

# ARC-21W39

**21.5" Intel® Processor N97/ X7433RE /N150  
Fanless Rugged Touch Panel PC with IET  
Expansion**



## Product Features

- 21.5" FHD LCD with PCAP multi-touch
- Full flat front panel with projected capacitive touch supports multi touch
- Rich I/Os, 2 LAN, 2 COM, 2 USB, 1 USB Type C, SIM card slot, swappable drive bay, speaker out for flexible expansion modules
- Fanless operation from -10 ~ 50°C
- Service window, easy to install memory module
- TPM2.0
- Intel® Processor N97/ X7433RE /N150 (Option Core i3-N305/ i3-N355)
- 1 x 204-pin DDR5 SODIMM socket, supports up to 32GB 4800MHz Max (non ECC only)
- Rugged design for vibration & shock protection
- Wide range DC power input from +12 ~ 24Vdc
- Front panel: IP65, rear: IP41(except I/O)

## Specification

### System Information

|                           |                                                                                                                                                                                  |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Processor</b>          | Intel® Alder Lake-N N97, 6M Cache, up to 3.6 GHz, 12W<br>Intel® Amston Lake X7433RE, 6M Cache, up to 3.40 GHz, 9W<br>Intel® Twin Lake N150, 6M Cache, 0.8 GHz up to 3.60 GHz, 6W |
| <b>System Memory</b>      | 1 x 262-pin DDR5 4800MHz SO-DIMM socket, supports up to 32GB Max (non ECC only)                                                                                                  |
| <b>Watchdog Timer</b>     | H/W reset, 1sec. ~ 65535sec./1sec.step                                                                                                                                           |
| <b>H/W Status Monitor</b> | Monitoring CPU & system temperature and voltage                                                                                                                                  |
| <b>SBC</b>                | ARC-ASL                                                                                                                                                                          |
| <b>CPU Cooler (Type)</b>  | Fanless heatsink                                                                                                                                                                 |
| <b>Other</b>              | 3 x Knockouts for antenna mounting                                                                                                                                               |

## Expansion

|           |                                                                                                                                                                     |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expansion | 1 x M.2 (Key-B, 2242/3042/3052, SATAIII, USB3.2 Gen1x1(default, 5Gbp/s)) or PCIe1(via OEM BIOS request), USB2.0, SIM Slot for LTE Cards (*Not support PCIe2 device) |
|           | 1 x M.2 (Key-E, 2230, PCIe1, USB2.0)                                                                                                                                |
|           | 1 x optional by IET module                                                                                                                                          |

## Storage

|                      |                                                             |
|----------------------|-------------------------------------------------------------|
| Storage              | 1 x 2.5 Drive bay(7mm HDD restricted)                       |
| HDD/ SSD             | 1 x SATA3                                                   |
| Other Storage Device | 1 x M.2 Key-B 2242/3042/3052 for M.2 SATAIII SSD by default |

## Audio

|                |                 |
|----------------|-----------------|
| Audio Codec    | Realtek ALC888S |
| Speaker Output | 2 x 2W          |

## Ethernet

|                    |                                         |
|--------------------|-----------------------------------------|
| LAN Chipset        | 2 x Intel® I226LM 2.5 Gigabit Ethernet  |
| Ethernet Interface | 10/100/1000/2.5G Base-Tx GbE compatible |

## Power Requirement

|                    |                                                                |
|--------------------|----------------------------------------------------------------|
| DC Input           | +12V ~ +24V                                                    |
| DC Input Connector | Lockable DC Jack (default)<br>Optional for phoenix connector   |
| ACPI               | Single power ATX support S0, S3, S4, S5 and ACPI 3.0 compliant |

## Software Support

|    |                       |
|----|-----------------------|
| OS | Win 10/ Win11 / Linux |
|----|-----------------------|

## Certification

|                           |                  |
|---------------------------|------------------|
| Certification Information | CE / FCC Class A |
|---------------------------|------------------|

## Panel

|              |                           |
|--------------|---------------------------|
| LCD Size     | 21.5", 16:9               |
| Display Type | FHD                       |
| Resolution   | 1920 x 1080               |
| Pixel pitch  | 247.95um(H) x 247.95um(V) |

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Luminance                | 500 cd/m2                                         |
| Contrast ratio           | 1000                                              |
| Viewing angle            | 89 (U), 89 (D), 89 (L), 89 (R)                    |
| Response time            | 14 ms                                             |
| Backlight                | LED                                               |
| Touch Type               | Projective capacitive multi-touch up to 10 points |
| Touch Light Transmission | 89%                                               |
| Touch Controller         | USB touch (EETI)                                  |

## External I/O

|          |                                                                                                                                      |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|
| USB Port | 2 x USB3.2 (1 x double deck, type A)<br>1 X USB type C (w/ PD(20V/3A input), USB3.2(Gen2x1, 10Gbps, 5V/3A output), display function) |
| LAN Port | 2 x RJ-45                                                                                                                            |
| COM Port | 1 x RS-232/422/485<br>1 x RS-232                                                                                                     |

## Internal I/O

|           |                                                                                                                                                                                                                                              |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expansion | 1 x M.2 (Key-B, 2242/3042/3052, SATAIII, USB3.2 Gen1x1(default, 5Gbp/s)) or PCIe1x1(via OEM BIOS request), USB2.0, SIM slot for LTE cards<br>(*Not support PCIe2 device)<br>1 x M.2 (Key-E, 2230, PCIe1, USB2.0)<br>1 x 80-pin IET interface |
| DIO       | 12-bit GPIO + 2-pin CAN bus (by ARC-BYT DB-E)                                                                                                                                                                                                |
| Other     | 3 x Knockouts for antenna mounting                                                                                                                                                                                                           |

## System Control

|               |                    |
|---------------|--------------------|
| LED Indicator | HDD LED, power LED |
|---------------|--------------------|

## Mechanical & Environmental

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Operating Temp.       | -10°C ~ 50°C (14°F ~ 122°F)                                           |
| Storage Temp.         | -20°C ~ 60°C (-4°F ~ 140°F)                                           |
| Operating Humidity    | 40°C @ 95% Relative humidity, non-condensing                          |
| Dimension (W x L x H) | 538.05 x 341.05 x 60.05mm                                             |
| Weight                | 7.3 Kg                                                                |
| Vibration Test        | With SSD/mSATA : 1.5Grms, 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>Drop Test</b>            | ISTA 2A, IEC-60068-2-32 Test:Ed                                                                |
| <b>IP Rating</b>            | Front panel IP65<br>Back cover IP41                                                            |
| <b>Mounting Kit</b>         | Wall / Stand / VESA 75mm x 75mm, 100mm x 100mm<br>Panel mount with mounting kits               |
| <b>Power Mode</b>           | AT/ATX (ATX is default)                                                                        |
| <b>System Fan</b>           | Fanless                                                                                        |
| <b>Construction - Front</b> | Die casting with cover lens                                                                    |
| <b>Construction - Rear</b>  | Black die casting                                                                              |

## Component

|                |                                                                                           |
|----------------|-------------------------------------------------------------------------------------------|
| <b>Adapter</b> | Input: 100 ~ 240Vac/ 50 ~ 60Hz<br>Output: 72W adapter (19V @ 3.78A adapter) AC-DC adapter |
|----------------|-------------------------------------------------------------------------------------------|

## Ordering Information

ARC-21W39-150-B1R

21.5" 1920x1080 Industrial Touch Panel PC, ErP Design, PCAP Multi Touch  
Intel Processor N150, 3.60 GHz CPU/2GLAN/2COM/2USB3/USB typeC/SPK/12~24V  
input/72W Adapter

ARC-21W39-355-B1R

21.5" 1920x1080 Industrial Touch Panel PC, ErP Design, PCAP Multi Touch  
Intel Processor i3-N355, 3.90 GHz CPU/2GLAN/2COM/2USB3/USB typeC/SPK/12~24V  
input/72W Adapter

ACC-ARC-USB-1R

4 x USB 3.0 Kit for ARC Series

ACC-ARC-AUDIO-1R

HDMI + 5.1 CH Audio Kit for ARC Series

ACC-ARC-MPCIE-1R

HDMI + MPCIE w/SIM Kit for ARC Series

ACC-ARC-COM-1R

2 x Isolated RS-232 Kit for ARC Series

ACC-ARC-COM-2R

3 x RS-232 Kit for ARC Series

ACC-ARC-COM-3R

2 x RS-232 + USB Kit for ARC Series

ACC-ARC-COM-4R

2 x RS-232 + LAN Kit for ARC Series

ACC-ARC-GPIO-1R

12-bit GPIO + 2-pin CAN Bus Kit for ARC Series

ACC-ARC-OBDDI-1R

OBDDI - CAN Bus Kit for ARC Series (OBDDI/EOBD for Small Vehicle)

ACC-ARC-OBDDI-2R

OBDDI - CAN Bus Kit for ARC Series (J1939J1708 for Large Vehicle)

ACC-ARC-OBDDI-3R

OBDDI - CAN Bus Kit for ARC Series (ISO15765-4 for Special Large Vehicle)

ACC-ADP-060N-08R

AC/DC adapter 12V/5A 90 degree Screw Type

E1702031835R

USA Power Cord

E170203183DR

EU Power Cord

E170203183BR

Japan Power Cord

E170P060370R

UK Power Cord

E170P060392R

Australia Power Cord