

## Warning!

Please read the user manual included in this work as it contains important information related with safety of installation and use of the device.

Only persons who read the user manual may use the device.

The user manual must be kept because it may be required in the future. The device is to be used exclusively for purposes specified in this user manual.

The device must be unpacked prior to starting-up. After removing the packaging make sure the device is in working order.

If the product has defects, it should not be used until it is repaired.

The product is intended for use at home and commercial use and may not be used for other than intended use.

The manufacturer is not liable for damages resulting from not adhering to the rules contained in the user manual, therefore, we recommend to follow the aforementioned safety rules for operation and maintenance of the device. In this way you will ensure yourself safety and avoid causing damage to the device.

The manufacturer and the supplier are not liable for losses or damages arising out of the product, including financial or intangible losses, loss of profits, income, data, pleasure from use of the product or other products related with it - indirect, incidental or consequential loss or damage. The above provisions apply whether the loss or damage concerns:

1. Deterioration of quality or the lack of operation of the products or products related with it due to damage as well as the lack of access to the product when it is undergoing repair, which results in stoppage the loss of user's time or a break in business activity;
2. Improper results of operation of the product or products related with it;
3. It applies to losses and damages according to any legal category, including negligence and other losses, termination of a contract, expressed or implied guarantee and strict liability (even if the manufacturer or the supplier was notified about the possibility of occurrence of such damages).

### Safety measures:

Particular attention at designing was directed to quality standards of the device where ensuring safety of operation is the most important factor.

The device must be secured against contact with caustic, staining and viscous fluids.

The device was designed in such a way that it restarts operation when power supply is restored after a break.

**Attention! We recommend using protections to further protect the device from possible overvoltages in installations. Surge protectors are effective protection against accidental pass to the device voltages higher than the rated. Damages caused by pass the voltages higher than specified in manual, are not under warranty.**

Turn off the device before transporting it.

Prior to connecting the device to a power source check whether the supplied voltage is consistent with rated voltage specified in the user manual.

### Proper product disposal:

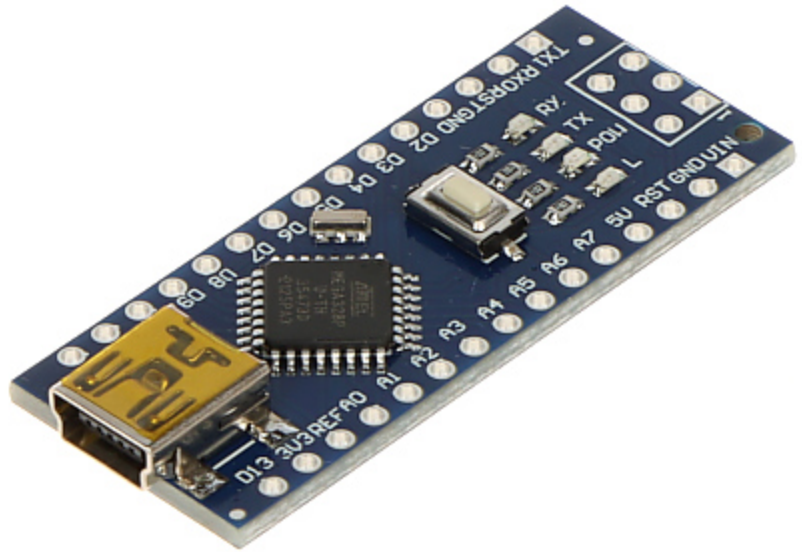
A marking of a crossed out waste bin indicates that the product may not be disposed together with other household waste in the entire EU. To avoid possible damage to the natural environment of health due to uncontrolled waste disposal, therefore, it should be handed over for recycling, propagating in this way sustainable use of natural resources.

To return a worn-out product, use a collection and disposal system of this type of equipment or contact a seller from whom it was purchased. He will then be recycled in an environmentally-friendly way.

The NANO-V3/CH340 board is a functional clone of the Arduino NANO. Thanks to minor modifications of the module, the manufacturer managed to maintain full compatibility with the Arduino environment with a significant reduction in production costs. The heart of the system remains - unchanged from the original, the Atmega328P microcontroller. The key change, however, concerns the USB<>TTL converter whose function is played here by the popular and reliable CH340 chip.

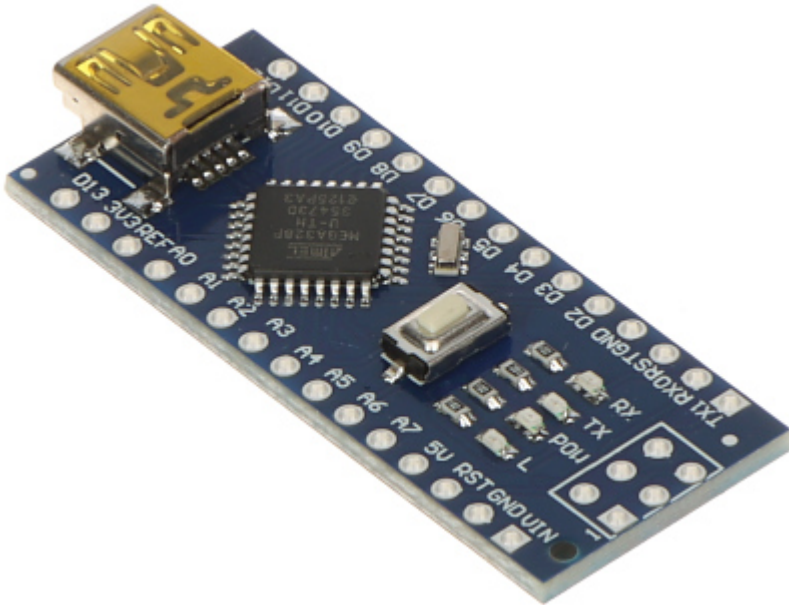
Gold-pins attached to the PCB are not soldered, which allows the user to decide how to connect the module with other devices. This is especially important when installing the module in places with very limited space. Full compatibility with the Arduino environment and pre-installed BOOTLOADER allow you to program the system in a manner identical to the original, using the same [Arduino IDE](#) software. Thanks to this, the product can be a perfect complement to the OSD-50HD character generator combined with the PORT-22 character converter.

**For more information about OSD systems, visit [www.osd.systems](http://www.osd.systems)**

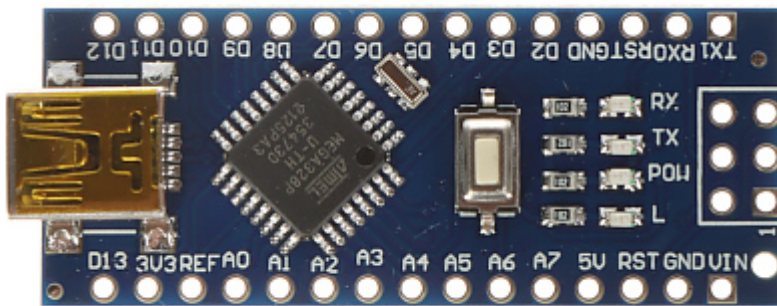


Support:	PORT-22
Built-in stabilizer:	✓
PCB casing:	—
Frequency fsck:	16 MHz
Memory:	<ul style="list-style-type: none"> <li>• 32 kB - Flash</li> <li>• 2 kB - SRAM</li> <li>• 1 kB - EEPROM</li> </ul>
I/O ports:	22
Inputs:	8 ADC
PWM outputs:	6
Communication:	<ul style="list-style-type: none"> <li>• UART,</li> <li>• mini USB - B type</li> </ul>
Power supply:	<ul style="list-style-type: none"> <li>• 7 ... 12 V DC,</li> <li>• 5 V DC - Port USB</li> </ul>
Weight:	0.005 kg
Dimensions:	45 x 18 x 6 mm
Guarantee:	2 years

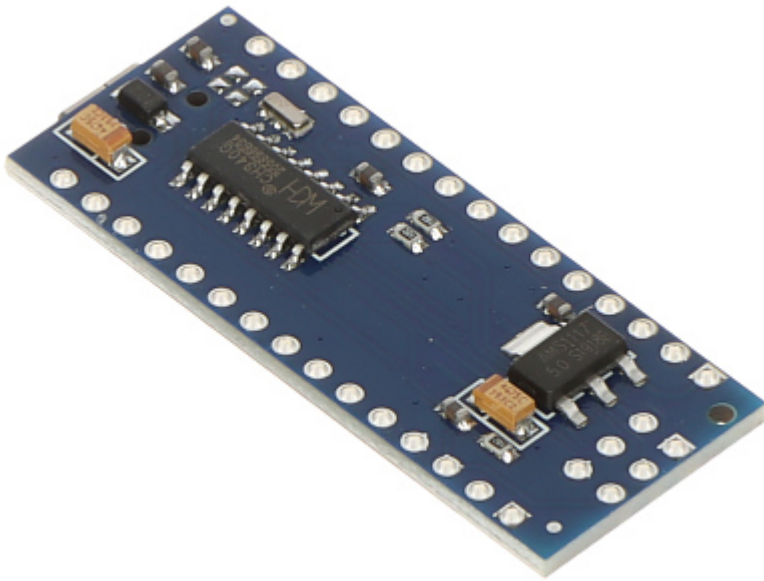




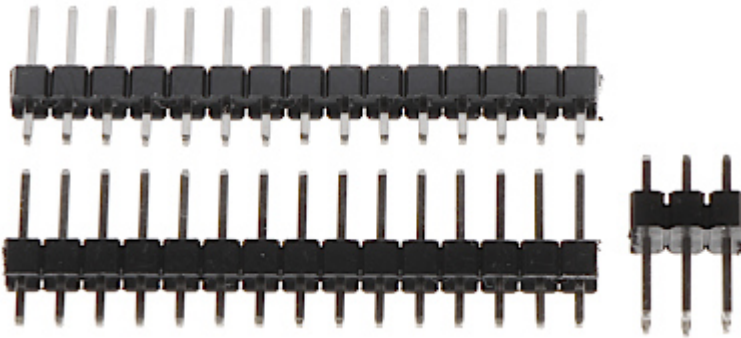
Top view:



Bottom view:



In the kit:



Example of application:

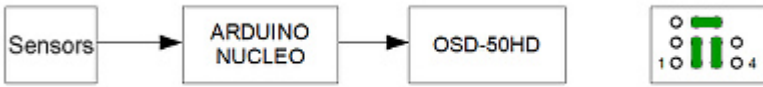


RS-485 connection to the ARDUINO / NUCLEO:

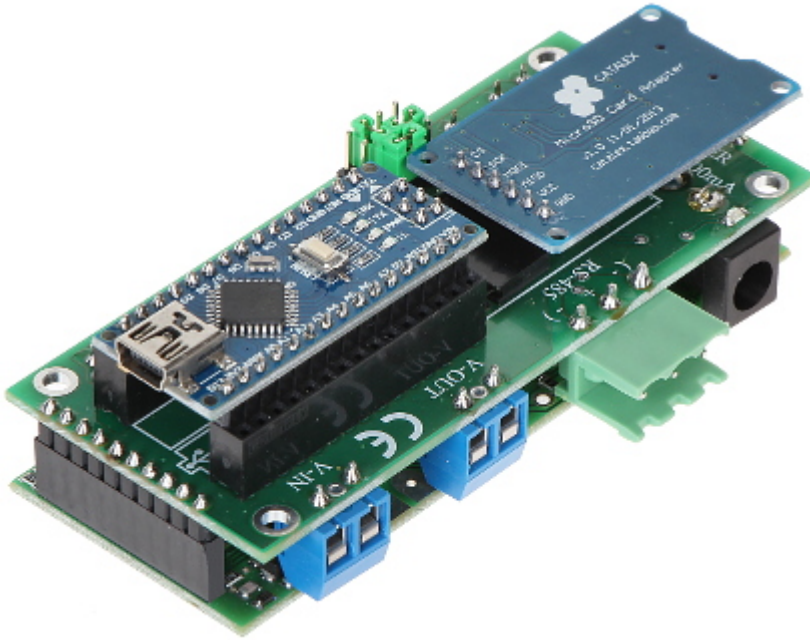


Direct sensors connection to the ARDUINO / NUCLEO:

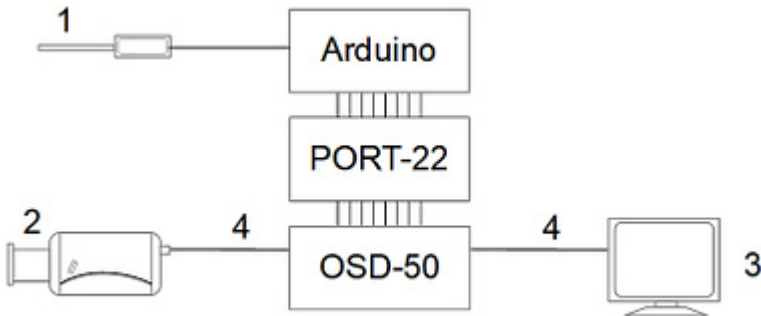




Cooperation between PORT-22 and Arduino and the microSD memory card slot:

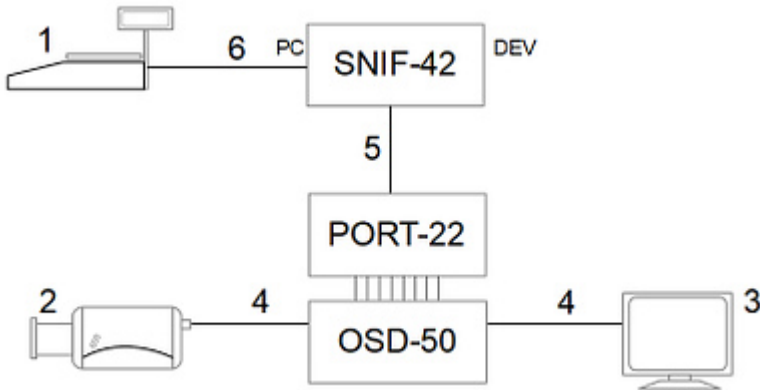


An example of connecting a temperature sensor:



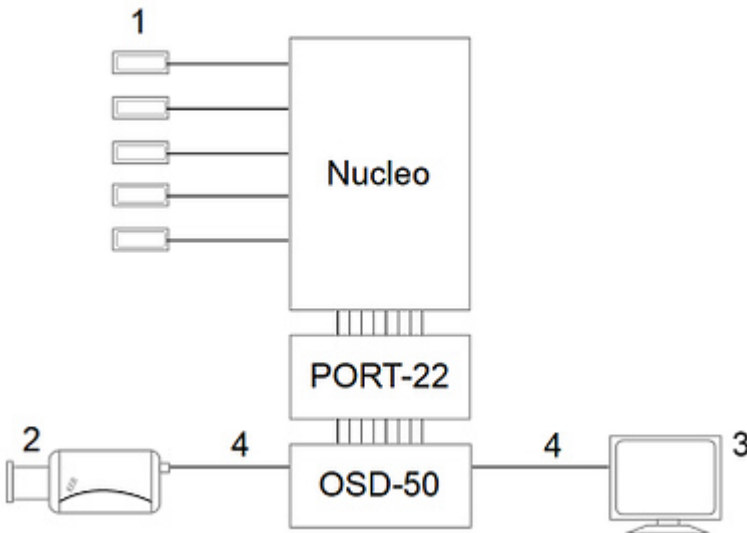
- 1. Temperature Sensor
- 2. Camera
- 3. Monitor
- 4. Video signal

Configuration with using a scale:



1. Electronic scale
2. Camera
3. Monitor
4. Video signal
5. RS-485
6. RS-232

An example of connecting several sensors:



1. Sensors
2. Camera
3. Monitor
4. Video signal

OSD Systems - the presentation:

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An exemplary OSD system for analogue HD cameras based on arduino nano using selected sensors:

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Example of application:

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## PACKAGE





# User Manual

Code: NANO-V3/CH340  
MODULE NANO-V3/CH340

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Dimensions (L x W x H): 0x0x0 mm	Gross Weight: 0 kg
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