

# Fully-Enclosed Embedded Industrial Panel PC

15.6" Fully-Enclosed Aluminum Panel PC

**Model: HC156RAO**



This industrial panel PC features a fully-enclosed all-aluminum structure with fanless passive cooling and an embedded mounting solution. The design emphasizes reliability, environmental adaptability, and expandability. Multiple CPU options paired with versatile I/O interfaces meet a wide range of application requirements. With embedded mounting and a narrow-bezel design, the unit installs easily and blends seamlessly into the cabinet for a clean, elegant appearance.

## Highlights

### Fanless Passive Cooling

Extruded aluminum rear cover with anodized finish dissipates heat efficiently and eliminates overheating shutdowns — ideal for industrial workshops and medical equipment.

### Waterproof & Fog-Proof Touch Surface

The touch panel surface resists water and fog, preventing condensation in humid weather.

### Intel Core or Android Platform

Five Intel Core option tiers from 3rd Gen i3 up to 10th Gen i7, or an optional Android board (RK3288 / RK3568 / RK3576 / RK3588) with 1 TOPS NPU.

### Fully-Enclosed Dust Protection

Fully-enclosed all-aluminum design prevents dust ingress on the screen and inside the unit, running reliably in dusty factory environments.

### G+G 10-Point Capacitive Touch

Responsive capacitive touch with over 50 million touches lifetime, ≥6H surface hardness and ≥85% light transmittance — operated by finger or conductive stylus.

### Rich, Expandable I/O

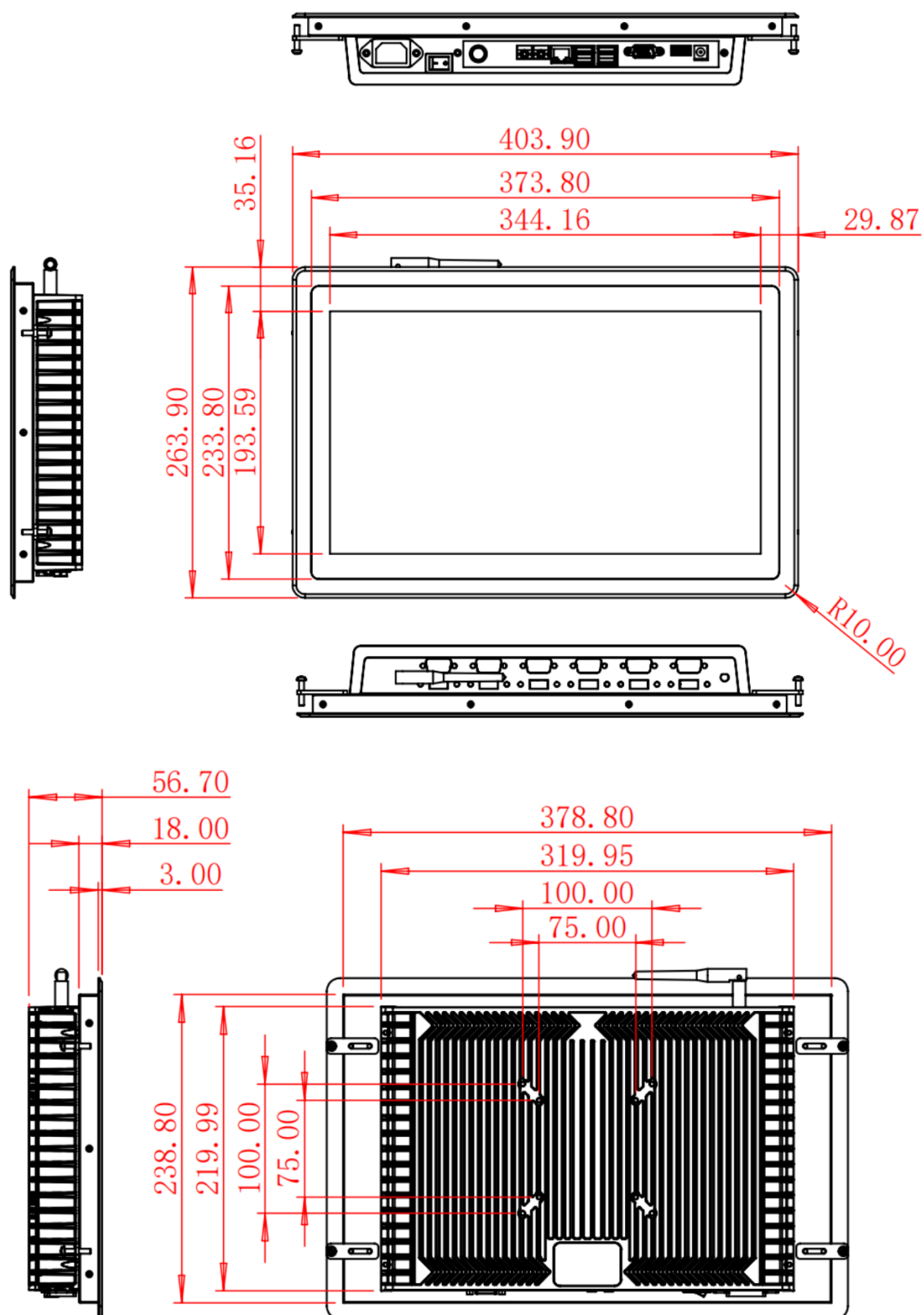
1×LAN, 2×COM, 4×USB, VGA, LINE OUT and MIC as standard; LAN expandable to 2, COM to 6 (RS232/RS485), USB to 6, plus wide-voltage, GPIO, LPT and aviation-connector options.

## Product Specifications

| GENERAL                  |                                                                                                                                                                                                                                                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                    | HC156RAO                                                                                                                                                                                                                                                                 |
| Screen Size              | 15.6"                                                                                                                                                                                                                                                                    |
| Overall Dimensions       | 403.9×263.9×56.7 mm                                                                                                                                                                                                                                                      |
| Cutout Dimensions        | 373.8×233.8 mm R10                                                                                                                                                                                                                                                       |
| Packing Dimensions       | 455×110×320 mm (reinforced carton)                                                                                                                                                                                                                                       |
| Housing Material         | Fully-Enclosed Aluminum Housing                                                                                                                                                                                                                                          |
| WINDOWS SPECS (OPTIONAL) |                                                                                                                                                                                                                                                                          |
| CPU                      | Intel Core™ 3rd Gen i3-3217UE / i5-3317U; 4th Gen i3-4010U / i5-4200U / i7-4500U; 6th Gen i5-6200U / 8th Gen i7-8550U; 10th Gen i5-10210U / i7-10510U                                                                                                                    |
| Memory                   | 4GB DDR3L 1333MHz (upgradeable to 8GB / 16GB)                                                                                                                                                                                                                            |
| Storage                  | 64GB SSD (upgradeable to 128GB / 256GB / 512GB; optional additional 2.5" HDD)                                                                                                                                                                                            |
| Graphics / Network       | Intel HD Graphics integrated GPU; Realtek RTL8111F Gigabit Ethernet                                                                                                                                                                                                      |
| Operating System         | Windows 7 / 8.1 / 10, Linux                                                                                                                                                                                                                                              |
| Wi-Fi (Optional)         | Wi-Fi and Bluetooth (optional)                                                                                                                                                                                                                                           |
| 4G (Optional)            | 4G function (optional)                                                                                                                                                                                                                                                   |
| I/O Ports                | 1×LAN / 2×COM / 4×USB / 1×VGA / 1×LINE OUT / 1×MIC (LAN expandable to 2, COM to 6, USB to 6)                                                                                                                                                                             |
| Speaker                  | Built-in 2W speaker                                                                                                                                                                                                                                                      |
| ANDROID BOARD (OPTIONAL) |                                                                                                                                                                                                                                                                          |
| CPU                      | Quad-core 32-bit Cortex-A55, up to 2.0GHz; board options: RK3288 / RK3568 / RK3576 / RK3588                                                                                                                                                                              |
| GPU                      | ARM Mali-G52 2EE GPU; supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1; built-in high-performance 2D hardware acceleration                                                                                                                                         |
| NPU                      | 1 TOPS computing power                                                                                                                                                                                                                                                   |
| Memory                   | 2GB (optional 4GB / 8GB)                                                                                                                                                                                                                                                 |
| Storage                  | 16GB (optional 32GB / 64GB / 128GB)                                                                                                                                                                                                                                      |
| Multimedia               | Supports 4K@60fps H.265/H.264/VP9 video decoding, 1080P@100fps H.265/H.264 encoding, and 8MP ISP; supports HDR and dual-screen mirroring                                                                                                                                 |
| Display Interface        | HDMI 2.0 up to 4K@60Hz; MIPI-DSI up to 1200×1920; 1×dual-8 LVDS + backlight interface up to 1920×1080; 1×IR receiver, 1×red LED, 1×green LED                                                                                                                             |
| Peripheral Interfaces    | 10/100M auto-negotiation Ethernet; 2.4G Wi-Fi and BT 4.1; 4×USB 2.0 host, 1×USB 3.0, 1×USB OTG; 2×TTL serial ports (TTL/RS232 optional), 1×debug serial port; 1×I2C, 4×GPIO; speaker interface up to two 8Ω 5W speakers; 1×Mic input, 1×headphone output, 1×audio output |
| LCD PANEL                |                                                                                                                                                                                                                                                                          |
| Resolution               | 1920 × 1080                                                                                                                                                                                                                                                              |
| Aspect Ratio             | 16:9                                                                                                                                                                                                                                                                     |
| Brightness               | 350 cd/m <sup>2</sup>                                                                                                                                                                                                                                                    |
| Viewing Angle            | Full viewing angle                                                                                                                                                                                                                                                       |
| Colors                   | 16.7M                                                                                                                                                                                                                                                                    |
| Contrast Ratio           | 1000:1 (Typ.) (transmissive), 72% NTSC                                                                                                                                                                                                                                   |

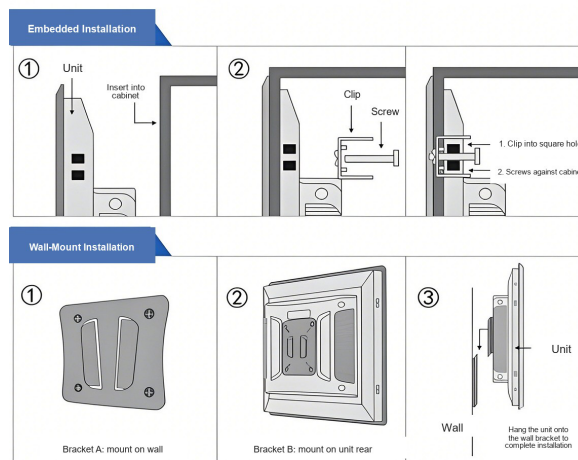
| TOUCH SCREEN               |                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Touch Type                 | G+G capacitive 10-point touch screen                                                                                                                         |
| Input Method               | Operated by finger or conductive stylus                                                                                                                      |
| Touch Life                 | >50 million touches                                                                                                                                          |
| Max Resolution             | 4096 × 4096                                                                                                                                                  |
| Linearity Error            | <2.5 mm                                                                                                                                                      |
| Light Transmittance        | ≥85%                                                                                                                                                         |
| Surface Hardness           | ≥6H                                                                                                                                                          |
| ENVIRONMENT & INSTALLATION |                                                                                                                                                              |
| Installation               | Embedded, wall-mount, desktop, VESA standard support arm                                                                                                     |
| Power Supply               | 12V 5A external power adapter                                                                                                                                |
| Operating Temperature      | 0–50 °C                                                                                                                                                      |
| Storage Temperature        | -10–60 °C                                                                                                                                                    |
| Operating Current          | ≤5A                                                                                                                                                          |
| UPGRADE OPTIONS            |                                                                                                                                                              |
| Memory                     | Upgradeable to 4GB / 8GB / 16GB                                                                                                                              |
| Storage                    | SSD upgradeable to 128GB / 256GB / 512GB; optional additional 2.5" HDD                                                                                       |
| Display                    | High-brightness option available                                                                                                                             |
| Appearance                 | Custom colors / silk-screen logo                                                                                                                             |
| Stand / Mount              | Optional floor stand, hanging mount, or adjustable mount                                                                                                     |
| I/O Ports                  | COM ports convertible from RS232 to RS485; additional COM, USB, LAN ports, wide-voltage module, aviation connector, LPT, GPIO and other interfaces available |
| WHAT'S IN THE BOX          |                                                                                                                                                              |
| Accessories                | Industrial Panel PC × 1 · Power adapter × 1 · Power cord × 1 · Warranty card × 1 · User manual × 1                                                           |

## Schematics



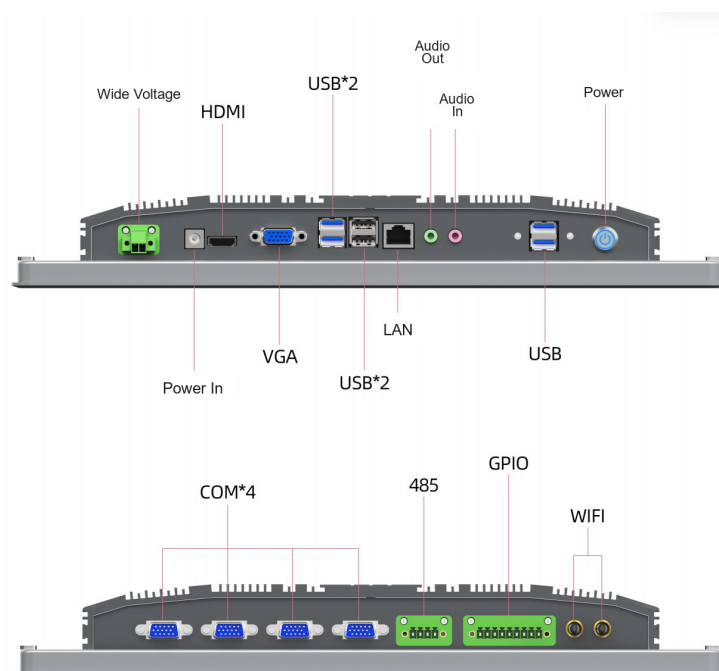
Dimension Drawings (Unit: mm)

## Installation Methods



Embedded / wall-mount / desktop / VESA arm

## Terminal & I/O Interfaces



Standard I/O interface layout