# NEX 650-ADU

Mini-ITX form Factor
with Onboard Intel® Celeron® Processor J1900 Product Family



## Main Features

- Intel® Celeron® processor J1900
- Integrated Intel® Gen7 Intel® graphics DX 11, OGL3.2
- Supports dual channel DDR3 1333MHz, 2 x SO-DIMM, up to 8GB system memory
- 3 x COM (RS-232/422/485), 2 x COM (RS-232); 1 x HDMI, 1 x D-Sub, 1 x Dual channel 24-bit LVDS; 4 x USB 3.0, 6 x USB 2.0, 2 x SATA2; Gigabit LAN : 2 x Realtek LAN
- 12~24 V DC-in power support

## Product Overview

NEX 650-ADU is the NEXCOM most advanced flagship Mini-ITX form factor powered by onboard 4-core Intel® Celeron® J1900 processor (codenamed Bay Trail) that integrates with 24/48-bit LVDS & upto 8GB DDR3/L memory & rich I/Os.

NEX 650-ADU represents a powerful model for intensive multi-media & high computing base application which can be embedded into fan-less or 1U/2U rack mounted chassis as customized system–ready PBOX solution. The wide range 12~24V DC-in.

## Specifications

### Form Factor
- Dimensions: Mini-ITX (6.7-in x 6.7-in)

### Processor System
- CPU: Intel® Celeron® processor J1900
- Core number: 4
- Max speed: (by CPU)
- L3 cache: 2MB
- Chipset: N/A
- BIOS: UEFI

### Expansion Slot
- mini-PCIe: 1 (full size)
- mSATA: 1
- PCIe: 1

### Memory
- Technology: dual channel DDR3L 1333 MHz SDRAM
- Max.: 8GB
- Socket: 2 x SO-DIMM

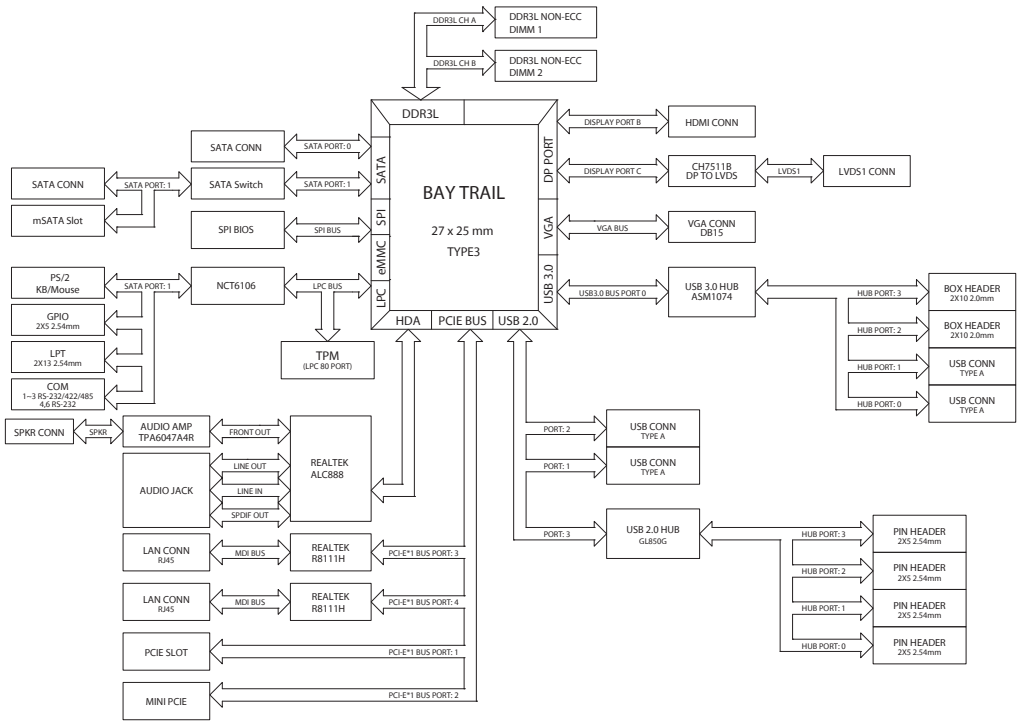
### Graphics
- Controller: Intel® Gen7 Intel® graphics DX 11, OGL3.2
- VRAM: shared memory
- VGA: supports max. resolution 1920 x 1200
- LVDS: dual channel 24-bit, max resolution 1920 x 1200@60Hz
- HDMI: supports HDMI 1.3a, max resolution 1920 x 1200

### Ethernet
- Ethernet: 10/100/1000 Mbps
- Controller: GbE LAN: 2 x Realtek RTL8111H-CG
- Connector: 2 x RJ-45

### I/O Interface
- Max. data transfer rate: SATA2 (3.0 Gb/s)
- Rear I/O
- VGA: 1
- HDMI: 1
- Ethernet: 2
- USB: 4 (2 x USB 3.0, 2 x USB 2.0)
- Audio: 2 (Mic-in, Line-out)
- Serial: 3 (RS-232/422/485)
- PS2: 2 (1 x keyboard, 1 x mouse)

### Internal Connector
- USB: 6 (2 x USB 3.0, 4 x USB 2.0)
- LVDS/inverter: 1/1
- VGA: 1 (shared with rear I/O VGA COM)
- Serial: 2 (RS-232)
- SATA: 2 x SATA2 (3.0Gb/s)
- mPCIe: 1
- Parallel: 1
- mSATA: 1 (shared)
- GPIO 8-bit: 4 x GPI + 4 x GPO
- SATA PWR output con: 1
- Speaker header: 1

## Block Diagram




### Watchdog Timer

- Output: from super I/O to drag RESETCON#
- Interval: 256 segments, 0,1,2…255sec/min

### Power Requirements

- Input PWR: 12~24V DC-in (4-pin ATX PWR Con)
- Power on: AT/ATX supported
- AT: directly PWR on as power input ready
- ATX: press button to PWR on after power input ready

### Environment

- Temperature: 0ºC~60ºC

## Ordering Information

- **NEX 650-ADU (P/N:10G00065007X0)**
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We reserve the right to change specifications and product descriptions at any time without prior notice.