



LAN

## Industrial Control Panel HMI N8050PI



<b>Category:</b>	HMI Operator Interface Panels
<b>Manufacturer:</b>	Mobikator
<b>Supported OS:</b>	Windows CE 7.0 / Linux / WECON OS (Dedicated)
<b>Installed OS:</b>	-----
<b>Screen size:</b>	10.2"
<b>Resolution:</b>	800x480px
<b>Brightness:</b>	300cd/m <sup>2</sup>
<b>Touchscreen:</b>	4-wire resistive
<b>Processor:</b>	ARM A8 Core 600MHz
<b>Graphic Card:</b>	-----
<b>RAM:</b>	512MB DDR3
<b>ROM:</b>	8GB EMMC
<b>IP Norm:</b>	IP65 (front panel)
<b>Temp:</b>	-20°C - 60°C
<b>Storage Temp:</b>	-20°C - 70°C
<b>Humidity:</b>	10% - 90%
<b>Others:</b>	CANBUS   IP camera support   Remote control support   Wi-Fi support
<b>LAN:</b>	Yes
<b>Wi-Fi:</b>	No (it's possible to connect the device to wi-fi with a USB adapter)
<b>Bluetooth:</b>	No
<b>Connectors:</b>	1x USB 2.0 Host 1x USB 2.0 Client 2x COM 1x RJ-45 LAN
<b>Communication protocols:</b>	Modbus
<b>PLC:</b>	No

<b>Digital I/O (PLC):</b>	----
<b>Analog I/O (PLC):</b>	----
<b>Output type (PLC):</b>	----
<b>COM port (PLC):</b>	----
<b>Expansion:</b>	----
<b>Power:</b>	24V
<b>Power Consumption:</b>	Less than 10W
<b>Contrast Ratio:</b>	500:1
<b>Color Resolution:</b>	260k (18bit)
<b>Housing material:</b>	ABS
<b>Color:</b>	Gray
<b>Dimensions:</b>	272mm x 190.5mm x 41.4mm
<b>Fanless:</b>	Yes
<b>Weight:</b>	~1200g

**Product from the Archive - production finished**



**Specification**

**Description**

## Available versions

### Protection

### Communication

### Application

Industrial operator panels also known as control panels are devices that control other electrical devices using convenient and intuitive touch interface. Thanks to its robust design, these devices are suitable for use even in harsh environments. Model N8050PI has a IP65 standard which classifies and rates the degree of protection provided against intrusion (body parts such as hands and fingers), dust, accidental contact, and water by mechanical casings and electrical enclosures.

## Specification

Processor	ARM Cortex A8 600MHz
Screen	10.2" (800x480), Resistive
RAM	512MB DDR
Flash memory	8GB EMMC
Connectors	USB 2.0 Host   USB 2.0 Client   COM: RS232/422/485   RJ-45 LAN   SD Card
Operating system	Windows CE 7.0   Linux   WECON OS (Manufacturer's dedicated system)
Dimensions	272mm x 190.5mm x 41.4mm
Weight	~1200g
Protection	IP65 (Front panel)
PLC Protocols	Standard   Modbus

Check "Available versions" tab to see available configurations of this device. To get more information about this product click "Ask about the product" or use the [Contact form](#).



## Description



### Multitasking OS

HMI can be equipped with a Windows CE, Linux or WECON operating system, which ensures maximum efficiency of the device and easily copes with multiple processes simultaneously. Convenient interface makes the operator panels as much intuitive as possible.

### Efficient processor

An important advantage of the HMI N8050PI is a powerful combination of small size with considerable capabilities through the use of the processor family ARM Cortex A8 with 600MHz clock speed, which, combined with 512MB of RAM gives us a powerful, multi-purpose, quality device for a low price.

### Small size

HMI N8050PI is equipped with a 10.2 inch screen and the overall size of its design is only 272mm x 191mm x 41mm, with a cutout size of 260mm x 179mm and its weight is only 1.2kg. With such a small size it can be used in even if there is not much available space. In addition, HMI has the possibility to mount it on a wall for the greatest convenience and ease of access.

### Solid construction

HMI enclosure is made from a specialized blend of ABS providing a very high resistance to mechanical damage. With this construction it is ready for use even in extreme conditions such as heat, cold or vibration at any time. In addition, the front panel of the device has IP65 international standard, which confirms the water resistance and a complete protection against dust.

### Low power consumption





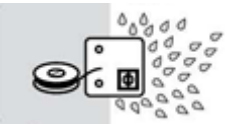


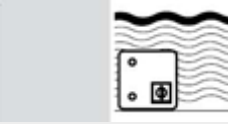
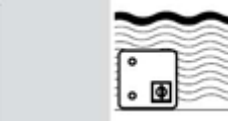
Using the latest technology, HMI N8050PI is designed for continuous operation with low power consumption of less than 10W at 24V.



## Protection

### IP65 RESISTANCE

IP stands for Ingress Protection and is essentially a rating system developed by the International Electrotechnical Commission or the IEC. The system is now being used to classify different degrees of protection against intrusion or immersion. The IP rating is usually followed by two digits. The first indicates the level of dust-resistance, the second water resistance. Dust-resistance levels goes from 0 up to 6 while water-resistance goes from 0 to 8.

No protection	0		0	No protection
Protection against any large surface of the body, such as the back of a hand	1		1	Protection against vertically dripping water
Protection from object > 12mm, e.g. Fingers or similar objects	2		2	Protection against vertically dripping water when device is tilted at an angle up to 15 degrees
Protection from object > 2.5mm, e.g. tools, thick wires, etc.	3		3	Protection against direct sprays of water when device is tilted at an angle up to 60 degrees
Protection from object > 1mm, e.g. most wires, slender screws, large ants etc.	4		4	Protection from sprays and splashing of water in all directions
Dust protected - Ingress of dust is almost entirely prevented.	5		5	<b>Protection from low pressure water projected from a nozzle with a 6.3mm diameter opening in any direction</b>
<b>Dust tight - No ingress of dust, complete protection against contact.</b>	6		6	Protection from water projected in powerful jets from a nozzle with a 12.5mm diameter opening in any direction
—	7		7	Protected from immersion in water with a depth of up to 1 meter (or 3.2ft) for up to 30 mins
—	8		8	Protected from immersion in water with a depth of more than 1 meter

Work temperature

-10 -60

Storage temperature	-30 - 70
Humidity	10% - 90%
Dust resistance (Front panel)	IP6x
Water resistance (Front panel)	IPx5

## Available versions

Select a version tailored to your needs. Clicking on the hardware number configurations will redirect you to the product with parameters listed below. At the customer's request can be created configurations which are not available in the offer. Detailed parameters are available in the "Technical Data".

### SUPPORT FOR INDIVIDUAL OPERATING SYSTEMS

	<b>WECON OS</b>
Development tool	PI Studio
Cost	Free
System tool	Display adjust Communication parameters configuration
Documentation	Yes
Technical support	Professional support for hardware and software development
Default screen	WECON factory sceen

	<b>WINDOWS CE 7.0</b>
Development tool	Visual Studio .NET
Cost	Free (not licensed) / Paid (licensed)
System tool	CETOOL tool
Documentation	Microsoft documentation

Technical support	Driver developmnet only
Default screen	Windows CE 7.0 desktop

	<b>LINUX</b>
Development tool	Qt
Cost	Free
System tool	No
Dokumentacja	No
Technical support	Driver developmnet only
Default screen	Standard Linux command line

## Communication



### **MODBUS**

Modbus is a serial communications protocol initially for use with programmable logic controllers (PLCs). Simple and robust, it has since become a standard

communication protocol, and it is now a commonly available means of connecting industrial electronic devices. Modbus enables communication among many devices connected to the same network, for example a system that measures temperature and humidity and communicates the results to a computer. Modbus is often used to connect a supervisory computer with a remote terminal unit (RTU) in supervisory control and data acquisition (SCADA) systems.

Connectors:

CONNECTOR TYPE	QUANTITY
USB 2.0 Host	1
USB 2.0 Client	1
RS232/422/485	1
RS232/485	1
RJ-45 LAN	1
DC 24V	1

COM Ports:

PORT NUMBER	SUPPORTED PROTOCOLS
COM1	RS232/RS485 or RS232/RS422
COM2	RS232/485
COM3 ( COM2 port)	RS485



## **PLC**

PLC is a universal microprocessor device designed to control the operation of the machine or technological equipment. PLC must be adapted to the HMI device by introducing into its memory the desired algorithm for operation of the plant. A characteristic feature of the PLC controller distinguishes this from other drivers computer is cyclic circulation of program memory. The algorithm is stored in a dedicated controller programming language. You can change the algorithm by changing the contents of program memory. The driver provided with a suitable number of input circuits gathering information on the object status and requests service and the appropriate number and type of output devices connected to the actuators, signaling or data.

PLC is not included in the standard equipment - it must be purchased separately.

## **REMOTE CONTROL**

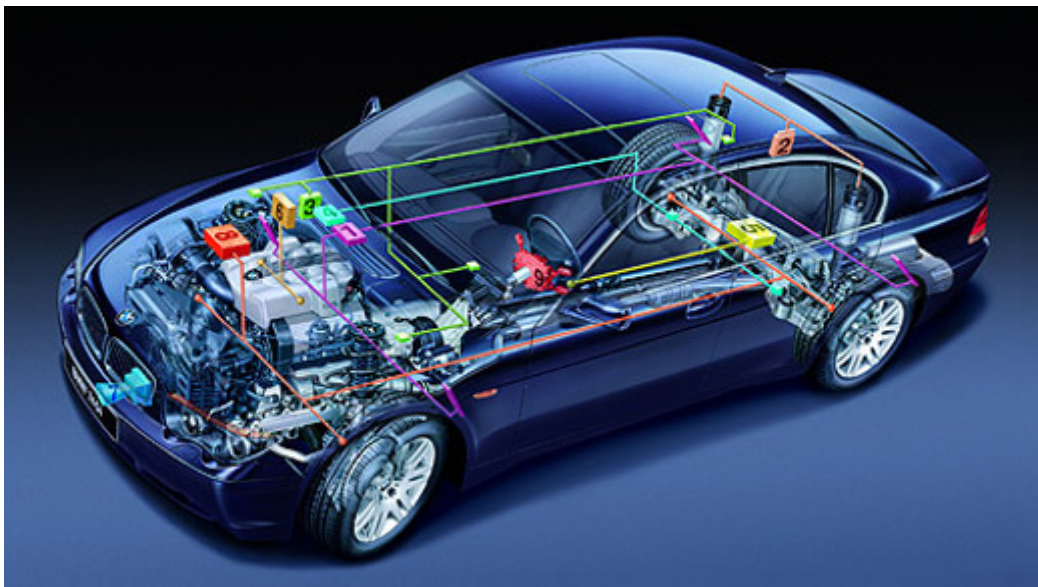
The HMI N8050PI allows you to remotely connect to your device via Ethernet, allowing you to fully control the HMI and display its screen in real-time on a device connected to it via a web browser. With this solution, you can connect several devices to one main computer and manage the network from one place.

## IP CAMERA SUPPORT



IP cameras are devices that record and transmit live video directly over the IP network, allowing authorized users to observe on-site or off-site. View, save and manage video from this camera is done through a standard IP-based network infrastructure. The HMI N8050PI allows you to connect this camera using an ethernet port so that you can view and control the camera image directly on the panel screen.

## CANBUS SUPPORT



CAN is an asynchronous serial bus for data exchange. It has been designed for the automotive industry to increase the reliability of systems such as ABS and engine control. This is commonly used in a variety of fields, primarily in the automotive industry, where a digital bus is based on the CAN bus. It is the primary aggregate medium for sensors, actuators, and auxiliaries. The CAN standard priority technology allows you to delimit control on one side of

extremely important components, such as airbags, on the other hand, trivial issues such as the transmission of data between additional equipment.

## Application



## Warehouse

Thanks to its transport independence, it can be used in various environments. Thanks to the ease with which it can be adapted to the specific tasks, it's widely used in many industries. Thanks to its robust design, it's perfect for harsh conditions, preventing damage to the device. Thanks to its design, it's perfect for use in polluted environments.

available in the **Technical data** tab.

