

Magna - Processor Module (SoM)

Product Brochure



Magna Processor Module (SoM) is a high-performance hardware board in Ittiam's Magna family of system solutions. It can be leveraged to build high performance, differentiated & cost effective video networking solutions. Magna SoM is designed on Texas Instrument's **DaVinci™ TMS320DM816x** processor with ARM Cortex™ A8 and C674x™ DSP, and supports multi-channel Full-HD encoding, decoding and transcoding.

HIGHLIGHTS

- Multiple processor options (DaVinci™ DM8169, DM8168, DM8167, DM8165)
- Multi-channel, simultaneous H.264 encode and decode (up to 3x 1080p60)
- Multiple Magna SoMs can be mounted in a single 1RU system
- Ideal for Transcoder use case when used stand-alone, and for Streaming Server, Media Player, Digital Video Recorder, Mixer/Switcher when used with Nova I/O Board (Nova x1/x2/x3/x4/x7)
- Suitable for Surveillance, Enterprise, Broadcast applications, Medical, Defense & Industrial applications



Processing Power

TMS320DM816x - 1.2 GHz ARM Cortex-A8
 - 1.0 GHz C674x DSP

Memory Capacity

1 GByte (Optional 2 GByte) DDR3 SDRAM
 256 MByte NAND Flash

Data/Communication Interfaces*

2x Gigabit Ethernet

Expansion Interfaces

240-pin BTB Conn - Digital Audio/Video, Ethernet*, TSIF signals
 120-pin BTB Conn – PCIe 2.0 x2, GPIO signals
 60-pin BTB Conn - 1x SATA, 1x USB, Analog Video signals

Power Input

+12V DC - DC Jack or via 120/240-pin BTB Conn

Power Consumption

15W (Typical)

Dimensions**

3.5" x 5.5" x 0.9"/0.84" (90 x 140 x 22.9/21.3 mm)

Temperature Range

0°C to +40°C (Operating)

-40°C to +85°C (Storage)

* Accessible on-board or via 240-pin BTB Conn

** With/Without Processor Heatsink & Fan

Nova x4 I/O Board Specifications

AV/Stream Inputs

- 1x 3G-SDI Up to 1080p60 + 4x Stereo Audio
- 1x HDMI® Up to 1080p60 + 4x Stereo Audio Loop-through output
- 1x ASI Transport stream

AV/Stream Outputs

- 1x 3G-SDI Up to 1080p60 + 4x Stereo Audio
- 1x HDMI® Up to 1080p60 + 4x Stereo Audio
- 1x ASI Transport stream

Data/Communication Interfaces

- 1x RS-232/RS-422/RS-485

Expansion Interfaces

- 1x PCIe 2.0 x2
- 1x Expansion Header (GPIOs, SPI etc.)

Storage Interfaces

- 1x SATA, 1x USB 2.0

Other Features

RTC with power back up (up to 7 years with Battery). Status LEDs

Power Input

+12V DC / +5V DC (Optional) - Terminal Block

Power Consumption

4W (Typical)

Dimensions

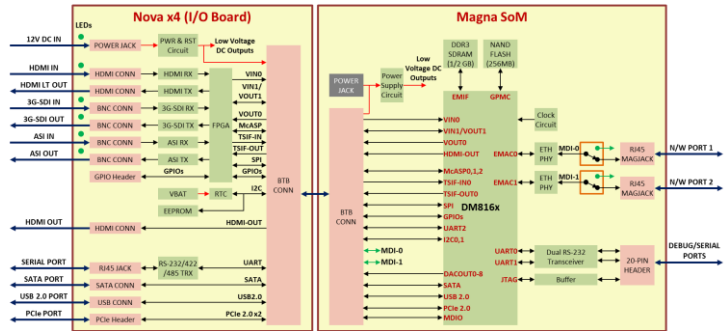
- 5.5" x 5.5" x 0.91" (140 x 140 x 23.0 mm)
- 5.5" x 5.5" x 1.61" (140 x 140 x 41.0 mm) ^①
- 5.5" x 5.5" x 1.68" (140 x 140 x 42.6 mm) ^②
- ^① with Magna SoM, without Processor Heatsink & Fan
- ^② with Magna SoM, with Processor Heatsink & Fan

Temperature Range

-20°C to +75°C (Operating)
-40°C to +85°C (Storage)



Magna SoM with Nova x4



Nova x7 I/O Board Specifications

AV/Stream Inputs

- 2x 3G-SDI Up to 1080p60 + 4x Stereo Audio

AV/Stream Outputs

- 2x 3G-SDI Up to 1080p60 + 4x Stereo Audio
- 1x HDMI* Up to 1080p60 + 4x Stereo Audio

Data/Communication Interfaces

- 1x RS-232/422/485

GenLock Support

- 1x GenLock Input with LT output

Expansion Interfaces

- 1x Expansion Header (GPIOs, SPI etc.)

Storage Interfaces

- 1x SATA, 1x USB 2.0

Other Features

RTC with power back up (up to 7 years with Battery). Status LEDs

Power Input

+12V DC

Power Consumption

6W (Typical)

Dimensions

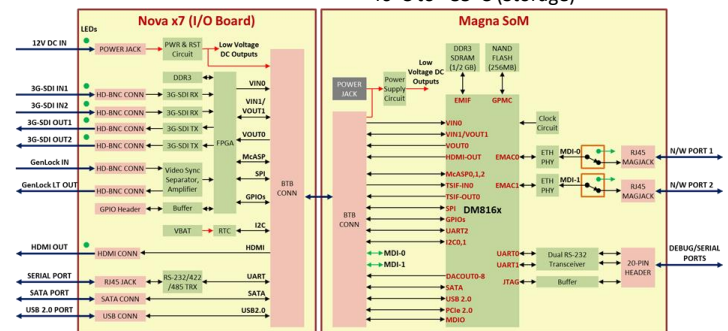
- 5.5" x 4.5" x 0.71" (140 x 114.3 x 18.1 mm)
- 5.5" x 4.5" x 1.42" (140 x 114.3 x 36.1 mm) ^①
- 5.5" x 4.5" x 1.48" (140 x 114.3 x 37.7 mm) ^②
- ^① with Magna SoM, without Processor Heatsink & Fan
- ^② with Magna SoM, with Processor Heatsink & Fan

Temperature Range

-20°C to +75°C (Operating)
-40°C to +85°C (Storage)



Magna SoM with Nova x7



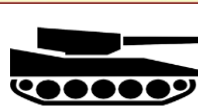
MEDICAL



BROADCAST



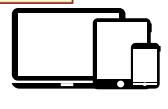
AVIONICS & IFE



DEFENSE



SURVEILLANCE



ENTERPRISE

For more details, write to ids-mkt@ittiam.com or visit www.ittiam.com/products/system-solutions

AMERICAS CONTACT

Bob Lee
Senior Director
+1-847-477-2411
bob.lee@ittiam.com

Dirk Peters

SVP, Business Development
+1-408-850-7244
dirk.peters@ittiam.com

EUROPE CONTACT

Elodie Livernette
Business Development
+33-185086071
elodie.livernette@ittiam.com

Marc Guillaumet

SVP, Marketing
+33-621403654
marc.guillaumet@ittiam.com

ASIA CONTACT

Chaucer Kuo
GM, Sales & Marketing
+86-1391-037-0450
chaucer.kuo@ittiam.com

JAPAN

Kazuyoshi Yui
Manager, Business Development
+81-50-3632-6801
kazuyoshi.yui@ittiam.com



KOREA

YJ Kim
Manager, Business Development
+82-10-3754-6431
yjkim@ittiam.com