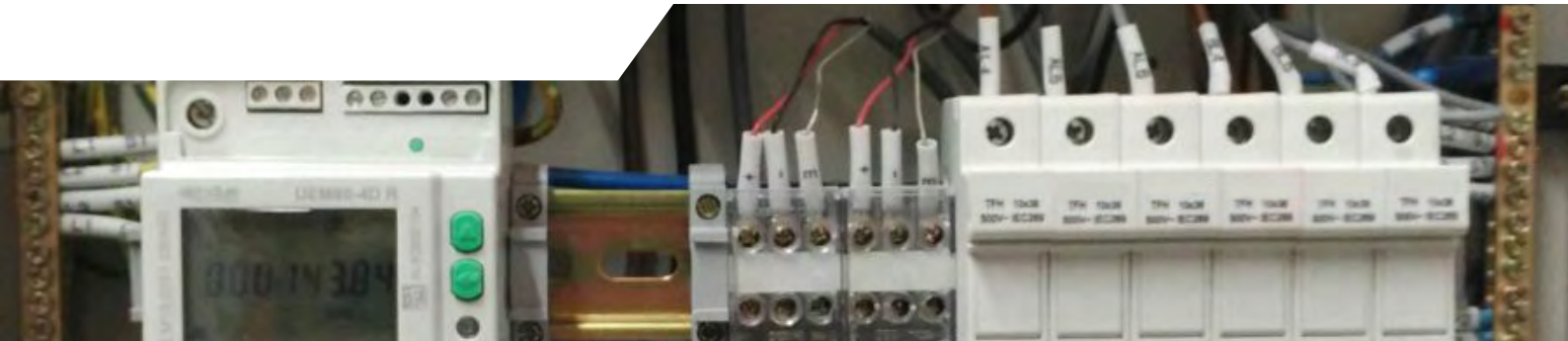


REPORT COUNTERS



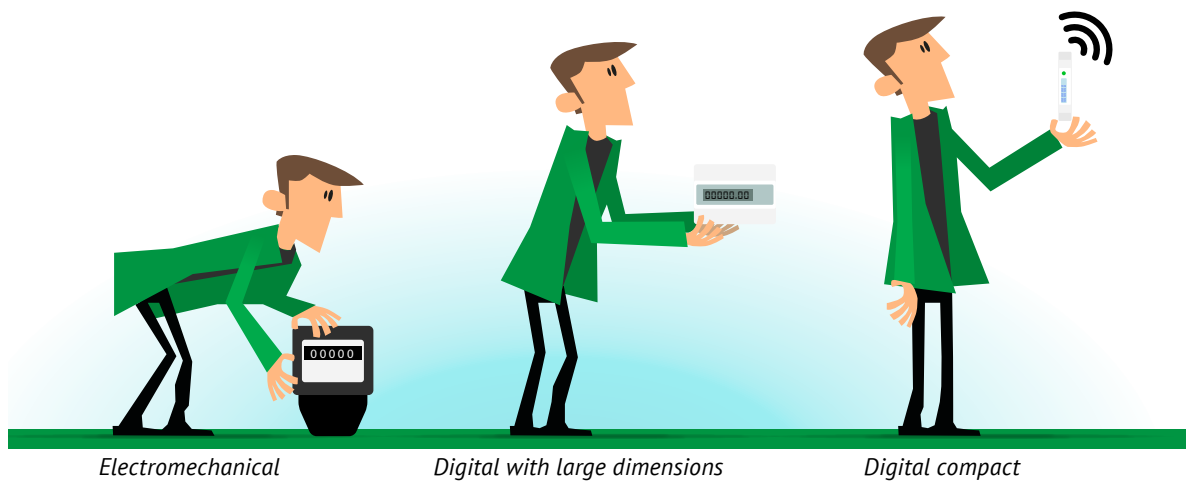
ALL YOU NEED TO KNOW ON COUNTERS BEFORE BUYING THEM

Like most of the products and services we use daily, **even the electrical energy meters have undergone a real “evolution of the species”**.

Within a few decades we have gone from an analog and electromechanical electricity meter with a manual reading to **a much more compact instrument with powerful performance**: from remote reading to the billing certification (MID).

But it was not just these items to evolve: **also the needs of the energy sector professionals have changed and evolved with them.**

THE EVOLUTION OF THE SPECIES



WHY SHOULD I INSTALL A COUNTER?

The main reason to install a counter is **to know when and where there is an electrical energy consumption**. The data provided by the counter allow to implement a policy of reducing unnecessary consumption and inefficiencies of the system, in industrial, civil or commercial.

Which are your needs?

Discover the products in Algodue range and choose the one that best suits your needs.

IN WHICH FIELD DO YOU USE THE COUNTER?

- For residential uses and monitoring of photovoltaic systems the model is **SINGLE-PHASE**



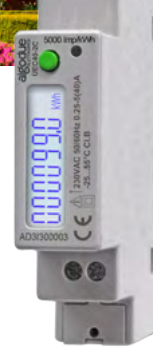
Series
UEM80-2D



Series
UEC80-2X



Series
UEM40-2C



Series
UEC40-2C

- For industrial uses (industrial facilities, shopping centers) the solution is a **THREE-PHASE** model



Series
UEM1P5



Series
UEM80



Series
UEC1P5-X



Series
UEC80-X



Series
UEC1P5-4X



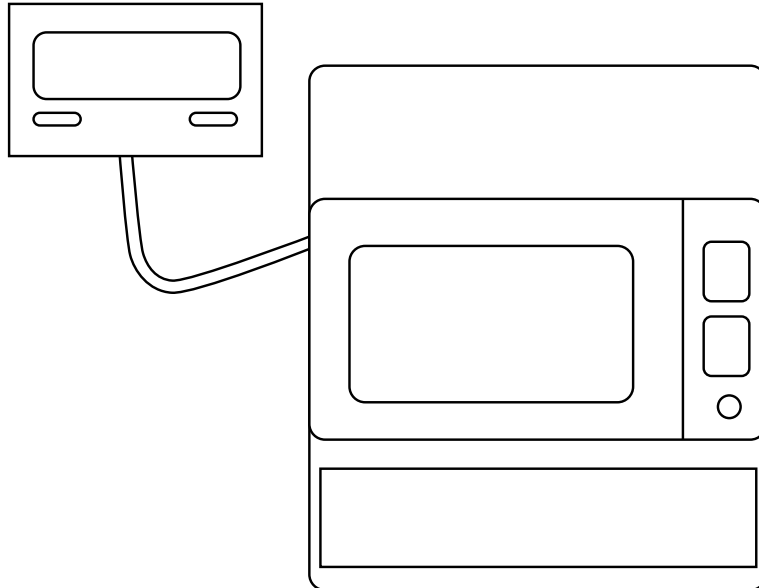
Series
UEC80-4X

WHICH TYPE OF MEASUREMENTS IS REQUIRED?

PULSE

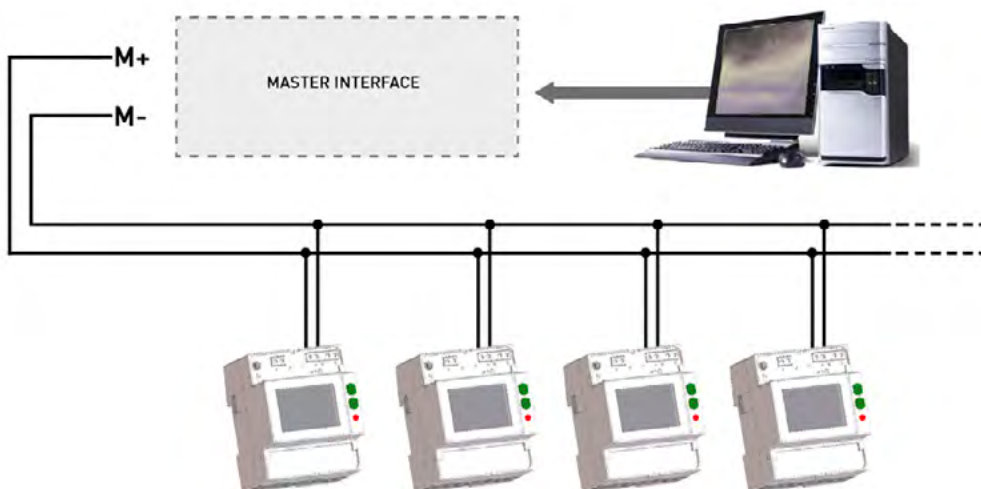
All Algodue counters offer one or two **pulse** outputs and they can then be combined with standard equipments for counting pulses and the subsequent consumption calculation.

The ones that are most used in this application are however the models of the **UEC series**, since they do not offer a built in communication and two pulse outputs particularly useful for simultaneously monitoring of two parameters, for example active lagging and leading energy.



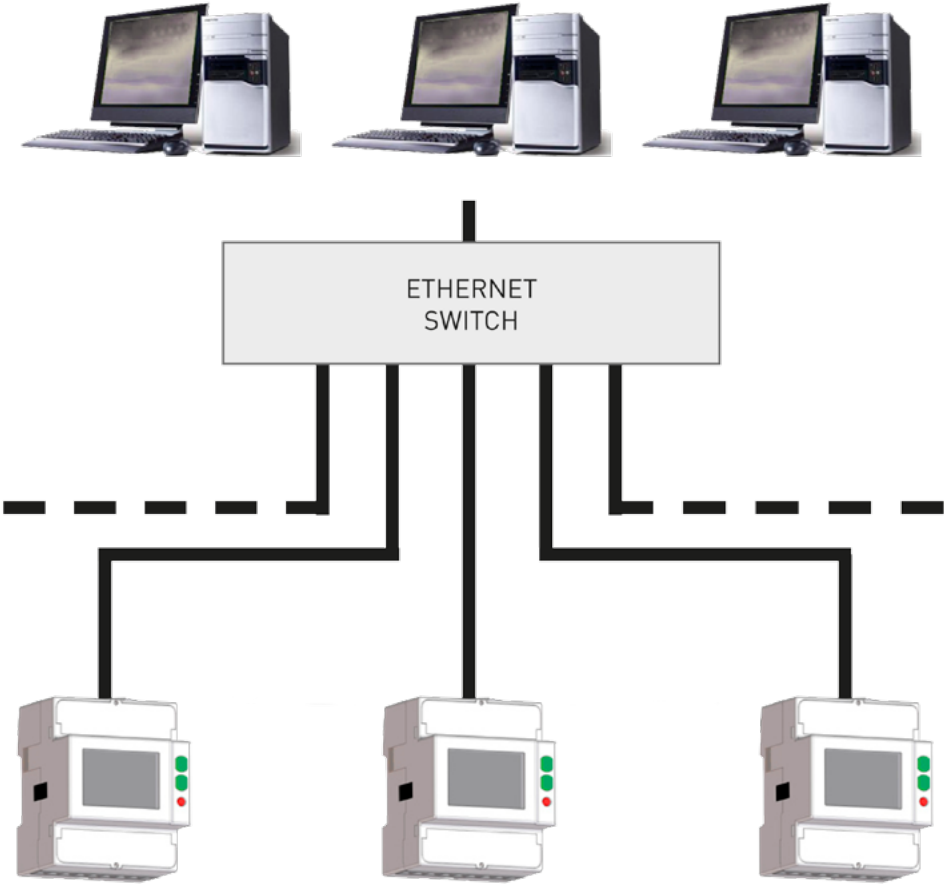
REMOTE

The **UEM series** (single and three phase) offer different protocols to be selected as for communication. There are therefore different models to choose, such as: **RS485 RTU protocol, Ethernet MODBUS TCP protocol and MBUS**. The advantage is to create a **centralized communication network** for the control of the consumption data.



Example Network MODBUS/MBUS

RETE LAN
LAN NETWORK



Example Ethernet Network

MODE	PROTOCOL
RS485	MODBUS RTU
Ethernet	MODBUS TCP
MBUS	MBUS

PRODUCTS

UEC RANGE



Series UEC80-2X



Series UEC40-2C



Series UEC1P5-X



Series UEC80-X



Series UEC1P5-4X



Series UEC80-4X

UEM RANGE



Series UEM40-2C



Series UEM80-2D



Series UEM1P5



Series UEM80

MODEL	PHOTO	VERSION		CURRENT INPUTS		COMMUNICATION PORT			RECORDING	INPUTS & OUTPUTS		MID
		SINGLE-PHASE	THREE-PHASE	CT	DIRECT	RS485	MBUS	ETHERNET	select among all measured parameters	TARIF INPUT	SO	
UEM1P5-4D R			✓	✓		✓				✓	✓ (1 SO)	OPZ.
UEM1P5-D M			✓	✓			✓			✓	✓ (1 SO)	OPZ.
UEM1P5-4D E			✓	✓				✓	✓		✓ (1 SO)	OPZ.
UEM40-2C R		✓			40A	✓					✓ (1 SO)	OPZ.
UEM40-2C M		✓			40A		✓				✓ (1 SO)	OPZ.
UEM80-2D R		✓			80A	✓					✓ (1 SO)	OPZ.
UEM80-2D M		✓			80A		✓				✓ (1 SO)	OPZ.
UEM80-2D E		✓			80A			✓	✓			OPZ.
UEM80-4D R			✓		80A	✓				✓	✓ (1 SO)	OPZ.
UEM80-D M			✓		80A		✓			✓	✓ (1 SO)	OPZ.
UEM80-4D E			✓		80A			✓	✓		✓ (1 SO)	OPZ.
UEC1P5-X			✓	✓						✓	✓ (2 SO)	OPZ.
UEC1P5-4X			✓	✓						✓	✓ (2 SO)	OPZ.
UEC40-2C		✓			40A						✓ (1 SO)	OPZ.
UEC80-4X			✓		80A					✓	✓ (2 SO)	OPZ.
UEC80-2X		✓			80A					✓	✓ (2 SO)	OPZ.

DO YOU NEED A COUNTER OR A NETWORK ANALYZER?

Before buying it is important to know the difference in functionality between the two devices, to verify with certainty which of the two is the one that best suits your needs. Below a simple scheme on the DIFFERENCES between the two devices:



Counter



Network analyzer

FEATURE	COUNTER	NETWORK ANALYZER
Data shown on the display	Only power and energy	All measured electrical parameters (i.e.: V, I, THD, PF), power, energy, etc.
Memory	NO. Except for the counters with Ethernet interface (Both single and three phase) which are provided with recording data memory (8MB)	YES, in most models with size up to 8 MB
Supply	Self-powered	Auxiliary power supply with different ranges depending on the model
Tarif input	YES	NO
MID certificate	MID (optional)	NO

DO YOU NEED MID CERTIFICATION?

MID certification according to the standard 2014/32/EU is aimed at making energy measurement carried out by the measuring systems on the market safe, reliable and trustworthy. The MID mark is applied on the case of the counters and is to grant that measurements are for billing.

The MID certified instruments are recognized by a supplementary metrology marking **MID** followed by the number of the model certificate and the certifying body to ensure maximum traceability of the certification.



MID counters

Algodue meters are available in 3 versions: BASIC, RESET and certified MID 2014/32/EU B+D. The RESET version allows to reset counters and the use of different systems. View and download Algodue MID certification [clicking here](#).

GENERAL FEATURES OF ALGODUE COUNTERS

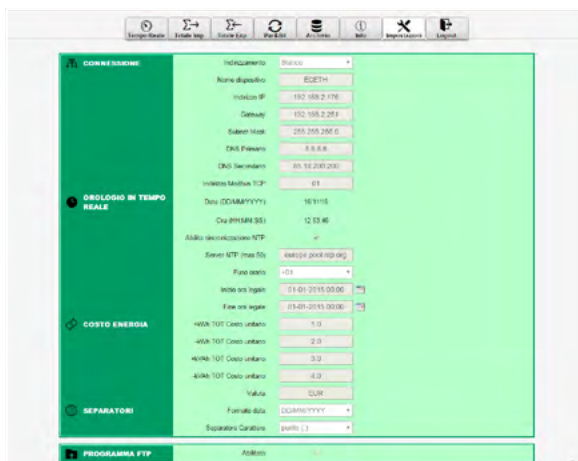
- Extremely compact 4 DIN modules (three-phase), 2 modules or 1 module (single-phase)
- Bi-directional measurements in 4 quadrants for all energies and powers
- Programmable transformation ratio in UEM1P5 and UEC1P5 models
- Input value selectable 1A or 5A in UEM1P5 and UEC1P5 models
- Single and three phase versions with direct connection to 40A, 80A
- MID version supplied with terminal covers and seals
- Coverage of the sealable terminals to prevent tampering or configuration changes
- Display Large backlit LCD that enables easy reading
- Display LCD with 7 digits in single-phase models, with 8 digits in three phase ones
- View of accumulating counter and instantaneous powers of the LCD
- Ability to display up to 30 instantaneous measured parameters in three-phase models
- Ability to display from 7 to 10 instantaneous measured parameters in single-phase models
- Complete set of energy counters and partial counters, with possibility to be started, stopped or cleared
- Indications of phase sequence and diagnostics of signal polarity errors in connection
- LED metrological on the front panel
- Class B accuracy, according to EN 50470-3

OUR PLUS

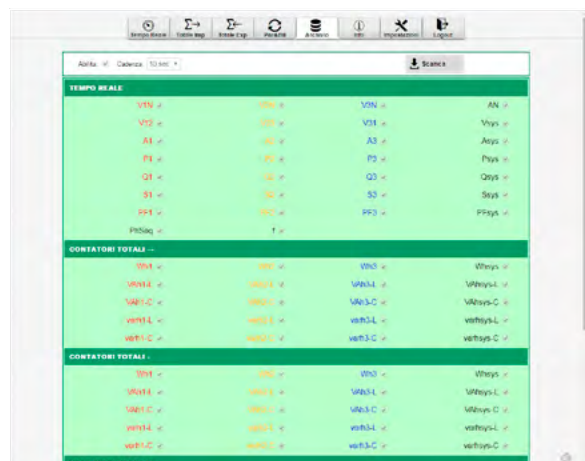
1 Three-phase model:

	UEM1P5-D M	UEM1P5-4D R/E	UEM80-D M	UEM80-4D R/E
CT ratio	✓	✓		
Programmable wiring	✓		✓	

2 The Ethernet versions of both families (direct connection and CT), three-phase and single-phase, have embedded webserver and memory. The recorded data can be transferred manually or automatically according to a preset FTP PUSH protocol.

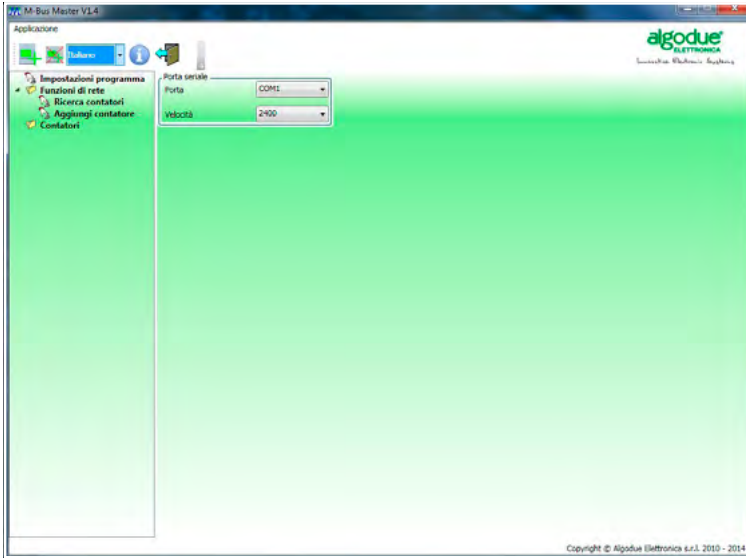


Programming page plan FTP Push

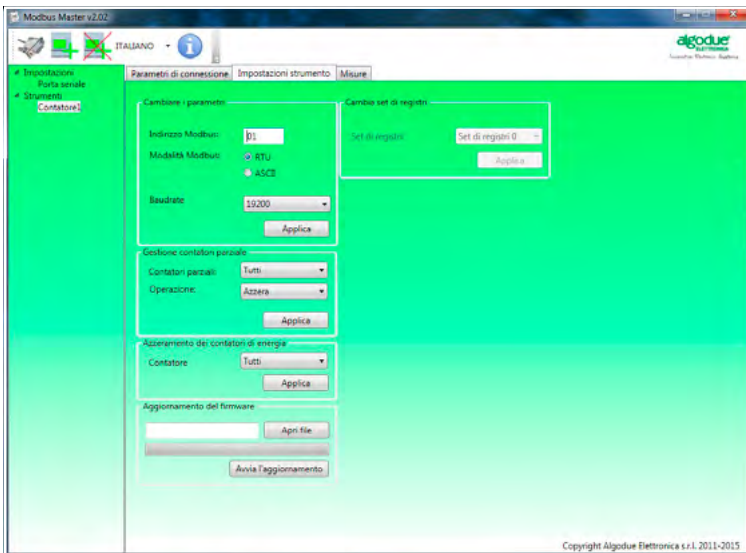


Page of Programming Data Recording

3 The **MBUS** and **MODBUS** versions are offered with a SOFTWARE TOOL, MODBUS MASTER and MBUS MASTER, downloadable from the reserved area of Algodue site. These applications allow you to make a quick programming of the counters and to verify proper communication also only with a laptop temporarily connected before the final commissioning.

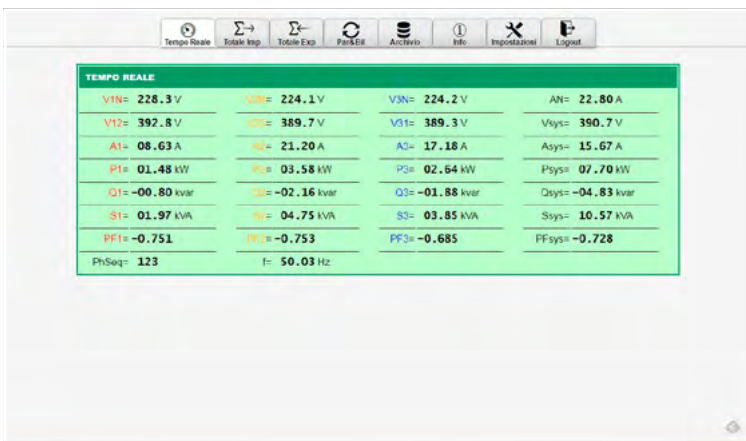


*Mbus Master
Screen Example*



*ModBUS Master
Screen Example*

4 In the **Ethernet version** webserver is embedded, but you can always use the MODBUS MASTER.



*Webserver
Screen Example*

PARZIALE →	PARZIALE ←	BILANCIO
ENERGIA ATTIVA		
Whsys= 050865.66 k	Whsys= 000000.00 k	Whsys= 074348.58 k
ENERGIA APPARENTE		
VWhsys-L= 004661.26 k	VWhsys-L= 000000.00 k	VWhsys-L= 004661.26 k
VWhsys-C= 083562.38 k	VWhsys-C= 000000.00 k	VWhsys-C= 083562.40 k
ENERGIA REATTIVA		
varhsys-L= 000426.86 k	varhsys-L= 000000.00 k	varhsys-L= 000426.86 k
varhsys-C= 000000.00 k	varhsys-C= 019349.84 k	varhsys-C= -019349.84 k

Webserver
Screen Example

5 The UEC models are equipped with an infrared port that allows the combination of a module communication, from among those available. In this way, also after the first installation for a use with the pulses, it is possible to reuse the same counter by simply adding the specific communication module.

Among the available modules, the only protocol not available in the UEM versions with integrated communication is the KNX. Therefore in cases in which this protocol is required, the solution is the **external module KNX** used in combination to UEC80-2X models, UEC1P5-X and UEC80-X.



6 Most of the models are equipped with a **digital input with the function to manage tariff** based on a signal that comes from the outside.

Depending on the signal type, consumption are added in the appropriate registers (Tariff 1 and Tariff 2) with consequent subdivision of the values that can then be used by a centralized system control and power management.

Here is the list of models with digital input:

UEC80-X, UEC80-2X, UEC80-4X, UEC1P5-X, UEC1P5-4X, UEM80-4D R, UEM80-D M, UEM1P5-4D R, UEM1P5-D M.

CUSTOMIZATION



All our products (Network Analyzers, MID certified Energy Counters, UL certified Rogowski Coils, CLASS A certified PQ METERS) can be adapted, customized and developed according to specific project or market requirements.

Our Research & Development Dept., made up of qualified technicians and engineers, together with our sales staff, is able to support you from the first feasibility study, through the development of your type of personalization, up to its production and delivery, ensuring high standards of quality and flexibility.

BRAND LABELLING STANDARD

Examples of customizations:

- Front panel with customized specifications (logo, colors, buttons, etc)
- Packaging labels
- Communication parameters
- Tool Software
- Web Server
- User manual in two languages
+ Quick Guide in 4 languages

BRAND LABELLING ADVANCED

Examples of customizations:

- Designing customized plastic parts (custom molds)
- Implementing customized firmware functions
- Hardware reengineering

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Write them to sales@algodue.it

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