H6825 is a COM Express Compact (95 mm x 95 mm) module 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. H6825 is offered with five processor options from 5W maximum TDP to 10W and one CPU core up to four cores. 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
- One 204-pin DDR3 SODIMM socket
- Supports DDR3 1066/1333/1600MHz
- Supports single channel memory interface
- Supports up to 8GB system memory
- DRAM device technologies: 1Gb, 2Gb, 4Gb and 8Gb DDR3 DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

### Onboard graphics features
- Supports VGA/LVDS, DDI interfaces
- Supports DirectX 11.1
- LVDS: 18-bit single channel
- VGA display resolution up to 1600x1200
- 1 DDI: DDI1 supports DisplayPort 1.2
- Supports Hardware H.264, MPEG-2, VC-1, MPEG4 (DivX), and WMV decode

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

### Onboard LAN features
- Intel® WGI210AT Gigabit Ethernet Controller
- Integrated 10/100/1000 transceiver
- Compliant IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

### 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)

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

### Trusted platform module (TPM) - Optional
- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

### Watchdog timer
- Watchdog timeout programmable via software from 1 to 255 seconds

### Expansion interfaces supported
- Supports 1 USB 3.0 port
- Supports 8 USB 2.0 ports
- Supports 3 PCIe x1 (GPP, GPP3 is connected to onboard LAN by default)
- Supports 8-bit Digital I/O
- Supports LPC interface
- Supports I2C and SMBus interface

### Damage free intelligence
- Monitors APU temperature
- Monitors APU fan speed
- Monitors
  - APU_VDD/APU_VDDNB/APU_VDDIO_SUS/1V8/0V95 voltages
  - Watchdog timer function

### Temperature
- Operating: 0° C to 60°C
- Storage: -20°C to 85°C

### Humidity
- 5% to 90%

### Power input
- 12V, 5VSB, VCC_RTC (ATX mode)
- 12V, VCC_RTC (AT mode)

### PCB
- Dimensions
  - COM Express® Compact
  - 95mm (3.74") x 95mm (3.74")
- Compliance
  - PICMG COM Express® R2.1, Type 6

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