H6824 is based on the new Intel® Atom™ Processor E3xxx offering increased performance while keeping power consumption low. The processor platform combines CPU, graphics engine and I/O in a single component, a so called system-on-chip, SoC.

The form factor is COM Express Mini (84 mm x 55 mm) and the module is compliant with COM Express R2.1, type 10. The feature set includes interfaces like 3 PCIe, LVDS, DDI, 9 USB and 2 SATA 2.0. The new Intel® HD graphics engine supports H264 and resolutions up to 2560x1600.

COM Express® is a registered trademark of the PCI Industrial Computer Manufacturers Group
**Technical Specifications**

### Processor options
- Intel® Atom™ Processor E3840 (2M Cache, 1.91GHz); 10W
- Intel® Atom™ Processor E3823 (1M Cache, 1.75GHz); 8W
- Intel® Atom™ Processor E3822 (1M Cache, 1.46GHz); 7W
- Intel® Atom™ Processor E3821 (1M Cache, 1.33GHz); 6W
- Intel® Atom™ Processor E3810 (0.5M Cache, 1.46GHz); 5W

### System Memory
- 1GB/2GB/4GB DDR3 on-board

### Onboard graphics features
- Intel® HD Graphics
- Display outputs:
  - 1 LVDS
  - 1 DDI: HDMI, DVI, DisplayPort
- Display resolution:
  - LVDS: NXP PTN3460, 24-bit, dual channel, up to 1920x1200
  - HDMI supports 1.4a resolution up to 2560x1600
  - DisplayPort supports 1.2 resolution up to 2560x1600
  - Embedded DisplayPort supports 1.3 resolution up to 2560x1600
- Supports Hardware H.264/AVC, MPEG-2 video decoder, VC-1, DirectX 9, 1080p decoder

### Onboard audio features
- Supports High Definition Audio interface

### Onboard LAN features
- Intel® i210AT Gigabit Ethernet Controller
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab
- Supports wire management

### Serial ATA (SATA) interface
- Supports 2 Serial ATA interfaces
- SATA 2.0 with data transfer rate up to 3Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller

### SSD (optional)
- 4GB/8GB/16GB/32GB
- Write: 30MB/sec (max), Read: 70MB/sec (max)
- SATA to SSD onboard

### Watchdog timer
- Watchdog timeout programmable via software from 1 to 256 seconds

### Expansion interfaces supported
- 1 USB 3.0 ports
- 8 USB 2.0 ports
- 3 PCIe x1 interfaces
- LPC interface
- SMBus interface
- I2C interface
- 8-bit Digital I/O

### Damage free intelligence
- Monitors CPU temperature
- Monitors CPU fan speed
- Monitors Vcore/VCC RTC/DDR3 voltages
- Watchdog timer function

### BIOS
- 16Mbit SPI BIOS

### OS support
- To be determined

### Temperature
- Operating: 0 °C to 60 °C
- Storage: -40°C to 85°C

### Humidity
- 10% to 90%

### Power input
- 4.75V to 20V, 5VSB, VCC_RTC (ATX mode)
- 4.75V to 20V, VCC_RTC (AT mode)

### PCB
- Dimensions:
  - COM Express® Mini, 84mm (3.30") x 55mm (2.16")
- Compliance:
  - PICMG COM Express® R2.1, Type 10