

## PRESS RELEASE

### For Immediate Release

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## Macnica Adds Mpression Nitro Cyclone V GX Based Board With HSMC Expansion Capability

YOKOHAMA, Japan (June 3, 2014) – Macnica Group, a leading global technical distributor for semiconductor and networking products, today announced release of its Mpression Nitro board using an Altera Cyclone® V GX FPGA. It is useful for quickly prototyping FPGA-based multi-input/output applications in combination with various I/O daughter cards and 3 of its on-board HSMC\* expansion connectors. The Mpression Nitro board enables FPGA designers to accelerate Cyclone V GX based design and verification at minimum cost and time. Macnica starts to take orders for Mpression Nitro from the middle of June 2014 worldwide through local Macnica subsidiaries having an Altera franchise.

Macnica's Nitro board has minimum components such as a Altera Cyclone V GX FPGA in the center, two DDR3 memories and clock ICs, and the three HSMC connectors to connect to any HSMC daughter cards either currently existing or newly created for functional differentiation. (Figure 1) For example, using DDR3 as a frame buffer and combining daughter cards on the 3 connectors, you can build various applications such as a video stream format converter among HDMI, DVI, SDI, DisplayPort, V-by-One®, or a high speed packet data switch to PCI Express, Ethernet, USB3.0, etc.

Even after designing an application, you can create a new application by replacing all or a part of the daughter cards and FPGA logic, resulting in a reduction of cost and time compared to developing new boards from scratch. When the design has to adopt new I/O standards, a designer can either buy off-the-shelf daughter cards or create new ones. For details, please visit the Mpression web site: [www.m-pression.com/solutions/boards/nitro-board](http://www.m-pression.com/solutions/boards/nitro-board)

The Mpression Nitro board is sold through Macnica's worldwide network with Altera franchises in Japan, North America, China, Hong Kong, Taiwan, ASEAN countries and India.

#### About Macnica Group

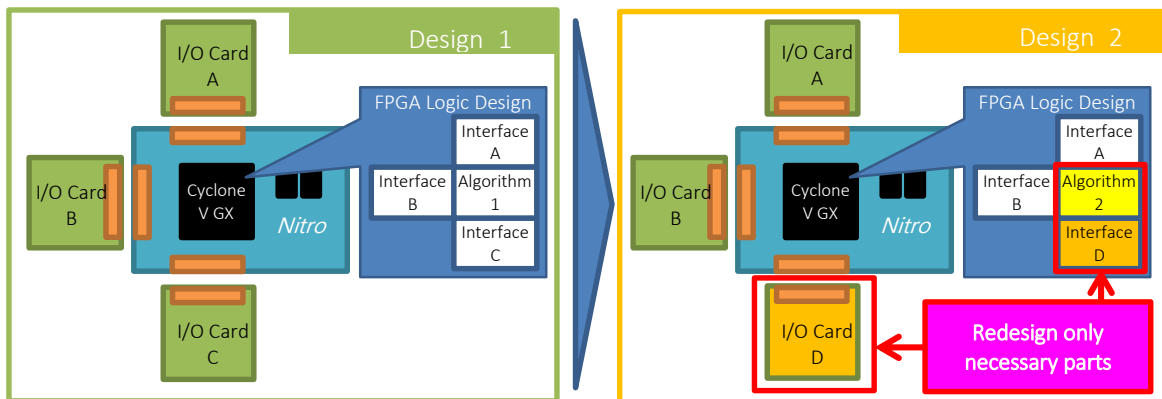
Macnica Group, a leading technical distributor operating worldwide, provides services and high-value products, including semiconductor components, electronic devices, network equipment and software, to electrical and electronics manufacturers and to IT and enterprise customers. Since Macnica was founded in 1972 in Japan, it has focused on technical support and continuous advancement of its technical capabilities. Macnica's business extends globally through its 34 local business centers worldwide, and aims to evolve from a unique Japanese company to a unique global company. Macnica operates in different brands in regions: Macnica (Japan, APAC, North America, Brazil, & Europe), Altima (Japan), Elseno (Japan), Kogent (Japan), Cytech Technology (China & Hong Kong), Cytech Global (ASEAN & India), and Galaxy Far East (Taiwan & China). For more details, please visit <http://www.macnica.co.jp/en/>

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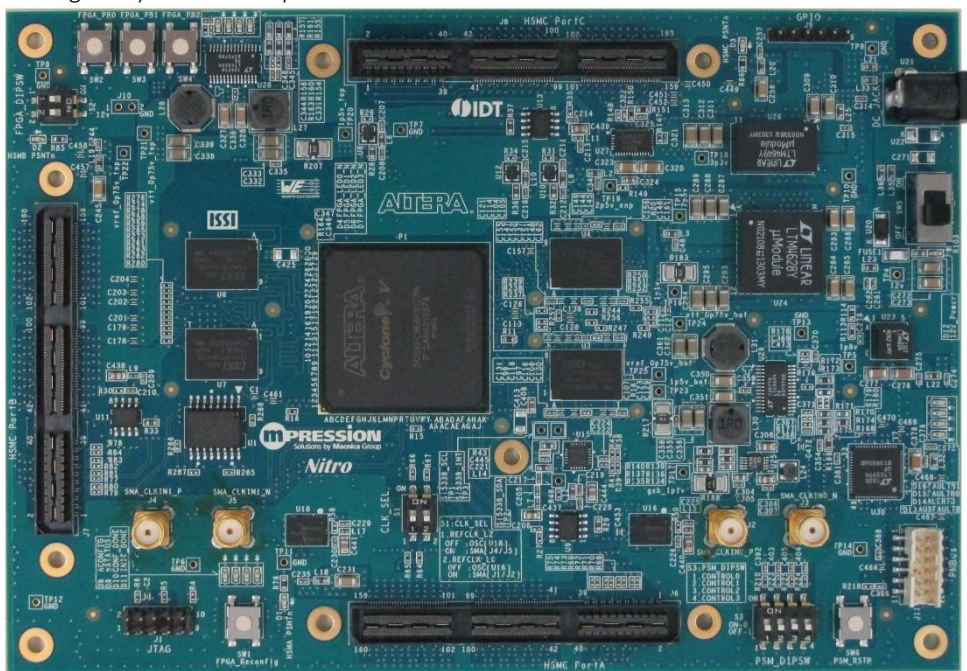
- Nitro features

Part Number:	ALTNITROC5GX
FPGA:	Cyclone V GX FPGA (5CGXFC9D6F31C7N)
Interfaces:	HSMC Connectors x 3
Memories:	DDR3-600 64bit x 1, DDR3-600 32bit x 1, Altera Configuration ROM (EPCQ256SI16N)
Others:	Linear Technology PSM for power monitoring and management JTEG, LED x 4, DIP switch, push switches, SMA connectors x for outside clock source
Deliverables	Nitro board, AC adapter, Reference design

- Figure 1) Nitro use case examples – connecting with I/O daughter cards in different configurations



- Figure 2) Nitro Board picture



- Reference

\*: HSMC – High Speed Mezzanine Card, a high speed adapter interface defined by Altera for connecting its development base boards and daughter cards, with connectors having 172 pins including 121 signal pins, 39 power pins and 12 ground pins.