



**MATRANDA**

2024

# Smart Data Transport and Control



**Connecting and controlling of equipment and machines.**



**MATRANDA, manufacturer and supplier of machine control and data collection with data transport.**  
Trade mark 'Matranda'. All our offers and contracts are subject to our General Terms & Conditions of Supply.  
Contact : Newtonlaan 115, 3584 BH Utrecht, +31 (0)84 – 872 89 38, [info@matranda.com](mailto:info@matranda.com), [www.matranda.com](http://www.matranda.com)

Suitable for  
- Industry 4.0  
- Industry 5.0

# MATRANDA

## Machine data processing and monitoring through the Matranda smart system

Matranda relieves the user by means of a smart system. The user is automatically kept informed by the smart system, and adjusts the system itself through an advanced control system. Equipment and machine parameters are linked together to improve operating conditions.

Some important tasks that can be performed by the smart system are:

- Identifying problems in production lines, machines, measuring equipment, and all processes.
- Predicting when maintenance is required, and predicting which part needs to be replaced.
- Eliminating wasteful downtime.
- Reducing unexpected failures.
- Remote condition monitoring, by tracking machine, device parameters and KPIs (Key Performance Indicators).
- Monitoring and control of machines and equipment by the user.

The Matranda smart system offers the manufacturer to optimize compatible parts/devices. This means that periodic service can take place in the most efficient way as possible.

We are at the beginning of the 4th industrial revolution, in which the Matranda smart system will contribute. We deal with fast deliveries, reliable products, high quality standards and extremely competitive prices. The Matranda smart system offers the perfect solution to be able to perform all these disciplines properly.

The Matranda smart system manages, controls and visualizes your production process.

The system controls the machine and the production process, whereby the control can be performed by an employee.



**MATRANDA, manufacturer and supplier of machine control and data collection with data transport.**

Trade mark 'Matranda'. All our offers and contracts are subject to our General Terms & Conditions of Supply.

Contact : Newtonlaan 115 , 3584 BH Utrecht , +31 (0)84 – 872 89 38 , [info@matranda.com](mailto:info@matranda.com) , [www.matranda.com](http://www.matranda.com)

## MTD - SERVER

Product code : MTD\_SERVER



### Specifications :

- *Dimensions 600x450x368 (LxBxH)*
- *Supply voltage 230V*
- *Nominal power 35 Watt*
- *Storage capacity 12 Tb*
- *Control Windows10*
- *Switch with 5 ethernet ports*
- *Router for separate network*
- *Ambient temperature min 10°C max 45°C*
- *Storage data for 7 years*
- *Protection class IP20*

### Extra Software Specificaties :

- *SVS data for Warnings en Alarmen*
- *OEE Data storage*
- *Predictive maintenance, with fast bouncings and slow bouncings*
- *First step to Artificial Intelligence (AI)*

## MTD – CONTROL MODULE

Product code : MTD\_CONTROL\_MODULE



### Specifications :

- *Dimensions 600x450x368 (LxBxH)*
- *Supply voltage 230V*
- *Nominal power 30 Watt*
- *Storage capacity 120Gb*
- *Control Windows10*
- *Unmanaged switch with 5 ethernet ports*
- *Router 1 WAN port, 4 Port 1GbE LAN switch*
- *Ambient temperature min 10°C max 45°C*
- *Storage data for 3 days*
- *Module for data transport*
- *Protection class IP20*

### Additional extension with power meter :



- *Power meter*
- *Modbus/TCP to Ethernet/IP*
- *3x Power measurement transformers*
- *1x Circuit breaker 3 phase*
- *1x Circuit breaker 1 phase*
- *Power meter built into the module door*
- *Suitable up to 1,000Amp / phase*



To guarantee data security, a private network has been chosen to send the encrypted data.

We have completely ruled out corporate espionage. The network is therefore a wired network conform the **ISA95** model, equipped with RJ45 connectors (Ethernet).

## MTD Module (8x dig.inp. - 4x relay outp.)

Product code : MTD\_08D04R00D00A00A



### Specifications :

- *Dimensions 400x210x500 (BxDxH)*
- *Supply voltage 230V*
- *Nominal power 15 Watt*
- *4 ethernet ports*
- *Ambient temperature min -10 °C max 55°C*
- *Protection class IP66*
- *8x digital galvanic parted inputs*
- *4x relais outputs (= galvanic parted)*
- *Feed through gland*
- *Machine controller (PLC)*
  
- *Data managed ethernet switch (only for the Master Module)*

## MTD Module (8x dig.inp. - 4x relay outp. - 2x anal. inp)

Product code : MTD\_08D04R00D02A00A



### Specifications :

- *Dimensions 400x210x500 (BxDxH)*
- *Supply voltage 230V*
- *Nominal power 15 Watt*
- *4 ethernet ports*
- *Ambient temperature min -10 °C max 55°C*
- *Protection class IP66*
- *8x digital galvanic parted inputs*
- *4x relais outputs (= galvanic parted)*
- *2x analoge inputs 4-20mA*
- *Feed through gland*
- *Machine controller (PLC)*
  
- *Data managed ethernet switch (only for the Master Module)*

## MTD Module (8x dig.inp. - 4x relay outp. - 2x PT100/1000 inp.)

Product code : MTD\_08D04R00D02P00A



### Specifications :

- *Dimensions 400x210x500 (BxDxH)*
- *Supply voltage 230V*
- *Nominal power 15 Watt*
- *4 ethernet ports*
- *Ambient temperature min -10 °C max 55°C*
- *Protection class IP66*
- *8x digital galvanic parted inputs*
- *4x relais outputs (= galvanic parted)*
- *2x PT100/PT1000 inputs (temperature sensor)*
- *Feed through gland*
- *Machine controller (PLC)*
  
- *Data managed ethernet switch (only for the Master Module)*

*This module can be expanded to also read thermocouples.*

## MTD Module (8x dig.inp. - 4x relay outp. - 2x anal. inp. - 2x anal. outp.)

Product code : MTD\_08D04R00D02A02A



### Specifications :

- *Dimensions 500x210x500 (BxDxH)*
- *Supply voltage 230V*
- *Nominal power 15 Watt*
- *4 ethernet ports*
- *Ambient temperature min -10 °C max 55°C*
- *Protection class IP66*
- *8x digital galvanic parted inputs*
- *4x relais outputs (= galvanic parted)*
- *2x analoge inputs 4-20mA*
- *2x analoge outputs 4-20mA*
- *Feed through gland*
- *Machine controller (PLC)*
  
- *Data managed ethernet switch (only for the Master Module)*

## MTD Module (12x dig.inp. - 8x relay outp.)

Product code : MTD\_12D08R00D00A00A



### Specifications :

- *Dimensions 500x210x500 (BxDxH)*
- *Supply voltage 230V*
- *Nominal power 15 Watt*
- *4 ethernet ports*
- *Ambient temperature min -10 °C max 55°C*
- *Protection class IP66*
- *12x digital galvanic parted inputs*
- *8x relais outputs (= galvanic parted)*
- *Feed through gland*
- *Machine controller (PLC)*
  
- *Data managed ethernet switch (only for the Master Module)*

## MTD Module (12x dig.inp. - 4x relay outp. - 4x dig. outp)

Product code : MTD\_12D04R04D00A00A



### Specifications :

- *Dimensions 500x210x500 (BxDxH)*
- *Supply voltage 230V*
- *Nominal power 15 Watt*
- *4 ethernet ports*
- *Ambient temperature min -10 °C max 55°C*
- *Protection class IP66*
- *12x digital galvanic parted inputs*
- *4x relais outputs (= galvanic parted)*
- *4x digital galvanic parted outputs*
- *Feed through gland*
- *Machine controller (PLC)*
  
- *Data managed ethernet switch (only for the Master Module)*

## MTD Module (16x dig. inp. - 4x relay outp. - 8x dig. outp.)

Product code : MTD\_16D04R08D00A00A



### Specifications :

- *Dimensions 600x250x600 (BxDxH)*
- *Supply voltage 230V*
- *Nominal power 25 Watt*
- *4 ethernet ports*
- *Ambient temperature min -10 °C max 55°C*
- *Protection class IP66*
- *12x digital galvanic parted inputs*
- *4x relais relais outputs (= galvanic parted)*
- *8x digital galvanic parted outputs*
- *Feed through gland*
- *Machine controller (PLC)*
  
- *Data managed ethernet switch (only for the Master Module)*

## Thick/Fat Client included HDMI cables

Product code : MTD\_THICK CLIENT



### Specifications :

- *Dimensions screen LED 21,5inch*
- *2X Power supply 230V*
- *Ambient temperature min 10 °C max 45°C*
- *Protection class IP20*
- *Optical mouse, with cable*
- *Query keyboard, cabled*
- *Thick Client PC Windows10*

## Thin Client included HDMI cables

Product code : MTD\_THIN CLIENT



### Specifications :

- *Dimensions screen LED 21,5inch*
- *2X Power supply 230V*
- *Ambient temperature min 10 °C max 45°C*
- *Protection class IP20*
- *Optical mouse, with cable*
- *Query keyboard, cabled*
- *Thin Client PC with Windows10*

## Screen included HDMI cables

Product code : MTD\_BEELDSCHERM



### Specifications :

- *Dimensions screen LED 21,5inch*
- *1X Power supply 230V*
- *Ambient temperature min 10 °C max 45°C*
- *Protection class IP20*
- *Optical mouse, with cable*
- *Query keyboard, cabled*

# Machine data transport, -control, -monitoring, -collect, -surveillance.

# MATRANDA

## What is meant by basic software and user software?

**Basic software** is software which standard is programmed in all PLCs of the *Master and Slave modules*. The *basic software* is also included in the PCs of the Server and Control module. An example of the *basic software* is **Windows10**.

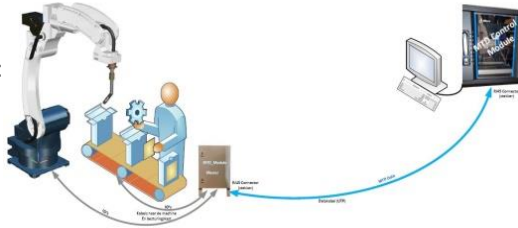
**User software** is software which is compiled together with the user and programmed by **Matranda**. These programs are controlled by the *Basic software*.

For example, a sensor and a lamp are connected to the *Master/Slave module*. Software is required to be able to read this sensor and to control the lamp with it.

This software is called *User software*.

The smallest configuration consists of :

- MTD Control Module
- MTD Master Module
- Screen, mouse and keyboard



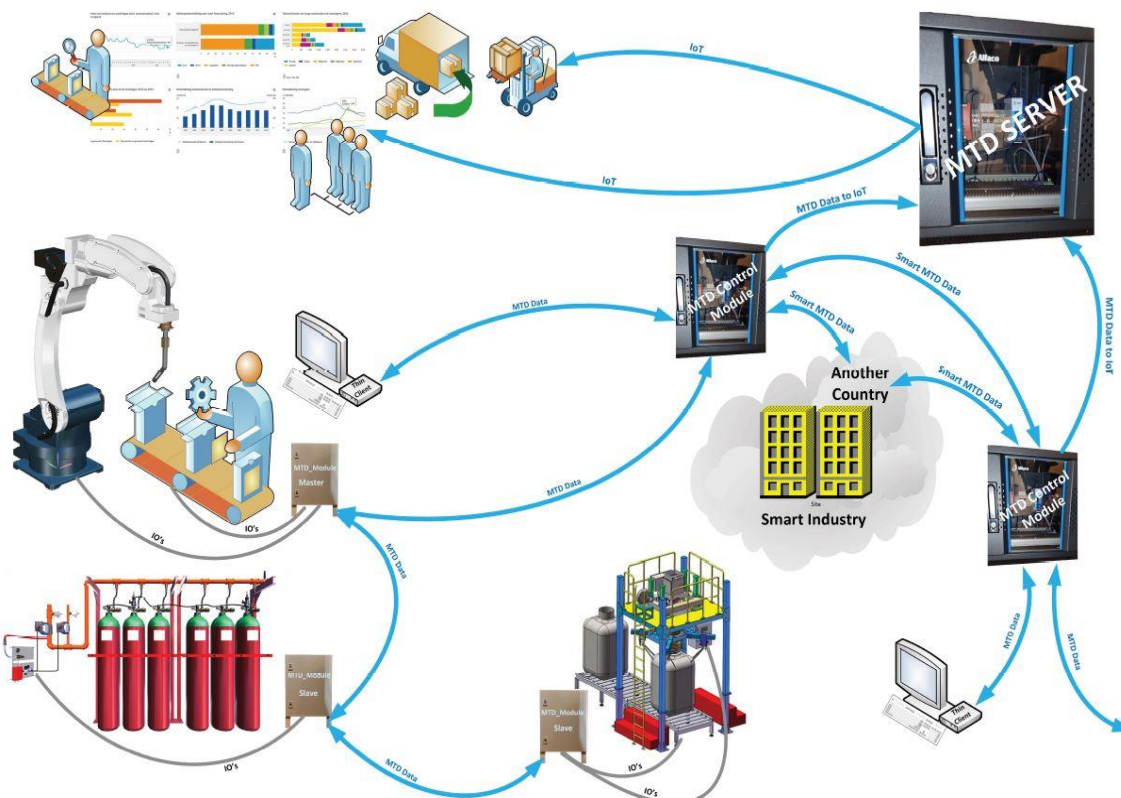
The most detailed composition of a **Matranda Smart System** is shown schematically below.

This configuration consists of:

- MTD Control Module
- MTD Master Module (1x)
- Screen, mouse and keyboard
- Thin Clients (optional)
- Fat Clients
- MTD Server
- MTD Slaves Modules (max 15 modules)
- Another location

The MTD Control Modules are all interconnected, even if they are in a different location. This location can also be in another country, around the world.

This is what makes the **Matranda system** so unique. The data that is sent to other locations is also encrypted data. As a result, we completely rule out corporate espionage. The MTD Servers are installed in each location. With this system it is therefore possible that devices and machines at one location, and other machines and devices at another location, can be controlled.



**MATRANDA**, manufacturer and supplier of machine control and data collection with data transport.  
Trade mark 'Matranda'. All our offers and contracts are subject to our General Terms & Conditions of Supply.

Head office :  
Newtonlaan 115  
3584 BH Utrecht

Assembly department :  
Belvedereweg 2 – 6  
3762 EE Soest

+31 (0)84 – 872 89 38  
The Netherlands

info@matranda.com  
www.matranda.com