

OP121-HD

21.5-inch Full HD Industrial HMI Monitor for Arm Mounting

Part of the OP Series family — also available: OP115-XG, OP116-HD, OP116-WX, OP118-HD, OP118-WX

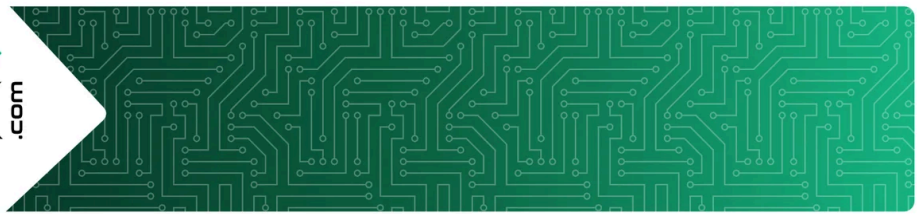


Product Overview

The OP121-HD is a 21.5-inch Full HD industrial HMI monitor built for arm-mounted operator workstations in factory automation, machine control, and production line environments. The 1920x1080 capacitive touch panel delivers a large, detailed operator interface with reliable gloved-hand-compatible input across a full IP65-rated enclosure - sealed front and rear against dust and water ingress.

Display signal is accepted via HDMI or VGA, with touch communicated back to the host over USB. Two internal USB 2.0 Type A ports and one rear-accessible 2-in-1 USB 2.0 port handle peripheral connections without exposing cable runs. DC 12-24V power input includes reverse connection, overvoltage and overcurrent protection.

The swing arm bracket supports NODKA 4460 square tube and Rittal CP 40 mounting systems. The button panel ships with a default set of five operator controls - emergency stop, selection, red push, green push, and key switch - and is fully configurable for customer-specific layouts with up to nine 22mm buttons. Configured and tested in the UK, with direct engineering support.



Product Highlights

- 21.5-inch LCD, 1920x1080 (Full HD) resolution
- Capacitive touch screen, USB interface
- Full IP65 - front and rear sealed
- HDMI + VGA display signal input
- 2 x internal USB 2.0 Type A + 1 x rear 2-in-1 USB 2.0
- DC 12-24V input with reverse, overvoltage and overcurrent protection
- Swing ARM mounting - NODKA 4460 square tube and Rittal CP 40 compatible
- Default button set: emergency stop, selection, red, green, key switch
- Customer-configurable button panel - up to 9 x 22mm buttons
- Frontally accessible button panel for field reconfiguration
- 250 cd/m2 brightness, 1000:1 contrast ratio
- Wide viewing angle: 89 degrees all directions
- Operating temperature: 0 degrees C to 50 degrees C
- Vibration: 1.5 Grms, IEC 60068-2-64 (SSD applied)
- Shock: 10G peak, IEC 60068-2-27
- EMC Class B
- 553 x 387.5 x 135 mm, 7.5 kg

Applications

Factory Automation

Production Line Control

Machine Control HMI

Operator Workstation

SCADA Interface

Process Monitoring

Cleanroom Control

Food and Beverage Processing

Pharmaceutical Manufacturing

Warehouse Automation

Technical Specifications

Display

Screen Size 21.5 inches

Contrast Ratio 1000:1

Resolution 1920 x 1080 (Full HD)

Viewing Angle 89 degrees Left / Right / Top / Bottom

Brightness 250 cd/m2

Backlight MTBF 50,000 hours

Touch Screen

Touch Type Capacitive

Light Transmittance 87% or above

Communication USB (1 x USB 2.0 Type B input)

I/O

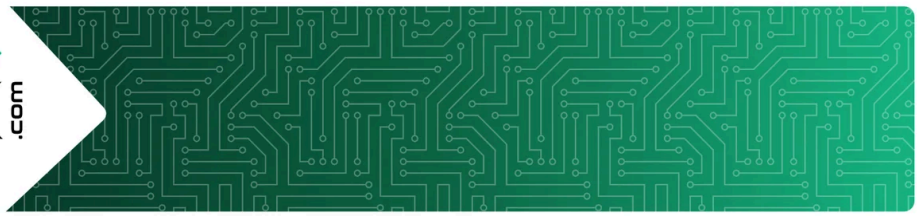
Display Input 1 x HDMI, 1 x VGA

USB

- 1 x USB 2.0 Type B (touch input from host)
- 2 x USB 2.0 Type A (internal)
- 1 x USB 2.0 2-in-1 (rear of housing)

OS Support

Compatible OS Windows 7, Windows 10/11 IoT, Ubuntu, CentOS



Technical Specifications (cont.)

Power

Input Voltage	DC 12-24V +/-10% <ul style="list-style-type: none"> • Reverse connection protection • Overvoltage protection • Overcurrent protection • 1 x 2-pin Phoenix connector (internal) • 1 x illuminated power button (rear)
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Power Consumption	18W minimum
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Mechanical

Dimensions (W x H x D)	553 x 387.5 x 135 mm
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Mounting	Swing ARM - supports NODKA 4460 square tube and Rittal CP 40
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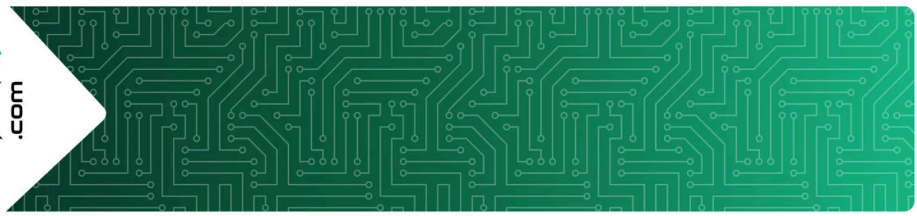
Weight	7.5 kg
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IP Rating	Full IP65 (front and rear)
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Operator Controls

Default Button Set	<ul style="list-style-type: none"> • 1 x Emergency stop button • 1 x Selection button • 1 x Red push button • 1 x Green push button • 1 x Key switch
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Custom Configuration	<p>Button panel is fully configurable to customer specification:</p> <ul style="list-style-type: none"> • Up to 9 x 22mm buttons supported • Frontally accessible for field changes and additions • Hard-wired connection mode
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Technical Specifications (cont.)

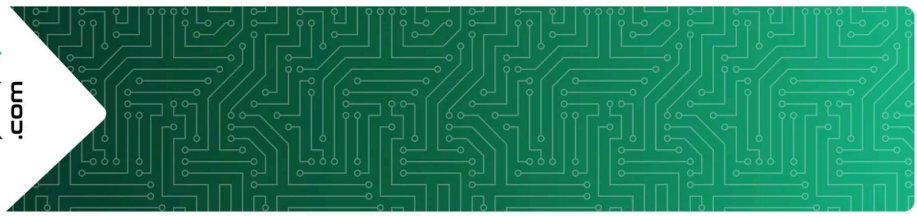
Environment			
Operating Temperature	0 degrees C to 50 degrees C	Vibration	1.5 Grms, IEC 60068-2-64, random, 5-500 Hz, 1 hr/axis (SSD applied)
Storage Temperature	-20 degrees C to 60 degrees C	Shock	10G peak acceleration (11 ms duration), IEC 60068-2-27
Humidity	5-95% (non-condensing)	EMC	Class B

Certifications

Certifications	<ul style="list-style-type: none"> • CE • EMC Class B • RoHS Compliant • WEEE Compliance Scheme member
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Warranty

Warranty	2 years RTB, extendable to 3 or 5 years
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Model Numbers

OP 1 XX - YY

Code	Meaning
OP	Operator Panel (HMI monitor series)
1	First generation
XX	Screen size in inches (15, 16, 18, 21)
YY	Resolution class (XG = XGA 1024x768, WX = WXGA 1366x768, HD = Full HD 1920x1080)

Example: OP121-HD = Gen 1, 21.5-inch, Full HD resolution

Ordering Information

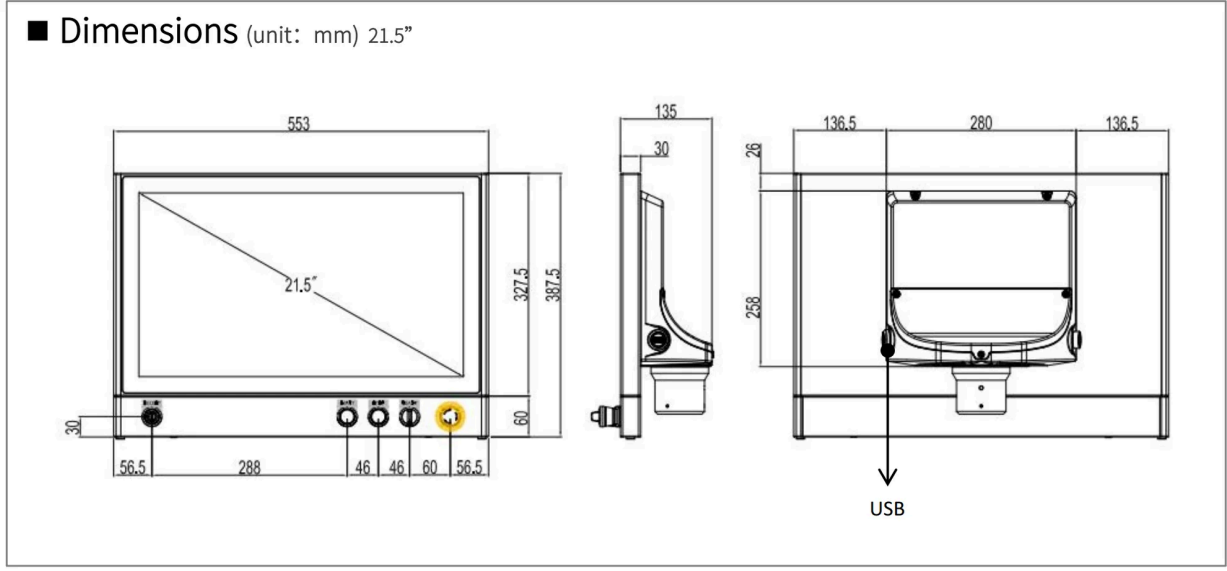
Part Number	Description
OP121-HD	21.5-inch Full HD capacitive touch HMI monitor, HDMI + VGA input, full IP65, swing ARM mount, DC 12-24V

Specifications are subject to change without notice. E&OE.

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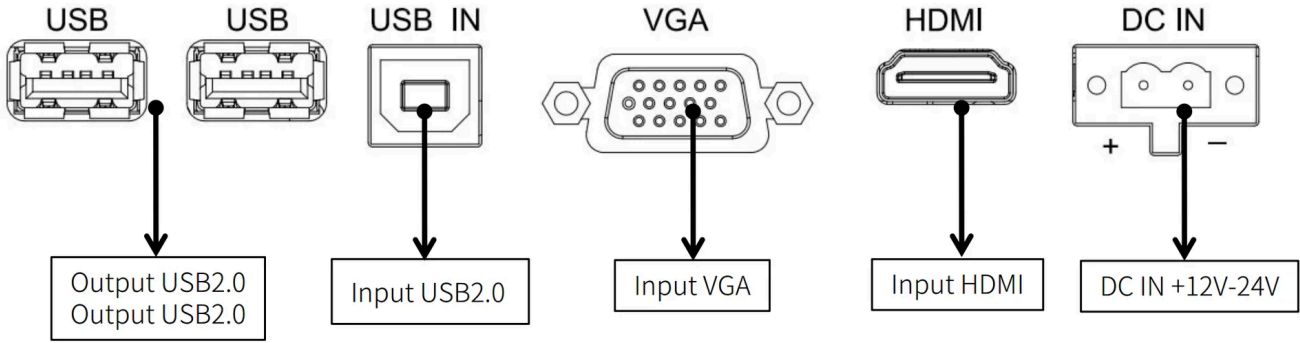
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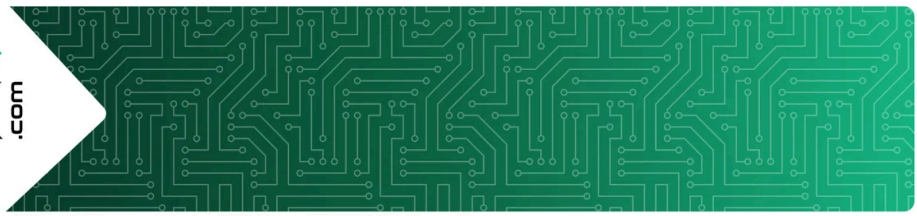
Dimensions (mm)



Port Layouts

Internal I/O





Product Gallery

