NOLAM
EMBEDDED SYSTEMS

Bringing Life To Your Ideas

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Séminaire Nano-Innov

4 décembre 2013

Palaiseau

NOLAM "Integration System Capabilities" include:

- Pre-engineering design feasibility studies,

- Hardware and software design and customization,
- Integration of hardware, software and middleware

- Racks and enclosures, from prototypes to rugged airborne ATRs,
- Full integration testing, qualification testing, and acceptance testing,

- Documentation and training,
- Quality management,
- On site support,

- Obsolescence crisis Management.

WORLDWIDE NOLAM BUSINESS DEVELOPMENT
sustain by a strong and longtime business relationships.

NOLAM is focused on four main market targets:

FRANCE for the regional and european customers
USA
ISRAEL
INDIA

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NOLAM DEVELOPMENT

HARDWARE § SOFTWARE PRODUCTS

NOLAM EMBEDDED SYSTEMS

FORM FACTOR	AEROSPACE/ DEFENSE	INDUSTRIAL	TELECOM	MEDICAL
Small form factor NES-PENDORA NES-STORMBRINGER	 X X	 X X	 X X	 X X
VME NES-ILLUMINATOR	 X			
CompactPCI 3U & 6U NES-EUPHORIA 3U NES-AFTERBURNER 6U	 X X	 X	 X	
VPX 6U & 3U NES-STRIKER NES-COUGAR	 X X	 X X	 X X	
ATCA				
AMC				

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FORM FACTOR	AEROSPACE/ DEFENSE	INDUSTRIAL	TELECOM	MEDICAL
FMC				
NES-FMC1553	**X**			
NES-FMCA429	**X**			
NES-FMCA429/CAN	**X**			
NES-FMCSERIAL	**X**	**X**		**X**
NEW DEVELOPEMENT				
NES-IPCORE1553	**X**			
NES-IPCOREA429	**X**			
NES-IPCORECAN	**X**	**X**		**X**
NES-IPCORESERIAL	**X**	**X**	**X**	**X**
NES-IPCORE-H264	**X**	**X**		**X**
NEW BOARD DEVELOPPEMENT				
NES-GHOSTRIDER	**X**	**X**	**X**	**X**

NES-VULCAN
Rugged Data Recorder

Intel® Celeron M,Pentium M,Core 2 duo ,Atom® or I5 or I7 Processors up to 2.53Ghz, up to 16 GB SDRAM

Compact Flash socket

Solid State Disk on Board (optional)

Dual PMC/XMC slots

Dual Gigabit Ethernet ports

Four USB 2.0

VGA/DVI Port

Three Serial Ports RS232/422/485

Supports RAID levels: 0 / 1 / 3 / 5 / 10 / JBOD / Clone
Provides RAID Manager GUI Utility to configure and monitor the status of the disks connected on RAID controller
Supports Hot Spare on RAID (optional)

Power 12-36VDC Input

Rugged Conduction Cooled, Sealed, and Lightweight Enclosure

Circular D38999 Style Connectors

Environmental (MIL-STD-810F Compliant),EMI/EMC (MIL-STD-461E Compliant)

Temperature -40°C to +85°C

Support for Windows® XP,VISTA ,Windows7 VxWorks® ,Linux,LynxOS and QNX

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NES-ANVIL
Serial FPDP Data Recorder

Complete serial FPDP record and playback (Transmit) system

Up to eight I/O channels in a single 4U 19" industrial rack-mount PC

Supports Flow Control, CRC,and Copy/Loop Mode as a receiver and transmitter

Supports 1.0625, 2.125 and 2.5 GBaud link rates

Single-mode and multi-mode fiber interfaces

Real-time sustained recording rates of up to 2 GB/sec in 8-channel configuration

Up to 8 terabytes of storage with SSD or HDD

C-callable API for integration of recorder into application

RAID levels supported 0 ,1, 5 , 6, 10

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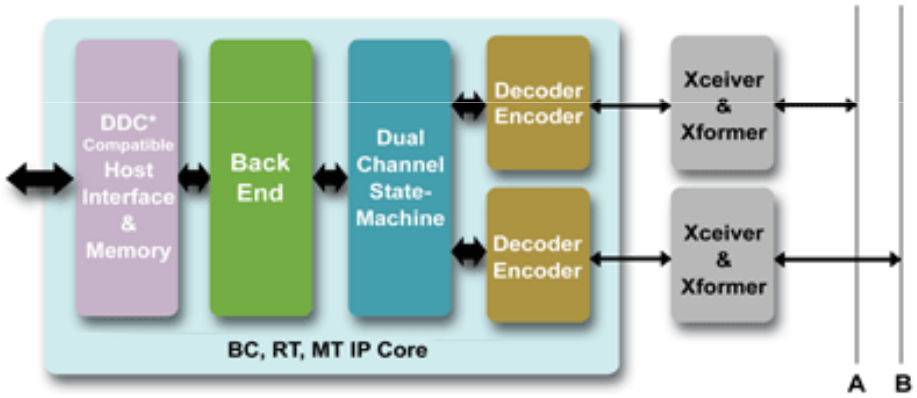
IP CORE
DEVELOPPEMENTS

NES-IPCOREMIL-STD1553
IP Core MIL-STD1553 BC/RT/MT Working on any type of FPGA



Mil-Std-1553 Intellectual Property for FPGAs and ASIC

Suitable for any MIL-STD-1553 BC, RT, MT implementation

Compatible to Enhanced DDC Mini-Ace interface and functionality, works with existing software drivers

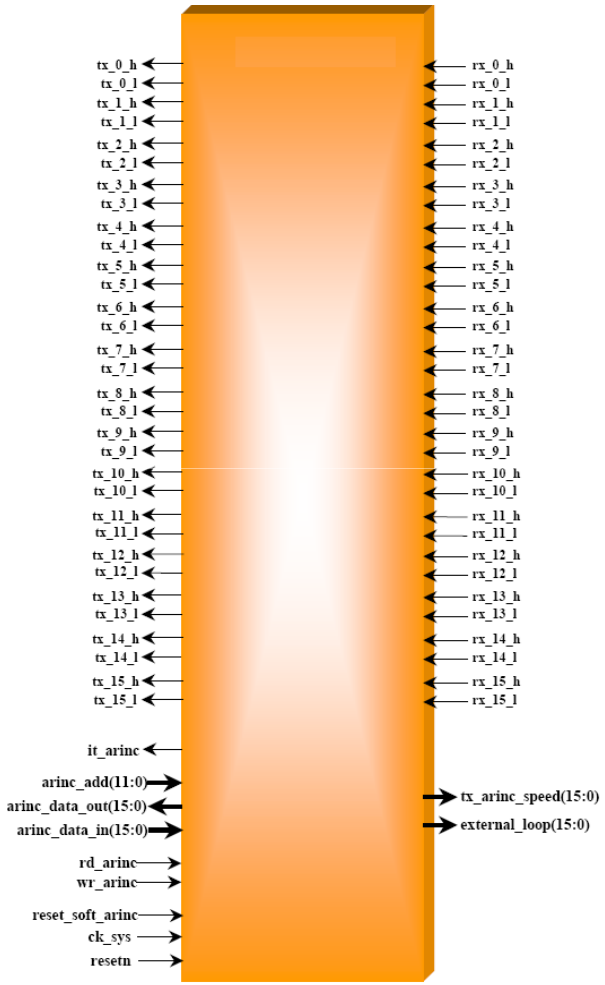
Eliminates risks related to parts obsolescence

Small FPGA area utilization

Supports any even clock frequency

Modular architecture allowing flexible implementations

NOLAM EMBEDDED SYSTEMS



NES-IPCOREA429
IP Core ARINC 429 Working on any type of FPGA

Up to 16 independent Receivers Rx with FIFO
Up to 16 independent Transmitter Tx with FIFO
16-bit Data bus
Direct addressing of all registers
Support all ARINC429 Data rate transfer and up to 2.5Mbit/s
Multi label capability
Parity Control : Odd,Even,No Parity ,Interrupt Capability
Independent Interrupt Request line for Rx and Tx functions
FPGA speed grade operating frequency dependant
System clock up to 70Mhz

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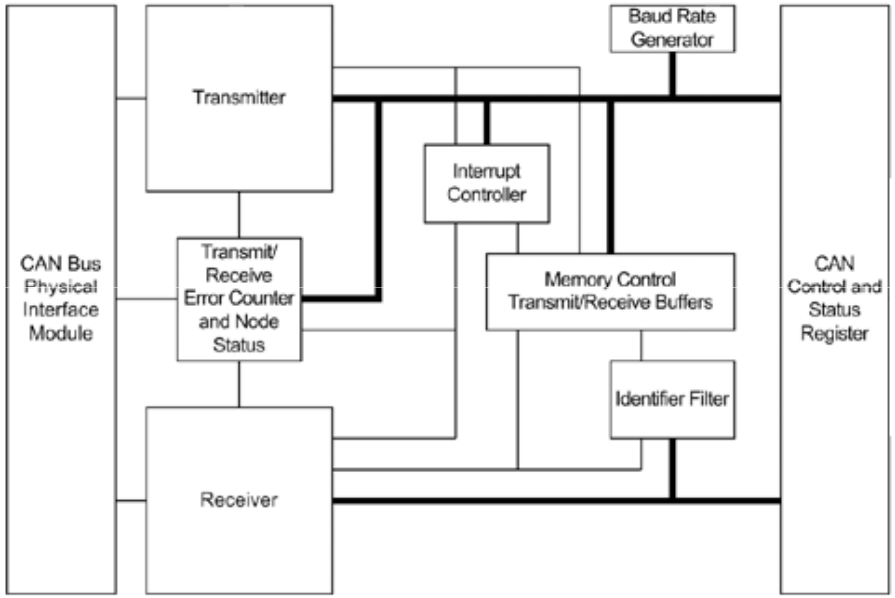
NES-IPCORECAN
IP Core CAN bus Working on any type of FPGA

FPGA IP Core
CAN Protocol Version 2.0A/B
- Standard and extended data frames
- 0..8 bytes data length
- Programmable bit rate up to 1 Mbps
Support of Remote Frames
5 receive buffers (FIFO scheme)
3 transmit buffers with prioritization
Maskable identifier filter
Programmable loop-back mode for self-test operation
Signaling and interrupt capabilities for receiver and transmitter error states



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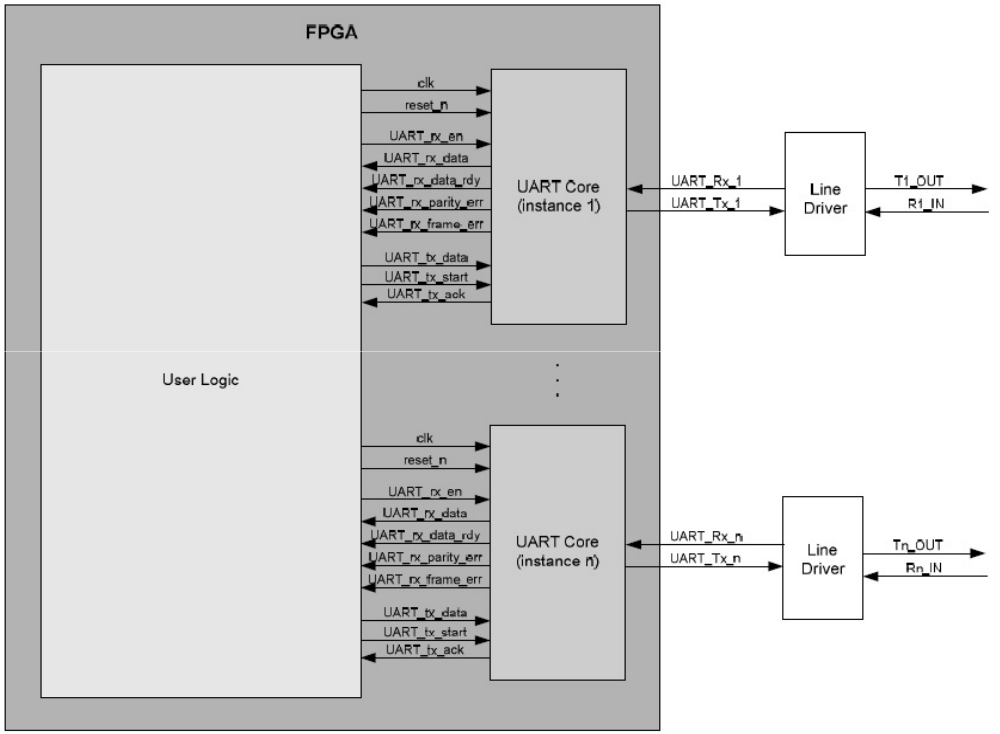
NES-IPCORESERIAL
IP Core Serial I/O Working on any type of FPGA



Separate configurable BAUD clock line
Majority Voting Logic
Two modes of operation: UART mode and FIFO mode
Configurable FIFO size up to 512 levels
Adds or deletes standard asynchronous communication bits (start, stop, and parity) to or from the serial data
Independently controlled transmit, receive, line status, and data set interrupts
False start bit detection
16 bit programmable baud generator
Independent receiver clock input
Programmable special characters detection
Trigger levels for TX and RX FIFO
Interrupts and automatic in-band and out-off-band flow control
Fully programmable serial-interface characteristics:
Clock prescaler from 1 to 31,875
Enhanced isochronous clock option
9-bit data mode
Software reset
Complete status reporting capabilities
Line break generation and detection. Internal diagnostic capabilities:
Full prioritized interrupt system controls
Fully synthesizable
Static synchronous design and no internal tri-states

NES-IPCORE-H264
IP Core H264 Encoder Working on any type of FPGA

Encoder features

8x8 and 4x4 adaptive spatial transform

Adaptive B-frame placement

B-frames as references /
arbitrary frame order

CAVLC/CABAC entropy coding

Custom quantization matrices

Intra: all macroblock types
(16x16, 8x8, 4x4, and PCM
with all predictions)

Inter P: all partitions
(from 16x16 down to 4x4)

Inter B: partitions from 16x16 down to 8x8 (including skip/direct)

Interlacing (MBAFF)

Multiple reference frames

Ratecontrol: constant quantizer, constant quality, single or multipass ABR, optional VBV

Scenecut detection

Spatial and temporal direct mode in B-frames, adaptive mode selection

Parallel encoding on multiple CPUs

Predictive lossless mode

Psy optimizations for detail retention (adaptive quantization, psy-RD, psy-trellis)

Zones for arbitrarily adjusting bitrate distribution,Provides high-performance compression

Encodes 4 or more 1080p streams in realtime on a single consumer-level computer.

High quality compression with advanced psychovisual optimizations.

Supports features necessary for many different video formats

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Current Main Customers

IAI (Israel Aircraft Industries)

Elbit Systems

Lockheed Martin

Thales

EADS

Rockwell Collins

Bharat Electronics

Systematic commercial india support

- Main Prospect

- **Bharat Electronics**
- **L&T**
- **Dynalog**
- **Tata Advanced Systems**

- Expected Turnover : 2M€

NES-STORMBRINGER

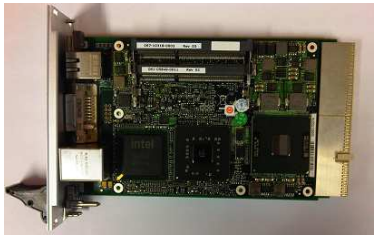
Small form factor Field Upgradeable SBC

Deploying PowerPC Core IQ or Celeron M,Pentium M, Core 2 duo ,Atom or i5, I7 Gen3 up to 2.53GHZ and 16GB RAM,Dual Gigabit Ethernet port, 4 USB ports,video ,CFAST, Sata ports operating temperature 0°C to 60° C and -40°C to 85° C operating systemWindows,linux,VxWorks

NES-PENDORA MiniITX Field Upgradeable SBC

Deploying PowerPC Core IQ or Celeron M,Pentium M, Core 2 duo ,Atom or i5, I7 Gen3 up to 2.53GHZ and 16GB RAM, Dual Gigabit Ethernet port, 3 RS232/422/485, dual XMC or PMC slots,CompactFlash, 4 USB ports,video , Sata ports operating temperature 0°C to 60° C and -40°C to 85° C operating system Windows,linux,VxWorks

NES-EUPHORIACompact PCI 3U Field Upgradeable SBC



Deploying PowerPC Core IQ or Celeron M,Pentium M, Core 2 duo ,Atom or i5 I7 Gen3 up to 2.53GHZ and 16GB RAM,Quad serial ports RS232/422/485, three Gigabit Ethernet ports, 4 USB ports,video ,CompactFlash , Sata ports operating temperature 0°C to 60° C and -40°C to 85° C operating system Windows,linux,VxWorks

NES-AFTERBRUNER Compact PCI 6U Field Upgradeable SBC

Deploying PowerPC Core IQ or Celeron M,Pentium M, Core 2 duo ,Atom or i5 I7 Gen3 up to 2.53GHZ and 16GB RAM,Quad serial ports RS232/422/485, three Gigabit Ethernet ports, 4 USB ports,PMC slot or Single or dual 2.5'' slot, video ,CompactFlash , Sata ports operating temperature 0°C to 60° C and -40°C to 85°C operating system Windows,linux,VxWorks

NES-STRIKER
VPX 3U Field Upgradeable SBC

Deploying PowerPC Core IQ or Celeron M,Pentium M, Core 2 duo ,Atom or i5 I7 Gen3 up to 2.53GHZ and 16GB RAM,Quad serial ports RS232/422/485, three Gigabit Ethernet ports, 6 USB ports, 8 GPIOports, video ,CompactFlash , Sata ports operating temperature 0°C to 60° C and -40°C to 85°C operating system Windows,linux,VxWorks

NES-COUGAR

VPX 6U Field Upgradeable SBC

Deploying PowerPC Core IQ or Celeron M,Pentium M, Core 2 duo ,Atom or i5, I7 Gen3 up to 2.53GHZ and 16GB RAM,Quad serial ports RS232/422/485, Gigabit Ethernet port, 4 USB ports,video ,CFAST, 2.5'' SATA slot or XMC slot , IPASS PCIe front panel, Sata ports operating temperature 0°C to 60° C and -40°C to 85° C operating system Windows,linux,VxWorks

NES-CPCI3U-4GBE

Compact PCI 3U Quad Ethernet

CompactPCI3U Quad Gigabit Ethernet
operating temperature -40°C to 85° C operating system
Windows,linux,VxWorks

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NES-VESTA

Standalone FMC Carrier

Size 136mmX80mm,1 FMC Slot ,FPGA Altera Cyclone III EP3C40 FBGA484,One USB port,One Serial port,Eight Users Leds,Power FMC VADJ adjustable in 1.2V,1.8V,2.5V and 3.3V Capacity 3A

NES-FMC1553

FMC Dual or Quad MIL-STD1553

FMC Dual or Quad MIL-STD1553 BC/RT/MT

NES-FMCA429
FMC Dual or Quad ARINC429

FMC Dual or Quad ARINC429 2Receive /2 Transmit channels or 4 Receive/4 transmit channels

NES-FMCA429/CAN
FMC Dual CAN bus and 2Receive/2 Transmit channels ARINC429

FMC Dual CAN BUS and 2Receive /2 Transmit ARINC429 channels

NES-FMCSER
FMC Serial 4 or 8 ports RS232/422/485

FMC 4 or 8 ports RS232/422/485 channels

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MERCI DE VOTRE ATTENTION !