

This COM Express Compact module is based on Intel® Atom™ processors N455 (single core), D425 (single core) and D525 (dual core). H6812 is a cost-effective solution offering a rich feature set and medium range performance to embedded systems. The small size (95mm x 95mm) makes it suitable for compact embedded systems. It's a low power platform with two CPU options for fanless operation and one with dual core technology aimed at designs requiring increased computing performance. H6812 is available in versions specified for extended temperature range.



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H6812 – Technical Specifications

Processor options

Intel® Atom™ D525 (Dual core CPU)

Intel® Atom™ D425 (Single core CPU)

Intel® Atom™ N455 (Single core CPU)

Cooling Options

Intel® Atom™ D525: Heat sink with cooling fan

Intel® Atom™ D425: Fanless solution with heat sink

Intel® Atom™ N455: Fanless solution with heat sink

Hectronic offers heatspreader for existing processor options.

Chipset

Intel® ICH8M I/O Controller Hub

System memory

One 204-pin DDR3 SODIMM socket

Intel® Atom™ D425/D525

- DDR3 800MHz only
- Up to 4GB system memory

Intel® Atom™ N455

- DDR3 667MHz only
- Up to 2GB system memory

Onboard graphic features

Intel® GMA 3150 - Refresh of 3rd generation graphics core

Intel® Atom™ D425/D525

- 400MHz render clock frequency

Intel® Atom™ N455

- 200MHz render clock frequency

Supports VGA display

Intel® Atom™ D425/D525

- Resolution up to 2048x1536

Intel® Atom™ N455

- Resolution up to 1400x1050

Supports LVDS display

- Resolution up to 1366x768, 18bpp

DirectX 9 compliant Pixel Shader 2.0

Onboard audio features

High Definition Audio interface

Onboard LAN features

Intel® 82567V Gigabit Ethernet Phy

10Mbps, 100Mbps and 1Gbps data transmission

IEEE 802.3 (10/100Mbps) and IEEE 802.3ab (1Gbps) compliant

IDE interface

Up to two IDE devices

- DMA mode: Ultra ATA up to 100MB/s
- PIO mode: up to 16MB/s

Serial ATA (SATA) interface

3 Serial ATA interfaces compliant with SATA 1.0 specification

SATA speed up to 3Gb/s (SATA 2.0)

Connectors

COM Express connectors

- Two 220-pin COM Express 1.0 Type II connectors
- Module connector pin: Tyco 4H3-1827231-6

Expansion interfaces (Type II)

1 Gigabit LAN interface

LPC (Low Pin Count) interface

SMBus interface

3 SATA 2.0 interfaces

AC'97/HDA audio interface

8 USB 2.0 interfaces

5 PCIe x1 interfaces

LVDS 18-bit single channel interface

RGB, H-sync/V-sync VGA signals

8-bit Digital I/O interface

1 IDE interface

4 PCI slots (PCI 2.3 interface)

BIOS

Award BIOS

8Mbit SPI BIOS

Energy efficient design

ACPI 2.0/1.0 specification

Enhanced Intel® SpeedStep Technology

Power

Input: 12V, 5VSB, VCC_RTC

Temperature

0°C to +60°C (Standard)

-20°C to +70°C (Optional)

HUMIDITY

10% to 90%

Dimensions

Compact (Micro) COM Express form factor

95 mm (3.74") x 95 mm (3.74")

Compliance

PICMG COM Express R1.0 basic form factor, Type 2