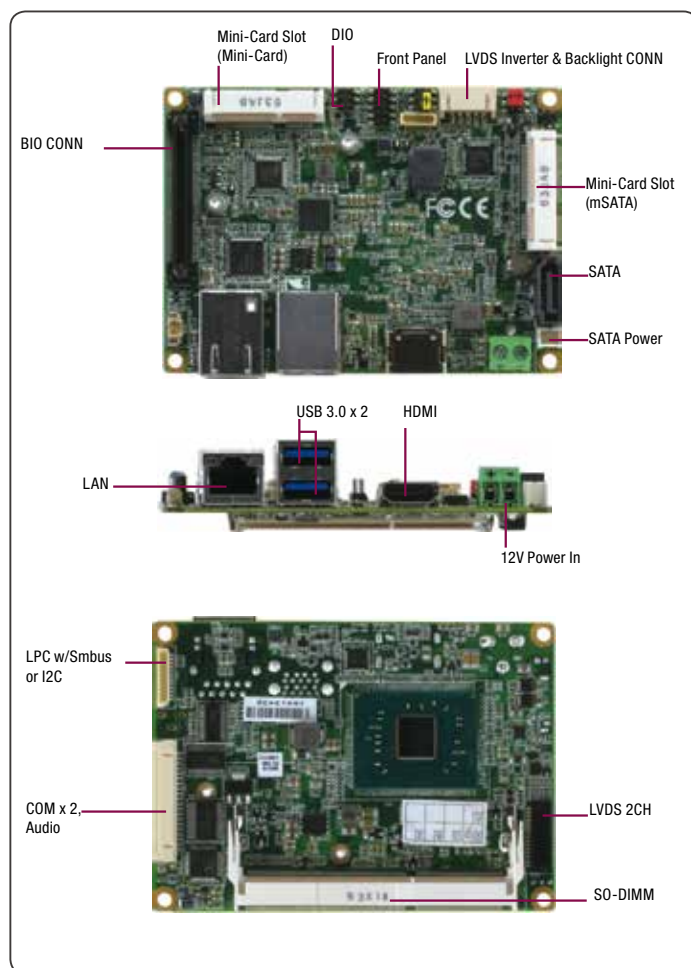


# 05 PICO-APL1

Pico-ITX Boards

Pico-ITX Board with Intel® Atom™/ Pentium® E3900 or N4200 Series Processor SoC



## Specifications

| System                      |   |
|-----------------------------|---|
| Form Factor                 | PICO-ITX  |
| CPU                         | Intel® Atom™ E3900 SoC Processor, Intel® N4xxx series |
| CPU Frequency               | up to 2.0GHz  |
| Chipset                     | Intel® Atom™ E3900 SoC Processor, Intel® N4xxx series |
| Memory Type                 | 204-pin DDR3L SODIMM x 1, DDR3L 1867MHz, Max 8GB      |
| Max. Memory Capacity        | Up to 8GB   |
| BIOS                        | AMI/SPI   |
| Wake On LAN                 | Yes   |
| Watchdog Timer              | 255 Level   |
| Power Requirement           | +12V AT/ATX (default)                                 |
| Power Supply Type           | AT/ATX(default), lockable connector optional          |
| Power Consumption (Typical) | TBD   |
| System Cooling              | Heat-spreader; heatsink optional                      |
| Dimension                   | 3.94" x 2.84" (100mm x 72mm)                          |
| Gross Weight                | —   |
| Operating Temperature       | 32°F ~ 140°F (0°C ~ 60°C),                            |
| Storage Temperature         | -40°F ~ 176°F (-40°C ~ 80°C)                          |
| Operating Humidity          | 0% ~ 90% relative humidity, non-condensing            |
| MTBF (Hours)                | —   |
| Certification               | CE,FCC  |

## Features

- Onboard Intel® ATOM/Pentium®/Celeron® E3900, N4200 Series Processor SoC
- DDR3L 1867Mhz SODIMM x 1, Up to 8 GB
- 18/24-bit Dual Channel LVDS LCD
- Support Triple Display (Optional)
- HDMI Support 3840 x 2160 (4K x 2K)
- SATA 3.0 x 1, mSATA (Full Size) x 1 or MiniCard x 1 (Optional)
- Gigabit Ethernet x 1, RJ-45 x 1
- USB3.0 x 2, USB2.0 x 1
- RS-232 x 1, RS-232/422/485 x 1
- Mini-Card x 1 (Half-Size)
- Digital I/O 4-bit
- BIO Connector for Daughter Board (Optional)



| Display        |  |
|----------------|--|
| Chipset        | Intel® Atom™ E3900 SoC Processor, Intel® N4xxx series                          |
| Resolution     | 1. LVDS (18/24bit 2CH) 1920 x1200<br>2. HDMI up to 3840 x 2160<br>3. DDI (BIO) |
| LCD Interface  | 18/24bit 2CH LVDS  |
| I/O            |  |
| Storage/SSD    | SATA III 6.0Gb/s x 1, mSATA/MiniCard(Full size) x 1                            |
| Ethernet       | Intel® Gigabit Ethernet i211AT, 10/100/1000Base, RJ-45 x 1                     |
| USB Port       | USB 3.0 x 2, Rear IO, USB 2.0 x 1  |
| Serial Port    | COM1: RS-232 x 1,<br>COM2: RS-232/422/485 x 1 (Ring/ +5V/ +12V)                |
| Audio          | Line-out x1  |
| DIO            | 4-bit (2-in, 2-out)  |
| Expansion Slot | Mini Card (Half-size) x 1, BIO x 1, I2C or SMBus x 1                           |
| SIM            | —  |
| TPM            | —  |
| Touch          | —  |

## Packing List

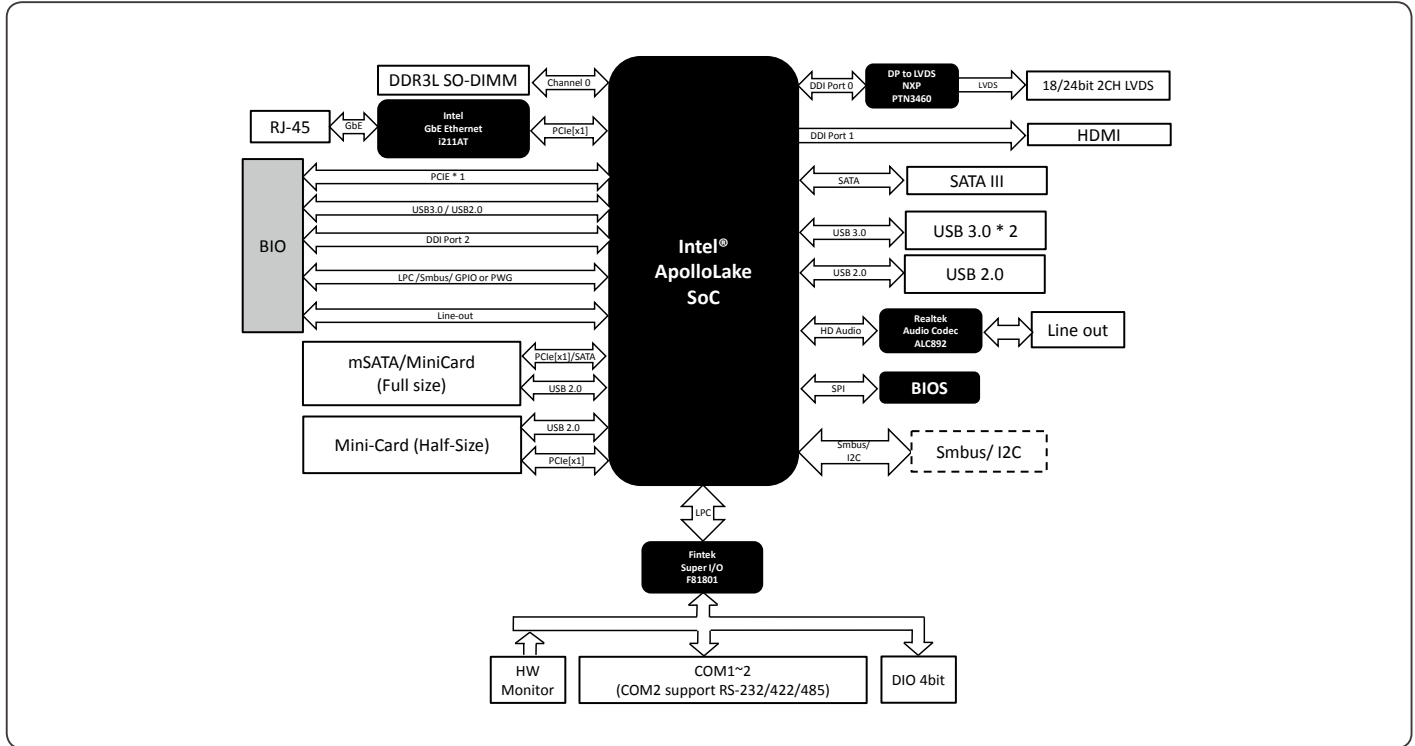
- M10BT01010  
Heat Spreader
- 1703200153  
COM x 2, Line-out Cable
- Product DVD
- PICO-APL1

## Optional Accessories

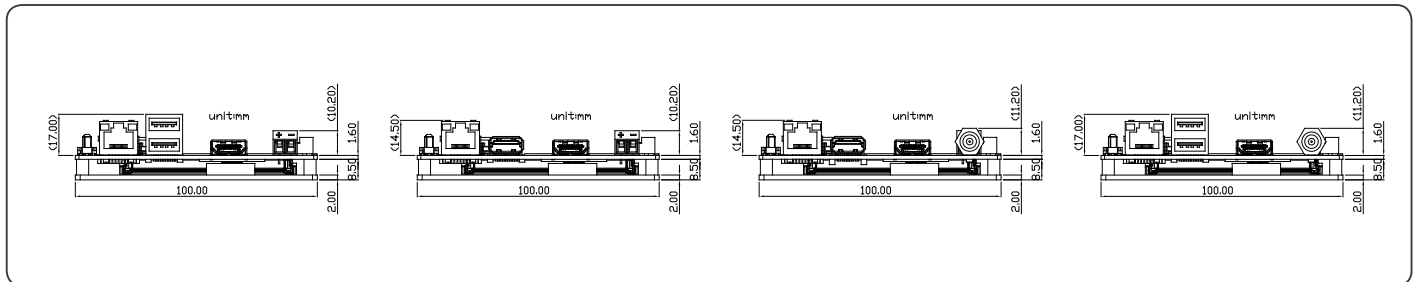
| Part Number          | Description                            | Qty. |
|----------------------|--|------|
| 1709070500           | (TF) SATA CABLE, 7P Pitch 1.27mm, 50cm | 1    |
| 1702150155           | (TF) SATA Power Cable                  | 1    |
| PICO-BT01-HSP01      | Heat-spreader                          | 0    |
| BIO-ST01-L1U2-A10-01 | LAN x 1, USB x 1                       | 1    |
| BIO-ST01-M1U1-A10-01 | MiniCard x 1                           | 1    |
| BIO-ST01-C4M1-A10-01 | COM x 1, MiniCard x 1                  | 1    |

\* Custom BIOS maybe required

## Block Diagram



## Dimension Unit: mm



## Ordering Information

| Part Number              | CPU   | Fan/Fanless   | Display       | LVDS      | Storage                            | LAN     | USB           | RS-232 | RS-232/422/485 | Expansion Slot           | Power | Power Temp | Others                  |
|--------------------------|-------|---------------|---------------|-----------|------------------------------------|---------|---------------|--------|----------------|--------------------------|-------|------------|-------------------------|
| PICO-APL1-A10-0001 (TBD) | N4200 | Heat-Spreader | LVDS/<br>HDMI | 24bit,2CH | SATA x 1, mSATA x 1<br>(Full-size) | GbE x 1 | USB3.0<br>x 2 | 1      | 1              | miniCard x 1 (Half-size) | 12V   | 0°C ~ 60°C | BIOS, DIO x 4, Line-out |
| PICO-APL1-A10-0002 (TBD) | N3550 | Heat-Spreader | LVDS/<br>HDMI | 24bit,2CH | SATA x 1, mSATA x 1<br>(Full-size) | GbE x 1 | USB3.0<br>x 2 | 1      | 1              | miniCard x 1 (Half-size) | 12V   | 0°C ~ 60°C | DIO x 4, Line-out       |