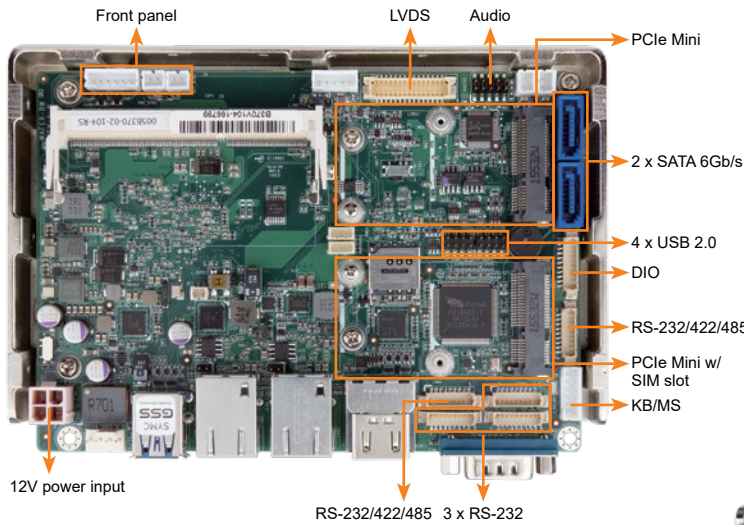


# WAFER-BW

3.5" SBC with Intel® 14nm Pentium®/Celeron® on-board SoC with Dual HDMI and LVDS, Dual PCIe GbE, USB 3.2 Gen 1 (5Gb/s), PCIe Mini, SATA 6Gb/s, mSATA, COM, Audio and RoHS

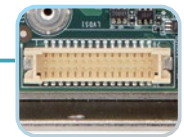


### Triple independent display

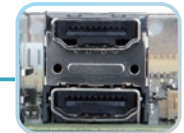
(Dual HDMI and one 18/24-bit dual-channel LVDS)



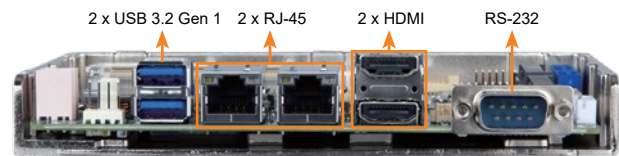
Digital Signage



LVDS



HDMI



## Specifications

- ◆ SoC
  - Intel® Pentium® N3710 on-board SoC (up to 2.56GHz, quad-core, 2MB cache, TDP=6W)
  - Intel® Celeron® N3160 on-board SoC (up to 2.24GHz, quad-core, 2MB cache, TDP=6W)
  - Intel® Celeron® N3060 on-board SoC (up to 2.48GHz, dual-core, 2MB cache, TDP=6W)
  - Intel® Celeron® N3010 on-board SoC (up to 2.24GHz, dual-core, 2MB cache, TDP=4W)
- ◆ BIOS
  - AMI UEFI BIOS
- ◆ Memory
  - One 204-pin 1600/1333 MHz single-channel DDR3L SDRAM unbuffered SO-DIMM slot supports up to 8 GB
- ◆ Graphics Engine
  - Intel® HD Graphics Gen 8 Engine with 16 low-power execution units, supporting DX11.1, OpenGL 4.2 and OpenCL1.2
- ◆ Display Output
  - Triple independent display
  - 2 x HDMI (up to 3840x2160@30Hz)
  - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
- ◆ Ethernet
  - LAN1: Realtek RTL8111GN
  - LAN2: Realtek RTL8111GN
- ◆ External I/O Interface
  - 1 x RS-232
  - 2 x USB 3.2 Gen 1 (5Gb/s) (on rear I/O)
- ◆ Internal I/O Interface
  - 1 x eMMC4.51 (optional)
  - 1 x KB/MS (1x6 pin)
  - 1 x mSATA
  - 2 x RS-232/422/485 (2 by pin header) (1x9 pin, P=1.25)
  - 2 x SATA 6Gb/s with 5V SATA power connector (no RAID)
  - 3 x RS-232 (1x9 pin, P=1.25)
  - 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ SMBus
  - 1 x SMBus (1x4 pin)
- ◆ I<sup>2</sup>C
  - 1 x I<sup>2</sup>C (1x4 pin)
- ◆ Audio
  - Realtek ALC662 HD codec
  - 1 x Front audio (2x5 pin)
- ◆ Front Panel
  - 1 x Power LED & HDD LED (1x6 pin)
  - 1 x Power button (1x2 pin)
  - 1 x Reset button (1x2 pin)
- ◆ LAN LED
  - 2 x LAN LED (1x2 pin)
- ◆ Expansion
  - 1 x Full/Half-size PCIe Mini slot (with SIM card holder)
  - 1 x Full/Half-size PCIe Mini slot (supports mSATA, colay with SATA port 2)
- ◆ Digital I/O: 8-bit digital I/O (1x10 pin, P=1.25)
- ◆ Fan Connector
  - 1 x Smart fan connector (1x4 pin)
- ◆ Power Supply
  - 12V only DC input
  - 1 x Internal power connector (2x2 pin)
  - Support AT/ATX mode
- ◆ Power Consumption
  - 12V@1.52A (Intel® Pentium® processor N3710 with 8 GB 1600 MHz DDR3L memory)
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 146mm x 102mm
- ◆ Weight: GW: 600g/ NW: 250g
- ◆ CE/FCC compliant

## Features

- 3.5" SBC supports Intel® 14nm Pentium®/Celeron® on-board SoC
- Triple independent display support
- 1.35V DDR3L 1333/1600 MHz SDRAM up to 8 GB
- COM, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s, PCIe Mini, mSATA and Audio support
- Two full-size PCIe Mini slots (one with SIM holder for WLAN/WWAN expansion)



## Packing List

1 x WAFER-BW single board computer	
1 x Audio cable	
1 x Power cable	2 x SATA with power cable kit
1 x RS-232/422/485 cable	1 x QIG

## Ordering Information

Part No.	Description
WAFER-BW-N4-R21	3.5" SBC supports Intel® Pentium® quad-core processor N3710 up to 2.56GHz (6W) with dual HDMI and LVDS, Dual PCIe GbE, PCIe Mini, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s, mSATA, COM, Audio and RoHS
WAFER-BW-N3-R21	3.5" SBC supports Intel® Celeron® quad-core processor N3160 up to 2.24GHz (6W) with dual HDMI and LVDS, Dual PCIe GbE, PCIe Mini, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s, mSATA, COM, Audio and RoHS
WAFER-BW-N2-R21	3.5" SBC supports Intel® Celeron® dual-core processor N3060 up to 2.48GHz (6W) with dual HDMI and LVDS, Dual PCIe GbE, PCIe Mini, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s, mSATA, COM, Audio and RoHS
WAFER-BW-N1-R21**	3.5" SBC supports Intel® Celeron® dual-core processor N3010 up to 2.24GHz (4W) with dual HDMI and LVDS, Dual PCIe GbE, PCIe Mini, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s, mSATA, COM, Audio and RoHS
32001-008600-200-RS	Dual-port USB 2.0 cable, 210mm, P=2.0
32006-001100-201-RS	PS/2 KB/MS cable, 135mm/110mm, P=2.0
32005-003500-200-RS	RS-232/422/485 cable, 250mm, P=1.25

\*\*By order production, MOQ: 100