



SPEC SHEET

# SYNCUSTECH

## EMB - NM70

# Intel Mobile Celeron 1037U High Value Industrial Mini-ITX Motherboard

## EMB - NM70

A high performing fanless-type ODM main board, capable of supporting multiple numbers of small-sized I/O (USB, serial) in Mini ITX. This board is applicable for POS, vision equipment, digital signage products, DVR, and industrial automation products.

### Features

- Intel® Mobile Celeron 1037U Dual Core, 2M Cache, 1.86GHz, FCBGA1023
- 2 x DDR3 Sodimm Socket supports up to 16 GB
- VGA and LVDS 1 x 40P Connector Support to 18/24bit, Single channel LVDS Signals
- 1 x HDMI Box Header
- 3 x Serial (Rear), 3 x Box Header Serial
- 4 x Rear Port, 4 x Pin Header (internal)
- Lan 2 x Gbe with 2 LEDs Rear Ports
- DC 12V 3.5A Power Adaptor
- Supports Win8, Win7, WinXP, Linux

| Module  | Function          |             | Descriptions                                      |
|---------|-------------------|-------------|---------------------------------------------------|
| Main    | Processor         | CPU         | Intel Mobile Celeron 1037U                        |
|         |                   |             | Dual Core, 2M Cache, 1.86GHz, FCBGA1023           |
|         | PCH               | PCH         | Intel Mobile NM70 Express Chipset, FCBGA989       |
|         | Memory            | Main Memory | 2 x DDR3 SODIMM Socket upto 2GB/4GB/8GB/16GB      |
|         | I/O Chipset       | Super I/O   | FINTEK F81866A, PQFP 128P                         |
|         | BRIDGE CONTROLLER | PCIE-to-PCI | PLX Tech, PEX8112-144P                            |
|         | OS                | OS          | WinXP, Windows7, Winodws8, Fedora Linux, etc.,    |
| Storage | BIOS              | Boot device | AMI UEFI BIOS for 16Mb/32Bb SPI ROM               |
|         | HDD               | Storage     | 3 x SATA GEN2 HDD, Up to 2 x 3.0GB/s, 1 x 6.0GB/s |

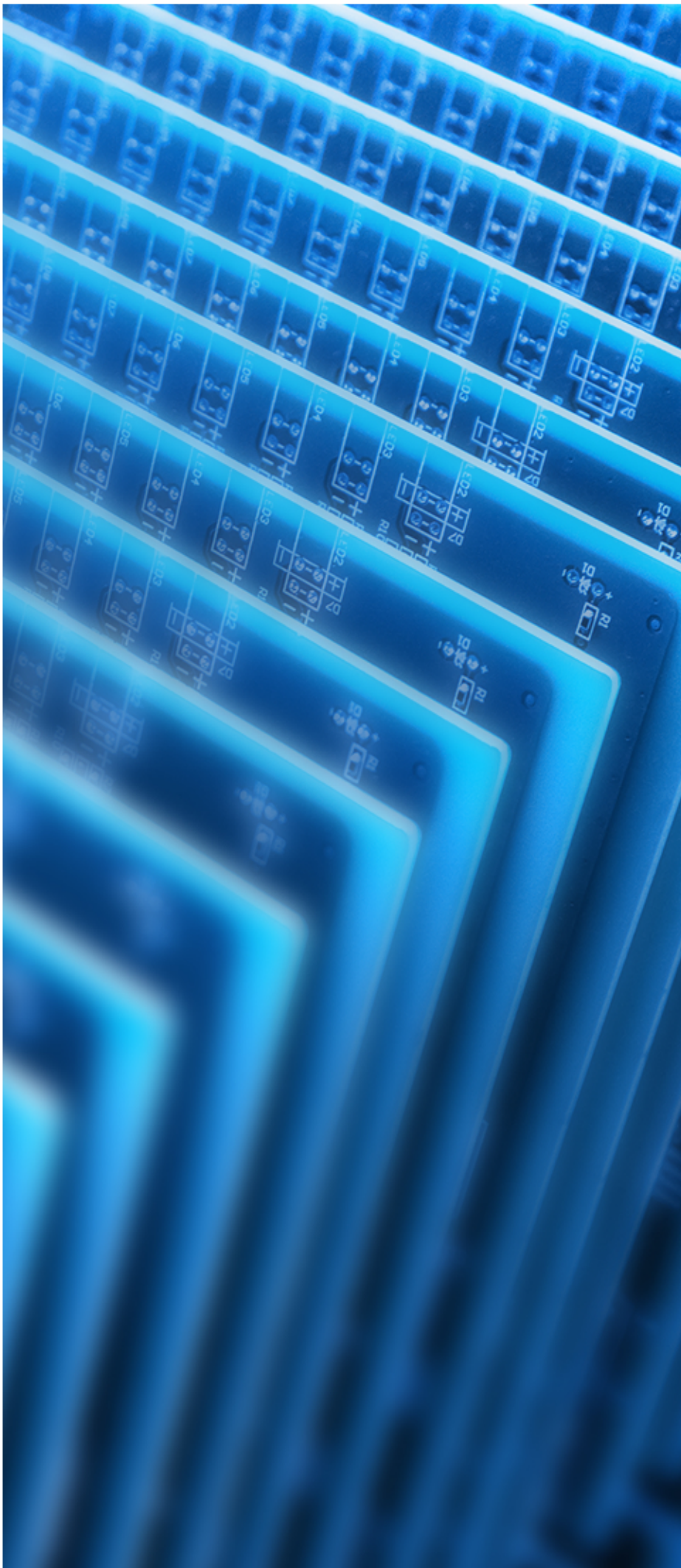


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| Module                          | Function                        |                             | Descriptions                                                                                                                                                             |
|---------------------------------|---------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On Board Connectors and Headers | Rear Panel I/O                  | VGA                         | 1 x VGA Connector                                                                                                                                                        |
|                                 |                                 | LAN                         | 2 x GbE RJ-45 Connector with 2 LEDs                                                                                                                                      |
|                                 |                                 | USB                         | 4 x Host                                                                                                                                                                 |
|                                 |                                 | SERIAL                      | 3 x 9P D-SUB Connector (COM1/2/3), COM1: 2 x RS-232/422/485 Select Jumper                                                                                                |
|                                 |                                 | Keyboard                    | 1 x PS/2 Keyboard                                                                                                                                                        |
|                                 |                                 | Mouse                       | 1 x PS/2 Mouse                                                                                                                                                           |
|                                 |                                 | Audio                       | 1 x Line-Out/Mic/Line-In (Factory Option)                                                                                                                                |
|                                 | On Board Headers and Connectors | LVDS                        | 1 x 40P Connector (Pitch=2mm or 2.54mm)<br>Support to 18/24-Bit Single channel LVDS Signals (Default)<br>Support to 18/24-Bit Dual Channel LVDS Signals (Factory Option) |
|                                 |                                 | Backlight Control Selection | 1 x 5P Connector                                                                                                                                                         |
|                                 |                                 | LCD CORE POWER              | 1 x 6P 2mm Header, LVDS CORE Power Select Header                                                                                                                         |
|                                 |                                 | HDMI BOX Header             | 1 x 20P 2mm BOX Header                                                                                                                                                   |
|                                 |                                 | Display Port                | 1 x 20P 2mm BOX Header                                                                                                                                                   |
|                                 |                                 | USB                         | 4 x 10P 2.54mm Header W/Key, 1.1/2.0 Supported                                                                                                                           |
|                                 |                                 | SERIAL                      | 3 x 10P 2mm BOX Header, RS-232C (COM4/5/6), W/Power Select Header (5V/12V)                                                                                               |
|                                 |                                 | Parallel                    | 1 x 26P 2mm BOX Header, Parallel                                                                                                                                         |
|                                 |                                 | GPIO n SPK                  | 1 x 10P 2mm Box Header, 2 DI/DO + Internal Stereo Speaker                                                                                                                |
|                                 |                                 | SATA                        | 3 x SATA Connector (1 x 6.0Gb/s, 3 x 3.0Gb/s)                                                                                                                            |
|                                 |                                 | SATA Power                  | 2 x 4P Connector, SATA Power (5V/12V), 1 x SATA Power Connector                                                                                                          |
|                                 |                                 | CPU FAN                     | 1 x 4P CPU Tacho Meter FAN Connector                                                                                                                                     |
|                                 |                                 | SYSTEM FAN                  | 1 x 3P SYSTEM FAN Connector                                                                                                                                              |
|                                 |                                 | Front Panel                 | 1 x 10P 2.54mm Header, Internal Front Panel Header                                                                                                                       |
|                                 |                                 | Clear CMOS Header           | 1 x 2P 2mm Header, CMOS Clear Header                                                                                                                                     |
|                                 |                                 | DCIN                        | 1 x 4P ATX Power Connector                                                                                                                                               |
|                                 |                                 | RS232/422/485 Select        | 1 x 16P Mode Setting Switch, RS-232/422/485 Mode/signal Select                                                                                                           |
|                                 | Slot                            | PCI                         | 1 x 32 Bit PCI Slot                                                                                                                                                      |
| Environment                     | Condition                       | Operating Temperature       | 0~60°C (Operational humidity: 40° C @ 95% RH Non-Condensing)                                                                                                             |
|                                 |                                 | Storage Temperature         | -40°C~85°C and 60°C @ 95% RH Non-Condensing                                                                                                                              |
| Certification                   | Safety & EMI                    | EMI                         | KCC                                                                                                                                                                      |
| Power                           | Adapter                         | DC In                       | 12V, DC INPUT                                                                                                                                                            |
| Cooling System                  | Cooling System                  | Heat Sink / Others          | TDP : 17W + 4W + Others                                                                                                                                                  |





This motherboard has been developed as a reference product and can be customized to your needs.

To ask for a customized solution, please contact our team at:

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