



## ARC-1033

10.4" Intel® Apollo Lake Fanless Rugged Touch Panel PC with IET Expansion

- > 10.4" XGA LCD with 5-wire Resistive Touch
- > Onboard Intel® Apollo Lake SoC BGA Processor
- > 1 x 204-pin DDR3L SODIMM Socket, Supports Up to 8GB DDR3L 1600MTs SDRAM
- > 2LAN, 2COM, 4USB3
- > Available Expansion for Audio, USB, COM, HDMI, MPCle, GPIO, CAN Bus
- > Rugged Design for Vibration & Shock Protection, Cableless Design
- > Fanless Operation from -10 ~ 50°C (N3350/N4200), -20 ~ 60°C (E3950)
- > Wide Range DC Power Input from +9 ~ 36Vdc
- > Service Window, Easy to Install Memory Module
- > IP65 Compliant Front Panel, IP41 Rear Box
- > TPM2.0 (optional)

### Spec

| -System Information-      |                                                                                                                   |
|---------------------------|-------------------------------------------------------------------------------------------------------------------|
| Processor                 | Onboard Intel® Apollo Lake SoC BGA Processor (Apollo Lake Platform N4200/ N3350/ E3950 CPU)                       |
| System Memory             | One 204-pin DDR3L SODIMM Socket, Supports Up to 8GB DDR3L 1600Mhz SDRAM (Non-ECC)                                 |
| Watchdog Timer            | H/W Reset, 1sec. ~ 65535sec./1sec.step                                                                            |
| H/W Status Monitor        | Monitoring CPU & System Temperature and Voltage                                                                   |
| TPM                       | TPM 2.0 (by optional)                                                                                             |
| CPU Cooler (Type)         | Fanless Heatsink                                                                                                  |
| Expansion                 |                                                                                                                   |
| Expansion                 | 1 x mSATA supports on the 1st Mini PCIe slot, Auto switch for mSATA or Mini PCIe<br>1 x 80-pin IET Interface      |
| Storage                   |                                                                                                                   |
| Storage                   | 1 x 2.5" Drive Bay(7mm HDD Restricted)                                                                            |
| HDD/ SSD                  | 1 x SATA3                                                                                                         |
| Other Storage Device      | 1 x mSATA supports on the 1st Mini PCIe slot, Auto switch for mSATA or Mini PCIe                                  |
| Panel                     |                                                                                                                   |
| LCD Size                  | 10.4" 4:3                                                                                                         |
| Display Type              | XGA                                                                                                               |
| B/L Inverter/Converter    | LCD built in                                                                                                      |
| Resolution                | 1024x768                                                                                                          |
| Pixel pitch               | 0.0685mm(H) x 0.2055mm(V)                                                                                         |
| Luminance                 | 500 cd/m2                                                                                                         |
| Contrast ratio            | 1200                                                                                                              |
| Viewing angle             | 88 (U), 88 (D), 88 (L), 88 (R)                                                                                    |
| Response time             | 25 ms                                                                                                             |
| Backlight                 | LED                                                                                                               |
| Touch Type                | 5 Wires resistive                                                                                                 |
| Touch Light Transmission  | 80 %                                                                                                              |
| Touch Controller          | Onboard USB touch (PenMount)                                                                                      |
| I/O                       |                                                                                                                   |
| USB Port                  | 4 x USB3.0 (2 x Double deck)                                                                                      |
| COM Port                  | 1 x RS-232/422/485, selectable by BIOS, RS-485 supports Auto Flow, Pin-9 selected by Ring/+5V/+12V)<br>1 x RS-232 |
| DIO                       | 16-bit GPIO                                                                                                       |
| Expansion                 | 1 x mSATA supports on the 1st Mini PCIe slot, Auto switch for mSATA or Mini PCIe<br>1 x Optional by IET module    |
| Other                     | 3 x Knockouts for Antenna Mounting                                                                                |
| System Control            |                                                                                                                   |
| LED Indicator             | HDD LED, Power LED                                                                                                |
| DC In/Out Characteristics |                                                                                                                   |
| Power Type                | AT/ATX                                                                                                            |
| Audio                     |                                                                                                                   |
| Audio Codec               | Realtek ALC888S                                                                                                   |
| Audio Interface           | speaker out                                                                                                       |
| Speaker Output            | 2 x 2W                                                                                                            |
| Certifications            |                                                                                                                   |
| Certification Information | CE / FCC Class B                                                                                                  |
| Ethernet                  |                                                                                                                   |
| LAN Port                  | 2 x Intel I211AT for N3350/N4200<br>2 x Intel® I210IT for E3950                                                   |
| Power Requirement         |                                                                                                                   |



|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DC Input</b>                       | DC +9V ~ +36V, wide voltage single power input<br>TVS component for surge protection<br>Reverse current/voltage protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>DC Input Connector</b>             | Lockable DC Jack (Default)<br>optional for phoenix connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>ACPI</b>                           | Single power ATX Support S0, S3, S4, S5 and ACPI 3.0 Compliant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Power Mode</b>                     | AT/ATX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Adapter</b>                        | Input: 100 ~ 240Vac/ 50 ~ 60Hz Output: 60W Adapter (12V @ 5A Adapter) AC-DC Adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Mechanical &amp; Environmental</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Operating Temperature</b>          | N3350/ N4200: -10°C ~ 50°C (-14°F ~ 122°F)<br>E3950: -20°C ~ 60°C (-4°F ~ 140°F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Storage Temperature</b>            | -30°C ~ 70°C (-22°F ~ 158°F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Operating Humidity</b>             | 0% ~ 90% Relative Humidity, Non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Dimension (W x L x H)</b>          | 259.6 x 195.8 x 46mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Weight</b>                         | 2.3Kgs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Vibration Test</b>                 | With SSD/mSATA : 2.24Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 1hr/axis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Shock Test</b>                     | Operating with SSD/CFast/mSATA : MIL-STD-810G, Method 516.6, Procedure I, functional shock=20G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>IP Rating</b>                      | Front Panel IP65<br>back cover IP41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Power Requirement</b>              | DC +9V ~ +36V, wide voltage single power input<br>TVS component for surge protection<br>Reverse current/voltage protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Power Mode</b>                     | AT/ATX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>System Fan</b>                     | Fanless                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Construction - Front</b>           | Silver Aluminum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Construction - Rear</b>            | Black Die Casting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Relative Humidity</b>              | 0~90% Relative Humidity, Non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Fanless</b>                        | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Drop</b>                           | ISTA 2A, IEC-60068-2-32 Test:Ed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Software Support</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>OS Information</b>                 | Linux, Windows 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Ordering Information</b>           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Ordering Information</b>           | <p>ARC-1033-335-A4R<br/>10.4" 1024x768 Industrial Touch Panel PC, ErP Design (F1 Stepping CPU)<br/>Intel Celeron SoC N3350 1.10GHz CPU/888S/4GDDR3L/2GLAN/2COM/4USB/SPK/9~36V input/12V Adapter</p> <p>ARC-1033-WMB-A4R<br/>10.4" 1024x768 Industrial Touch Panel PC, ErP Design/ Back panel Mount (F1 Stepping CPU)<br/>Intel Celeron SoC N3350 1.10GHz CPU/888S/4GDDR3L/2GLAN/2COM/4USB/SPK/9~36V input/12V Adapter</p> <p>ACC-ARC-USB-1R<br/>4 x USB 3.0 Kit for ARC Series</p> <p>ACC-ARC-AUDIO-1R<br/>HDMI + 5.1 CH Audio Kit for ARC Series</p> <p>ACC-ARC-MPCIE-1R<br/>HDMI + MPCIE w/SIM Kit for ARC Series</p> <p>ACC-ARC-COM-1R<br/>2 x Isolated RS-232 Kit for ARC Series</p> <p>ACC-ARC-COM-2R<br/>3 x RS-232 Kit for ARC Series</p> <p>ACC-ARC-COM-3R<br/>2 x RS-232 + USB Kit for ARC Series</p> <p>ACC-ARC-COM-4R<br/>2 x RS-232 + LAN Kit for ARC Series</p> <p>ACC-ARC-GPIO-1R<br/>12-bit GPIO + 2-pin CAN Bus Kit for ARC Series</p> <p>ACC-ARC-OBDI-1R<br/>OBDII - CAN Bus Kit for ARC Series (OBDII/EOBD for Small Vehicle)</p> <p>ACC-ARC-OBDI-2R<br/>OBDII - CAN Bus Kit for ARC Series (J1939J1708 for Large Vehicle)</p> <p>ACC-ARC-OBDI-3R<br/>OBDII - CAN Bus Kit for ARC Series (ISO15765-4 for Special Large Vehicle)</p> <p>E1702031833R USA Power Cord</p> <p>E1702031000R EU Power Cord</p> <p>E1702031834R Japan Power Cord</p> <p>E1702031830R UK Power Cord</p> <p>E1702031831R Australia Power Cord</p> |

## Assured Systems

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