



Main Features

- ♦ COM Express basic form factor, Type 2
- ♦ Intel® Atom™ Processor on-board
- ♦ US15W SCH, 400/533 FSB
- ♦ H/W acceleration of video decode
- ♦ DDR2 400/533 SO-DIMM
- ♦ 10/100/1000 Ethernet controller
- ♦ LVDS/SDVO interface

Product Overview

ICES 210 is a COM Express module that features Intel® Atom™ CPU (1.1G/1.6G) and US15W SCH in small foot print. ICES 210 provides outstanding performance in the combination of high computing power and low thermal dissipation.

DDR2 SO-DIMM memory is supported up to 2GB, H/W video decode acceleration for H.264, MPEG2, MPEG4 and WMV9/VC1. Two PCIe x1, One PCI, LVDS and SDVO are supported.

ICES 210 also supports various interface for expansion such as IDE SATA x2, Giga LAN, USB x6 and GPIO.

Specifications

CPU Support

- ♦ Intel® Atom™ Z510 Processor, 1.1GHz, 400MHz FSB, L2 Cache 512MB
- ♦ Intel® Atom™ Z530 Processor, 1.6GHz, 533MHz FSB, L2 Cache 512MB, HT technology

Main Memory

- ♦ 1 x DDR2 400/533 SO-DIMM up to 2 GB, non-ECC

Chipset

- ♦ US15W SCH, 400/533 FSB

BIOS

- ♦ AMI BIOS, 1MB

LAN

- ♦ Realtek RTL8111C-GR PCI Express 10/100/1000 Ethernet controller

Display

- ♦ GMA 500 (Integrated in US15W SCH)
- ♦ Ultra lower power integrated 2D/3D graphics with H/W accelerator
- ♦ Video decode engine (H.264, MPEG2, MPEG4, VC1 and WMV9)
- ♦ Dual independent display (18 bit or 24 bit LVDS + SDVO)

Storage

- ♦ 2 x SATA II (3.0 Gbps)
- ♦ 1 x IDE (33/66/100)

USB

- ♦ 6 x USB 2.0 (host)

Audio

- ♦ HD Audio Interface (Integrated in US15W SCH)
- ♦ Support up to 4 audio streams, 32 bit sample depth, 192 KHz sample rate

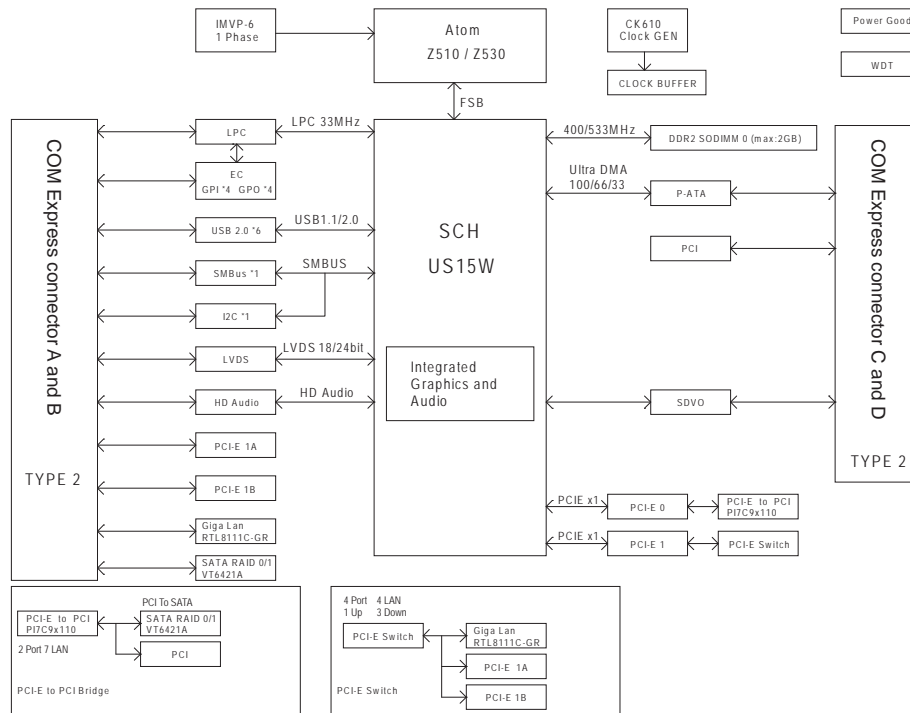
COM Express Connectors

- ♦ A, B connector
SATA x 2/LPC/SMBus/Two PCIe x 1/USB x 6/LVDS/Audio/GPIO/I2C/LAN
- ♦ C, D connector
IDE/PCI/SDVO

Others

- ♦ On chip RTC
- ♦ Watch dog timer
- ♦ GPI x 4, GPO x 4
- ♦ Hardware Monitor

Block Diagram



Power Requirements

- +12V, +5VSB, 3.3V RTC

Dimensions

- 94mm x 125mm

Environment

- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity:
 - 10% to 90% (operating, non-condensing)
 - 5% to 95% (non-operating, non-condensing)

Certifications

- CE approval
- FCC

Ordering Information

- **ICES 210-A11 (P/N: 10K00021000X0)**
COM Express Basic Module Type 2 with Intel® Atom™ Z510 (1.1G) processor
- **ICES 210-A16 (P/N: 10K00021001X0)**
COM Express Basic Module Type 2 with Intel® Atom™ Z530 (1.6G) processor