard Architecture
 - 16 General Purpose Register
 - 8 Special Purpose Register
 - 1 Cycle 32bit Multiplier
 - 8Kbytes I-Cache
 - Up to 100MIPS throughput with 100MHz Clock
- **Debug Interface**
 - On Chip Debug and In-System Programming through SWD
- **Memory**
 - 512KB/4Mbytes Internal Flash Memory
 - Endurance : 100,000 Write/Erase Cycles
 - 80Kbytes Internal SRAM
- **Sound Mixer**
 - - MONO Output
- **8-ch 12bit A/D converter**
 - 500kSPS
- **Low Power**
 - Sleep mode(CPU clock off),
 - Stop mode (Main OSC off)
- **Clock, reset and supply management**
 - POR and Programmable voltage detector (BOD)
 - 4-to-16 MHz crystal oscillator
 - PLL for CPU clock



LQFP80
10x10mm

- **Up to 47 fast I/O port**
- **DMA**
 - 4-ch GDMA
- **Timer**
 - 5-ch 32bit Timer with 10bit pre-scaler
Timer/Counter, PWM
Capture, Output Compare
 - 1-ch Tick timer with 64bit down counter
 - 1-ch 32bit Watchdog Timer
- **Up to 11 Communication interface**
 - 6-ch UART
support 6-ch. ISO 7816 interface
 - 2-ch Master/Slave SPI
 - 2-ch Two-wire Serial Interface
 - USB Full-Speed Device interface
Supports Full-speed Data Rate 12Mbps
- **Packages**
 - 80 pin LQFP
- **Part Matrix**

Product Code	Flash	SRAM
adLuna-T512K	512KB	80KB
adLuna-T4MK	4MB	80KB

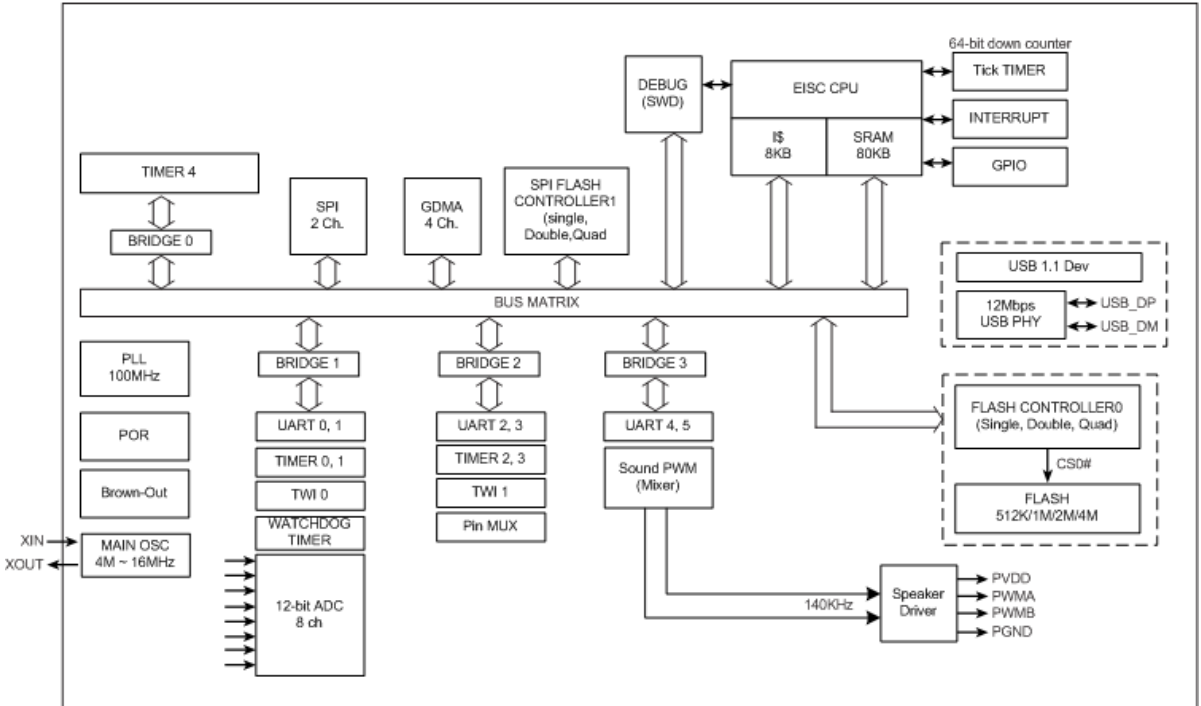
K:80pin w/ 0.4 pitch

(Unit : mm)

Application Area

- **Audio**
 - Announcement Device
- **Automotive**
 - Hi-Pass terminal
- **Home Appliance**
 - Rice Cooker and etc.
- **Toy**
 - Toy Robot, Story Book
- **Industrial**
 - Controller
- **Security**
 - Door Lock, Access Controller

Block Diagram



Comparison CANTUS vs. adLuna-T

Functions	CANTUS	adLuna-T
CPU Speed	96Mhz	100Mhz
Internal NOR Flash	128KB, 512KB	512KB, 4MB
Internal SRAM	80KB	80KB
12bit ADC	-	12bit ADC (4-ch, 8-ch)
UART	8-ch	6-ch (6-ch ISO7816)
SPI	1-ch	2-ch
I2S	1-ch	-
TWI	1-ch	2-ch
Timer	2-ch	5-ch
DMA	2-ch	4-ch
Sound Mixer	-	Mono
Max. GPIO	48	47
LCD Interface	SRAM	SPI
USB	USB v1.1	USB v1.1
RTC	O	X
Low Power Management	O	O
Debug Interface	JTAG	SWD
Package Type	100 Pin TQFP	80 Pin LQFP

● EISC Studio Software Tool

EISC-Studio is an integrated development environment tool for the developers who are using 32bit CPU in Windows environment. EISC-Studio provides convenient source editor, compile and debug tools while user implements a system and also, various images of high level programming language and executable code for source level debugging.