



### 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

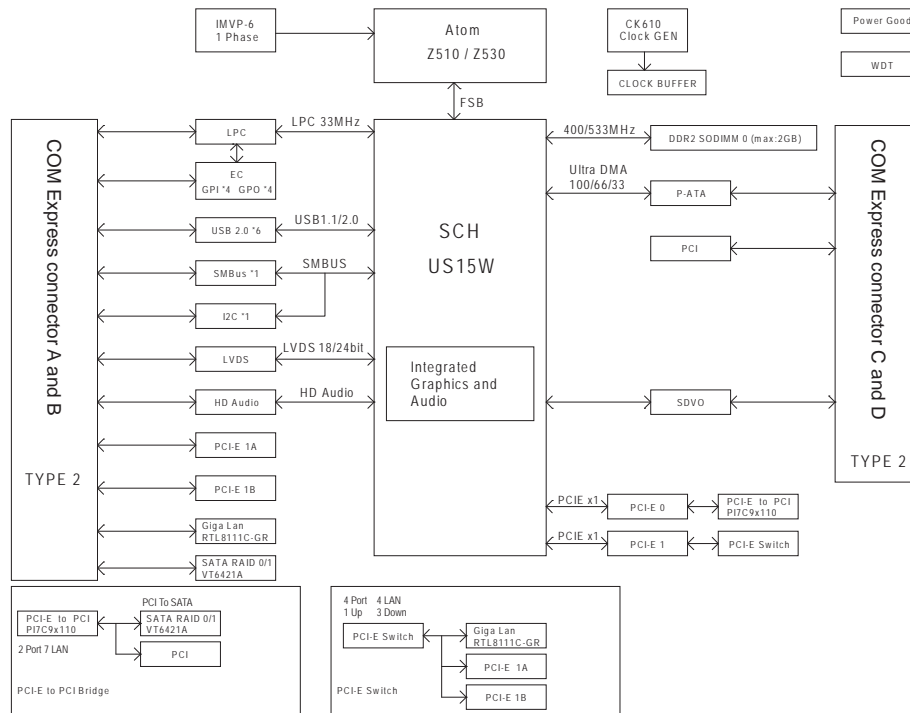
#### COM Express Connectors

- ♦ 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