

ROBOTICS IMAGE PROCESSING RENEWABLE ENERGY
STRAIN GAUGE
EMBEDDED CONTROL SYSTEMS TELEMETRY
POWER ELECTRONICS
DOMESTIC MEASUREMENT SYSTEMS R & D MICROCONTROLLER SOLAR ENERGY
MPPT INNOVATIONS COMMUNICATION
PROJECT CIRCUIT LAYOUT MOTORS AND DRIVERS
LINEAR MOTORS SOFTWARE ELECTRONICS M2M MODBUS
C#
MACHINERY AUTOMATION ENGINEERING BMS
HUMAN MACHINE INTERFACES MECHATRONICS RUSHLESS HUB MOTOR



ROBOTICS IMAGE PROCESSING RENEWABLE ENERGY
STRAIN GAUGE
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MPPT INNOVATIONS COMMUNICATION

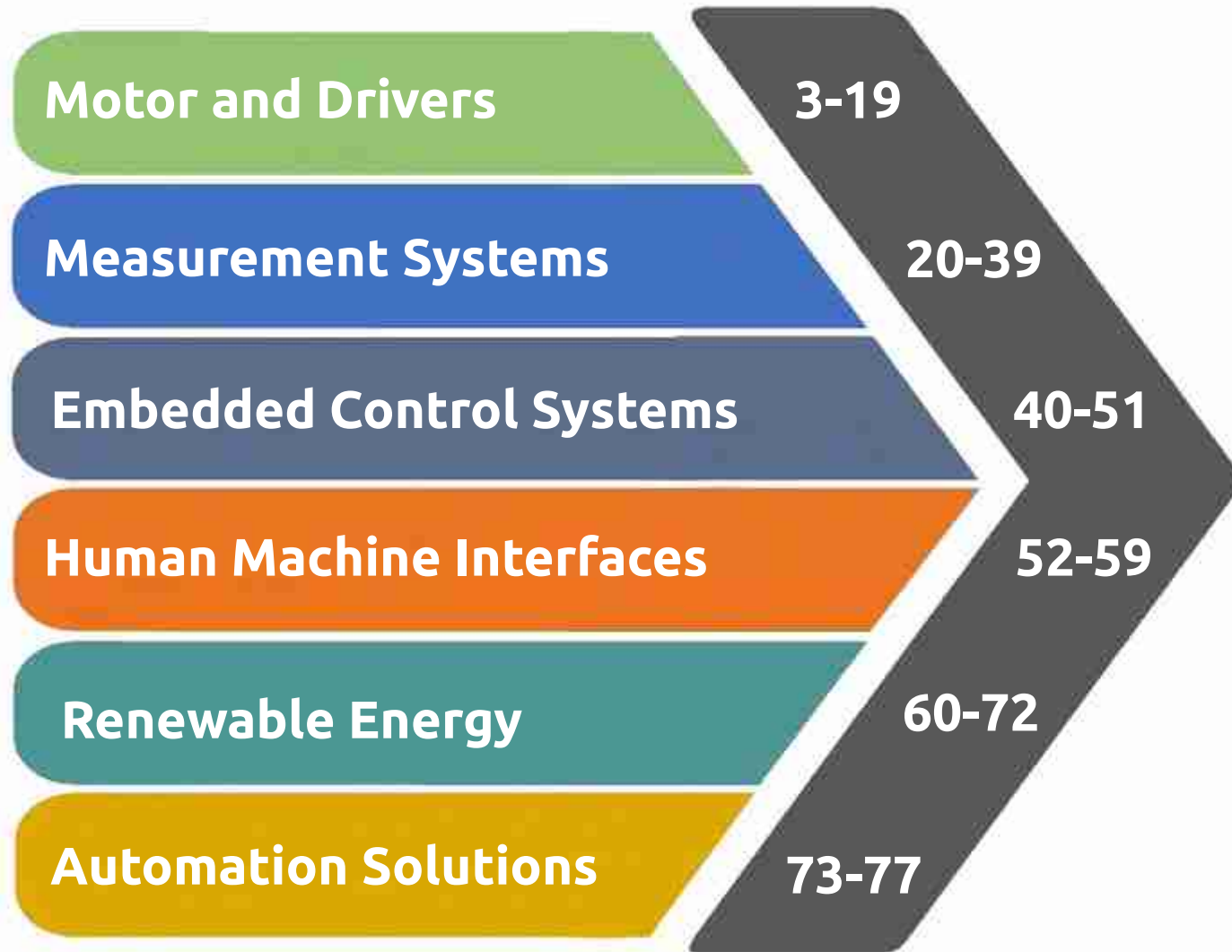
About Us

Destek Otomasyon produces high quality, optimum cost effective solutions in line with the needs and expectations of its customers in industrial automation projects that require specialized engineers and special solutions.

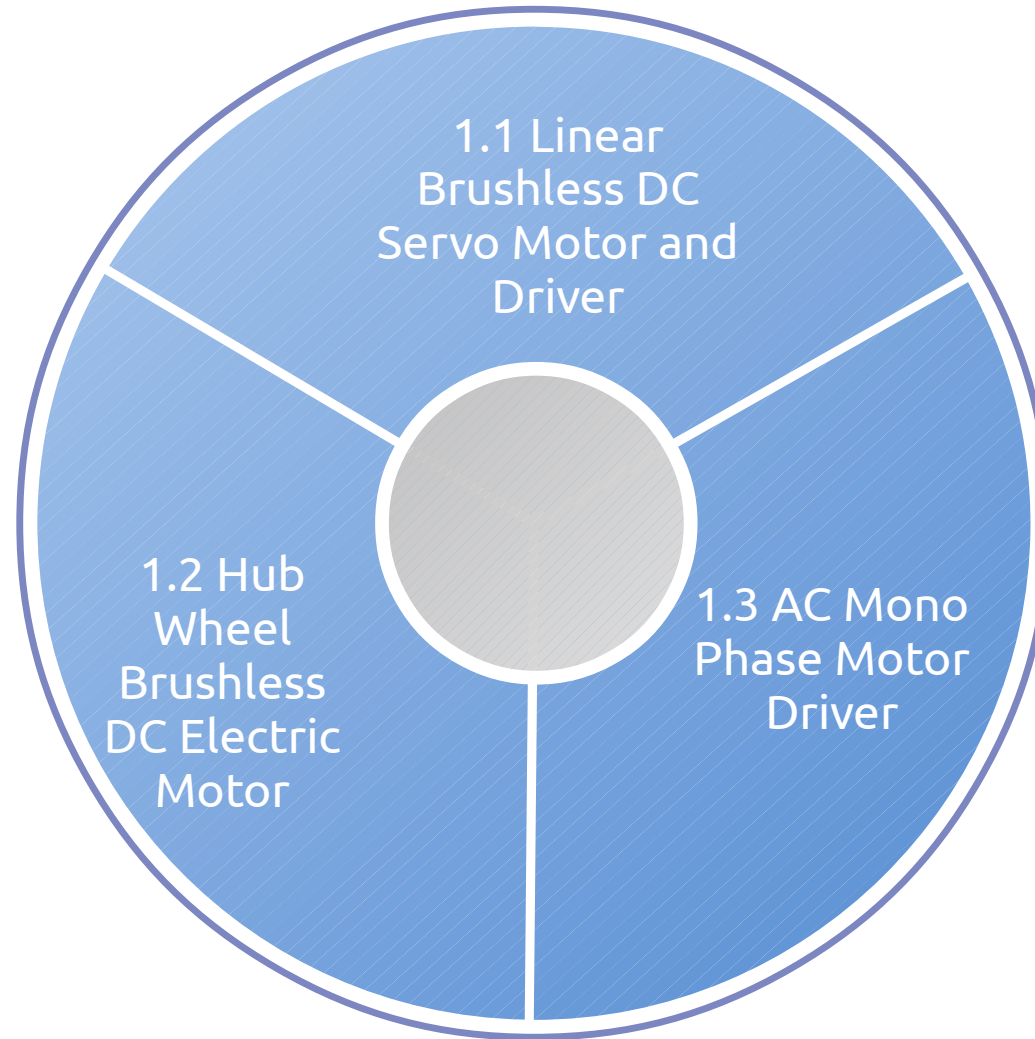
Beginning its commercial activities in 2009, Destek Otomasyon has emerged with the decision that its founders will continue to work under the same roof to sign a big success in R & D projects and to bring their experience to the service of the industrial world. The Destek Otomasyon work system includes project development, system design, production and testing, installation and training, after-sales services.

Supported by many successful projects, Destek Otomasyon has experience in designing and manufacturing embedded card software and hardware, brushless direct current motors and drivers, user interfaces, custom measurement systems with experience in engineering knowledge and experience.

Products



1 Motor and Drivers



1 Motor and Drivers

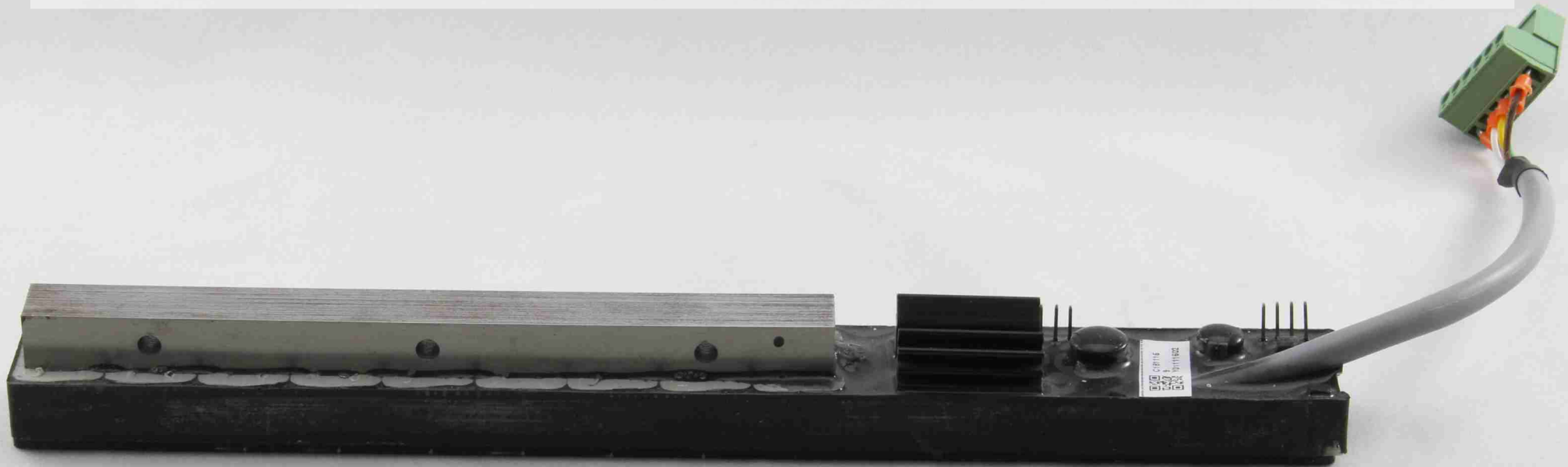
Destek Otomasyon offers different solutions to its solution partners with its products it produces within the scope of R & D projects.

Destek Otomasyon Linear Brushless Direct Current servo motors and drives provide direct linear motion without the need for a transfer.

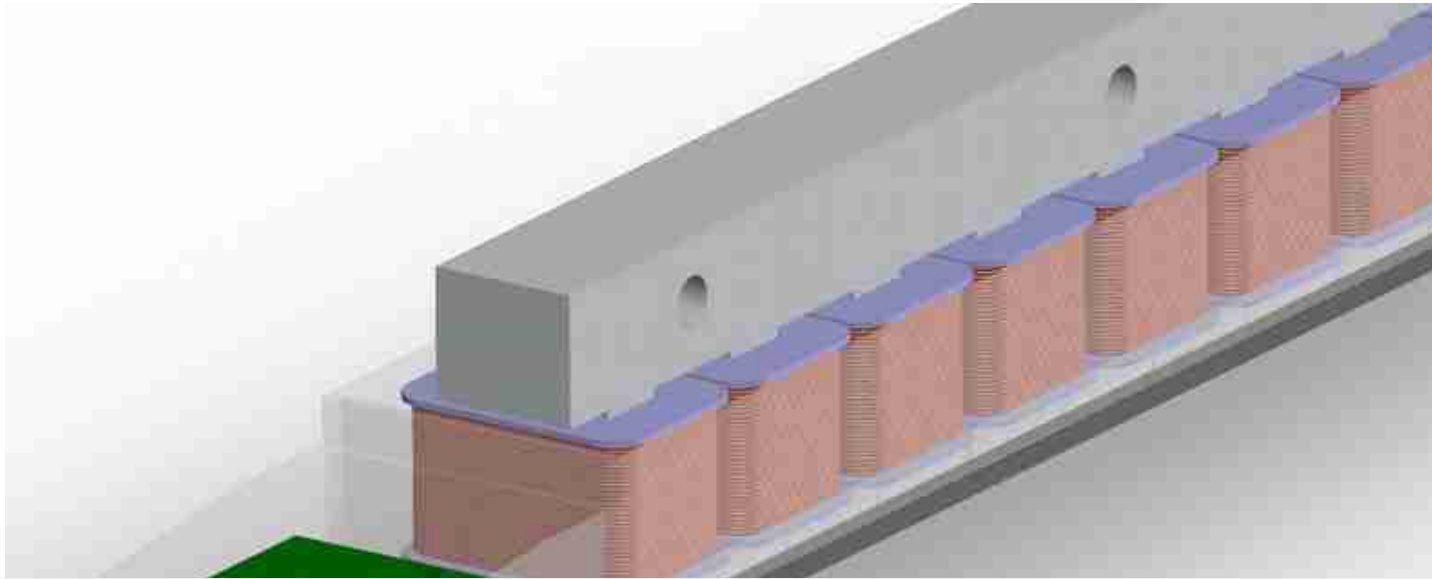
Destek Otomasyon In-Wheel Brushless Direct Current Electric Motor is used in electric and solar powered vehicles.

Manufacture of motors and drivers is carried out within the scope of 100% domestic production, at the production center located in İzmir, Destek Otomasyon.

1.1 Linear Brushless DC Servo Motor and Driver



1.1 Linear Brushless DC Servo Motor and Driver



Interior Structure Properties	Brushless DC motor
Power Options	20W-40W-60W
Maximum Carrying Weight	53 kg (tested in linear slide bearings)
Voltage	12-24V DC
Driver	Destek Otomasyon Brushless DC Motor Driver
Maximum Speed	1.4 m/s

1.1 Linear Brushless DC Servo Motor and Driver



Linear motor



Rotational motor
Power transmission
Controller circuit



Destek Otomasyon Linear Motor and Driver provides a cost advantage.

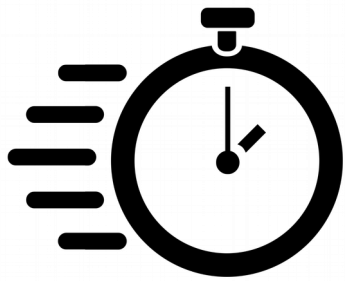
1.1 Linear Brushless DC Servo Motor and Driver

Usage areas
Industrial Cooling Cabins



1.1 Linear Brushless DC Servo Motor and Driver

RAPID



HANDICAP FRIENDLY



ACCURATE



MAINTANANCE FRIENDLY



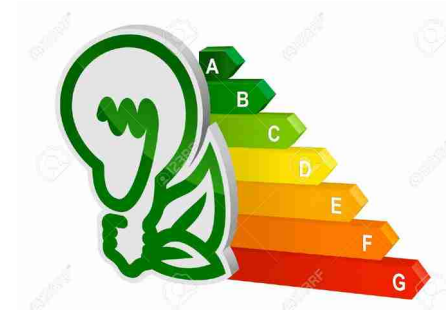
SILENT



ECONOMIC



HIGH EFFICIENCY



1.1 Linear Brushless DC Servo Motor and Driver



Package Included :
Linear Brushless DC motor
Motor Drive Circuit Board
Programming Module
Mounting Hairpiece (2 pieces)
Sensor Cable
Motor Cable

1.1 Linear Brushless DC Servo Motor and Driver

Areas of Usage



Industrial Cooler Cabinets



Sliding Doors Mechanisms

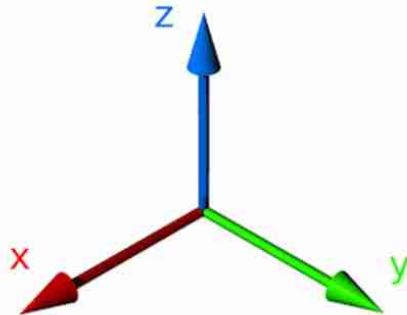
1.1 Linear Brushless DC Servo Motor and Driver



Areas of Usage
Linear Motion Mechanisms

1.1 Linear Brushless DC Servo Motor and Controller

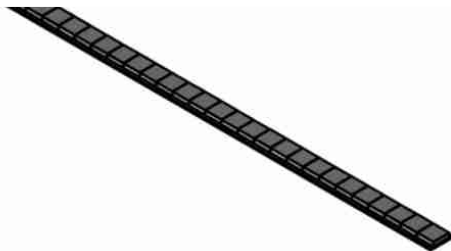
Special Solutions



Motion ability on more than one axis with using multiple linear motors



Curvilinear motion ability with using proper guides



Limitless motion capability

```
43 | char out;  
44 | out="lnl";  
45 | return out;  
46 | }  
47 |  
48 | void set_get(char chg_n, char w_add,int oct_val) //chg_n :  
49 | {  
50 | unsigned char cnt_byte,wrt_byte,wrt_data;  
51 | cnt_byte=cnt(chg_n);  
52 | wrt_byte=wrt_cmd(w_add,set_val);  
53 | wrt_data=set_val;  
54 | I2CStart();  
55 | I2Csend(cnt_byte);  
56 | I2Csend(wrt_byte);  
57 | I2Csend(wrt_data);  
58 | I2CStop();  
59 | }  
60 |  
61 | void set_all_get()  
62 | {  
63 | set_pot(0, wjms8a0d, aq1p1);  
64 | oct_pot(0, wjpcr100d, aq1p1);  
65 | set_pot(0, wjpcr200d, aq1p1);
```

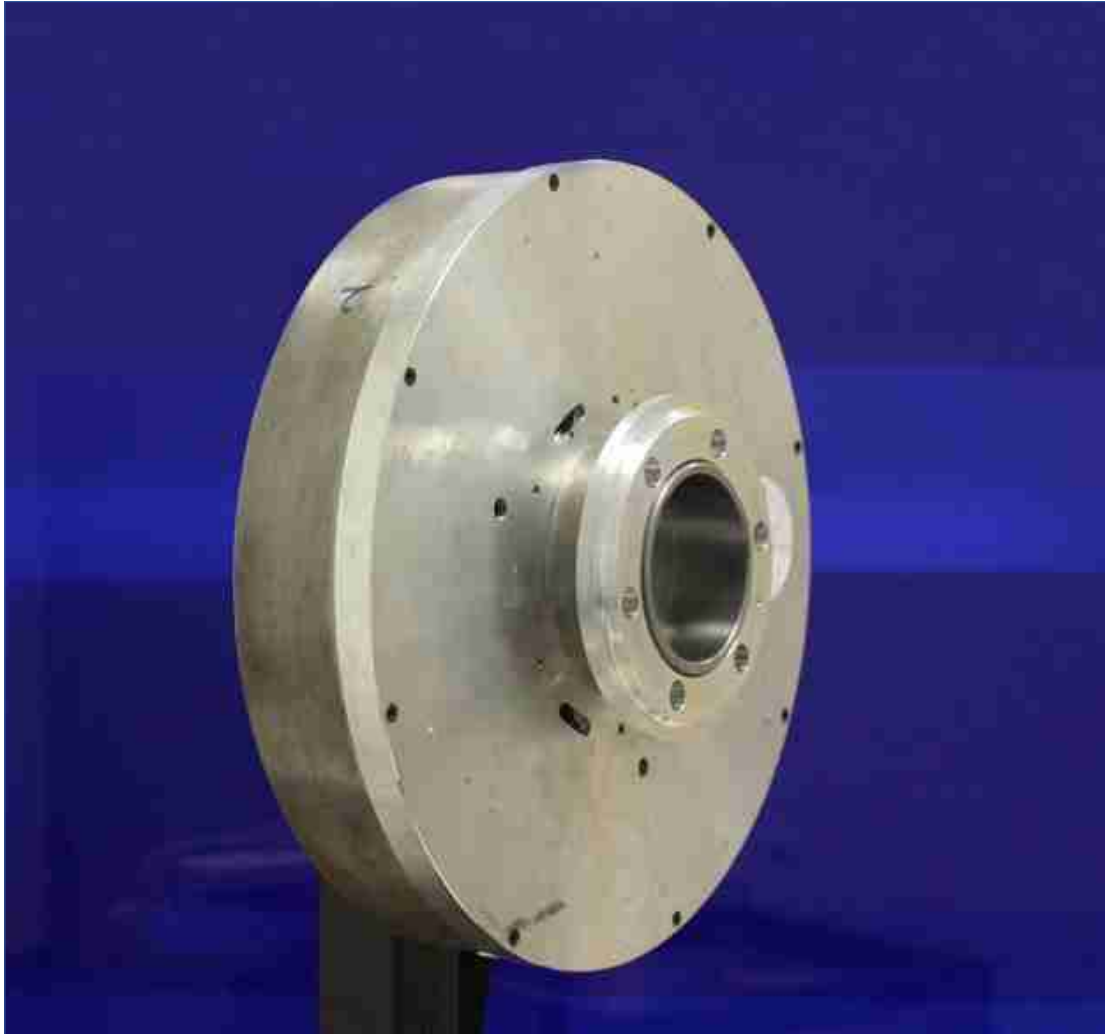


Changeable velocity, acceleration, energy producing options with software

1.2 Hub Wheel Brushless DC Electric Motor



1.2 Hub Wheel Brushless DC Electric Motor



Peak Power	7 kW
Nominal Power	3 kW
Nominal Voltage	100 V
Operating Voltage	65-130 V
Maximum Current	50 A
Weight	12 kg
Efficiency	% 92
Maximum Rev.	1450 rpm
Nominal Rev.	920 rpm

1.2 Hub Wheel Brushless DC Electric Motor



1.2 Hub Wheel Brushless DC Electric Motor



Areas of Usage
Electric Vehicles



1.2 Hub Wheel Brushless DC Electric Motor

Competitions which The Motor Used in

2013 TÜBİTAK Formula G Solar Car Race

2013 Australia-World Solar Challenge

2014 TUBITAK Electromobile EV Race

2015 Moroccan Solar Race Challenge

2015 TUBITAK Electromobile EV Race

2015 Australia-World Solar Challenge

2016 TUBITAK Electromobile EV Race

2016 European Solar Challenge

2016 Moroccan Solar Race Challenge

2017 TUBITAK Electromobile EV Race

Real road
in terms
tested.



1.3 AC Mono-phase Motor Controller



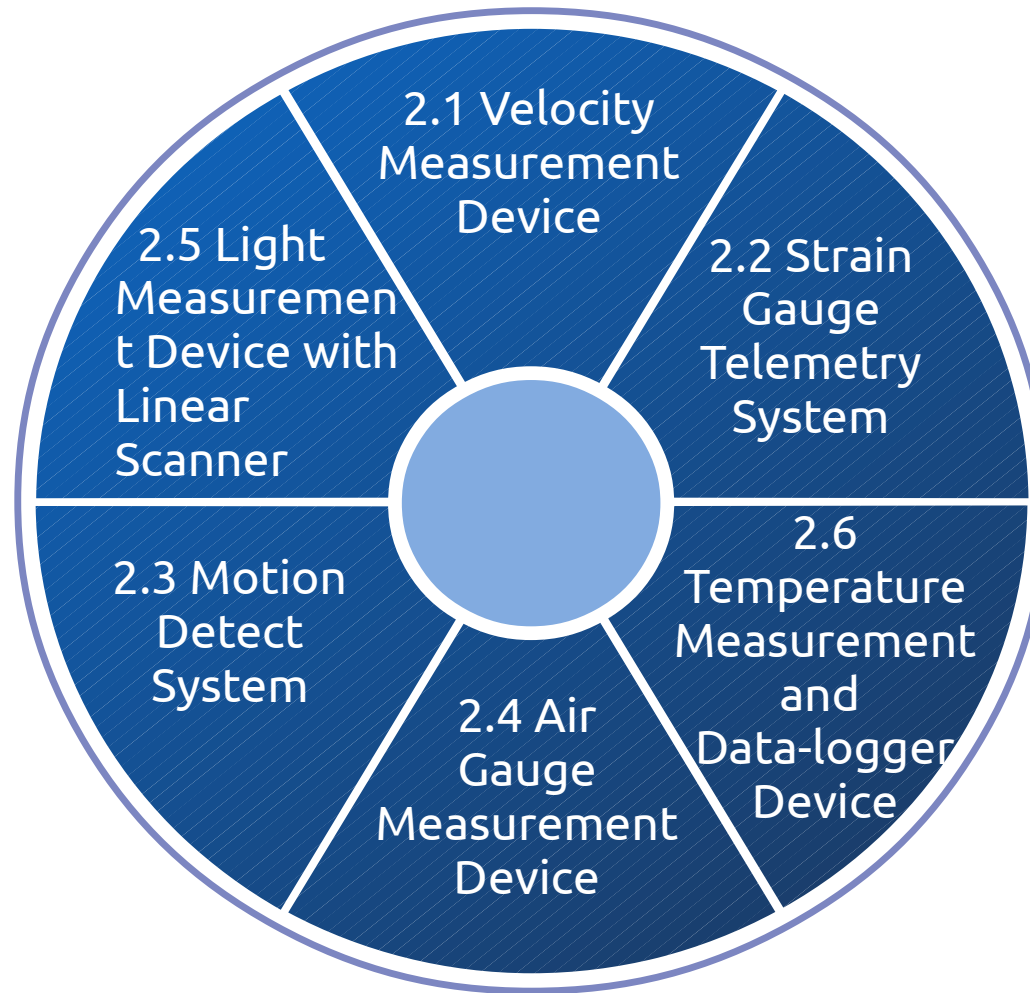
Nominal Power	2.5 kW
Operating Voltage	220 V 50 Hz
Circuit Board Dimensions	86mmx86mmx32mm (Without Cooler)
Weight	110 gr
Connections	Supply Motor Supply Motor Signal Error Signal Panel
Speed Control	Yes (<i>with panel connection</i>)
Software	Developing according to needing of customer



1.3 AC Mono-phase Motor Controller

Areas of Usage
Heater-Vent-Air
Conditioning Industry (HVAC
Industry)

2 Measurement Systems



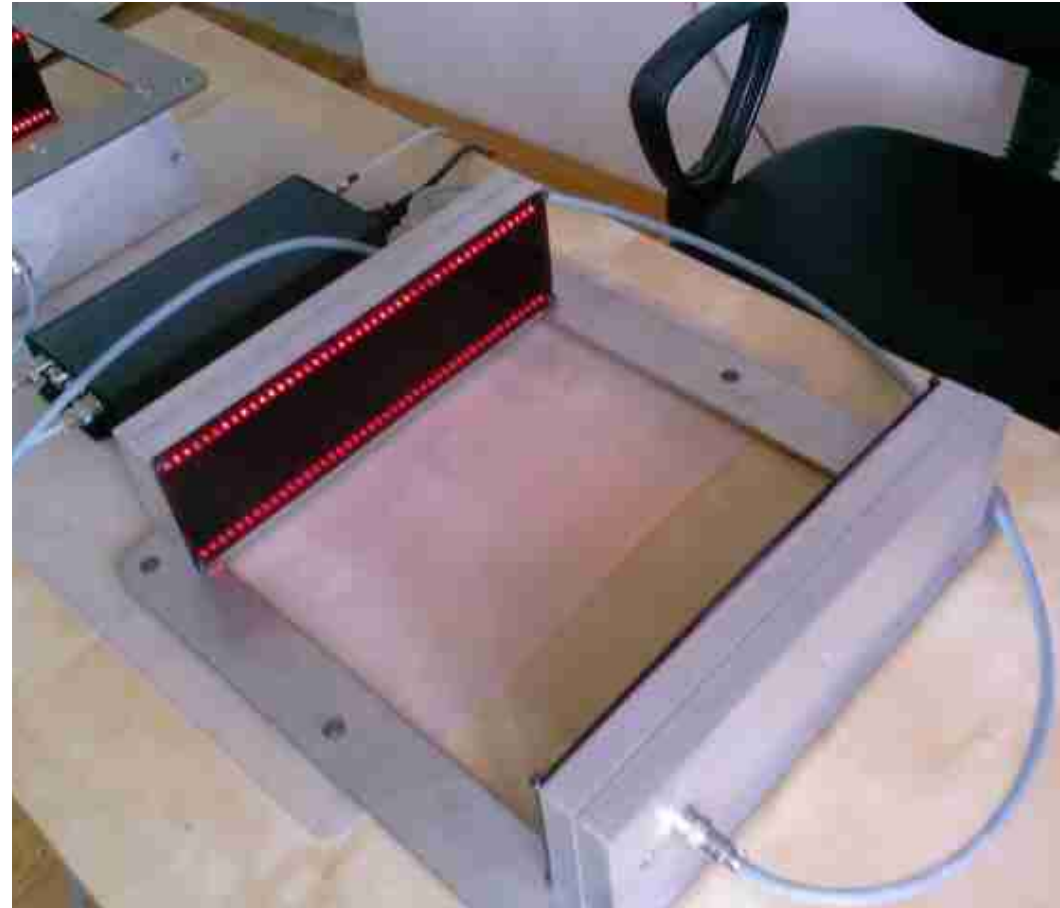
2 Measurement Systems

Destek Otomasyon, performs, records, designs and manufactures high precision measurement systems with R & D studies.

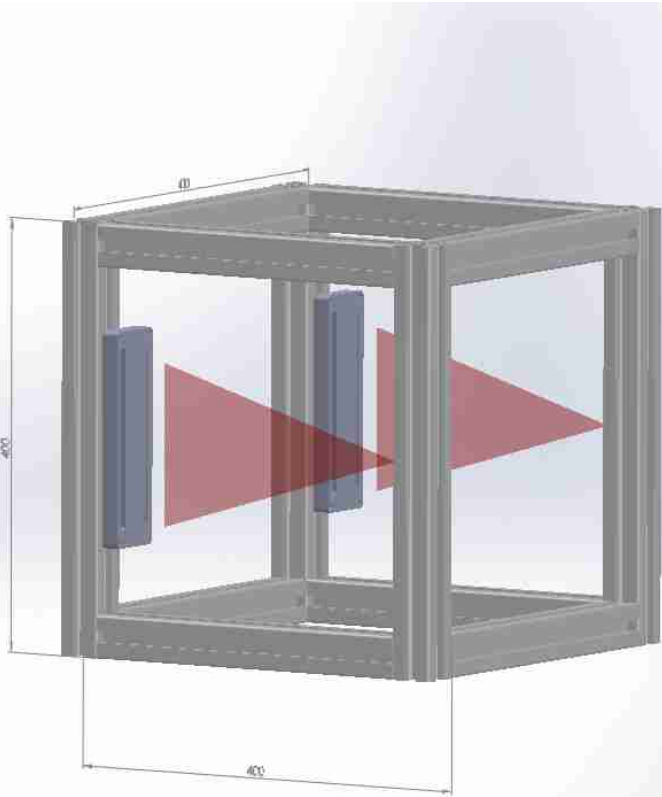
Destek Otomasyon provides services with high speed rotating particle orbital measurement, race end line measurement, air quality measurement, humidity and temperature measurement, carbon dioxide measurement linear light scanners, strain gauge measurement systems and Air Gauge Precision Measuring Systems for micron precision hole diameter measurement.

Our measurement systems are used in various sectors and laboratories, especially in the automotive, machine and defense industries.

2.1 Velocity Measurement Device



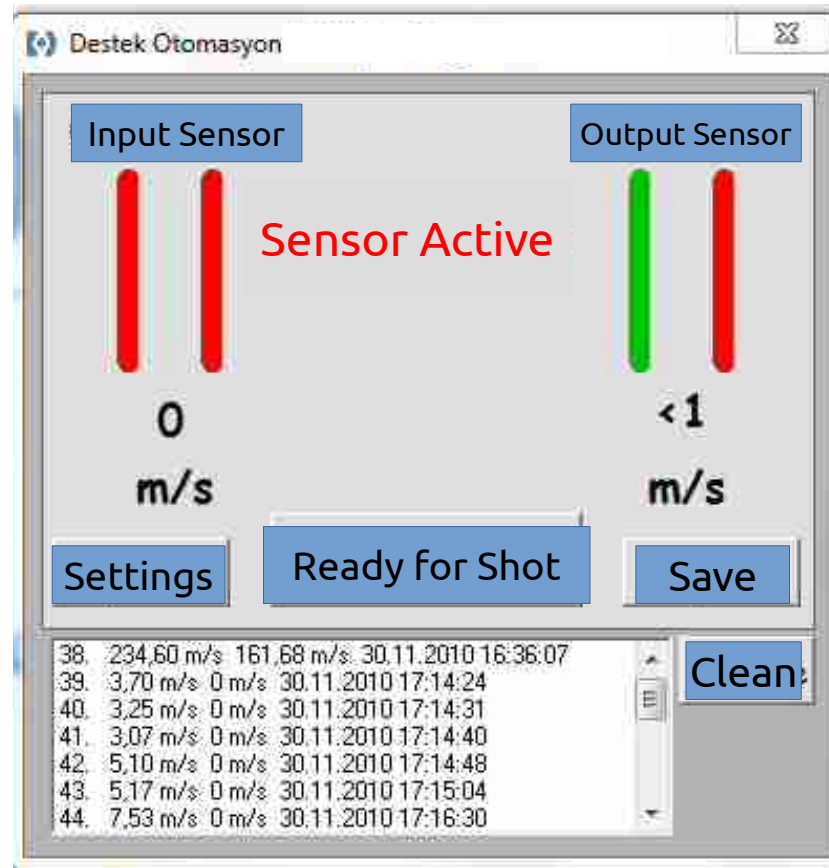
2.1 Velocity Measurement Device



Minimum Particle Dimensions	5 mm diameter
Available Maximum Velocity	Version A - 200 m/s Version B - 1200 m/s
Response to variation of light changes of sensors	Version A - Max. 50KHz Version B - Max. 100kHz
Communication Protocol	Modbus
Velocity Display	Graphical LCD Display
Software and Data-logger	Yes. (Optional - Destek Velocity Measurement Soft.)
Connection Type	Cable/Wireless*
Device Dimensions	400mmx400mmx400mm
Operating Voltage	220 V 50 Hz
<i>*Changeable for area of usage.</i>	

2.1 Velocity Measurement Device

Destek Otomasyon Velocity Measurement Software



2.1 Velocity Measurement Device

Split Hopkinson Bar Velocity Measurement



2.1 Velocity Measurement Device

Areas of Usage

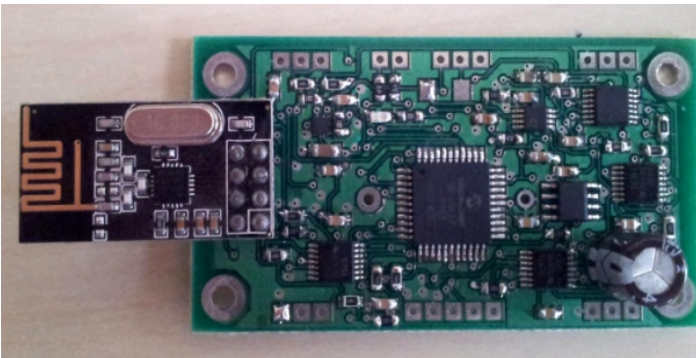


Laboratory Researches



Ballistic Experiments and Applications

2.2 Strain Gauge Telemetry System



Strain Gauge Connects.	4 pcs, quarter/half bridge
Accuracy	10 $\mu\epsilon$ (@1000 Gain)
Resolution	1,7751 $\mu\epsilon$ /bit (@1000 Gain)
Measurement Range	+/- 488 $\mu\epsilon$ (@1000 Gain)
Accelerometer Sensor	3 axis, +/-2g,4g,8g acceleration measurement option
Telemetry Receiver	USB Connected
Telemetry Range	100 m (<i>Rising up to 1 km</i>)
Computer Software and Data-logger	Yes (Destek Strain Gauge Telemetry Software)
Physical Dimensions	65mmx35mmx35mm, 110 gr
Supply	Li-ion rechargeable battery

2.2 Strain Gauge Telemetry System

Areas of Usage



Stress and Acceleration Measurement on Movable Systems

2.2 Strain Gauge Telemetry System

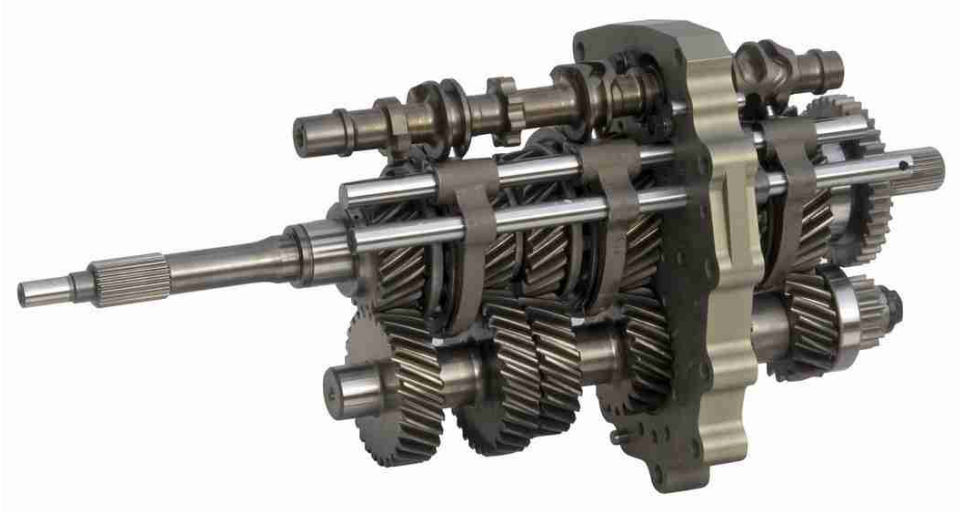


Areas of Usage

Stress and Acceleration
Measurement on Movable
Systems

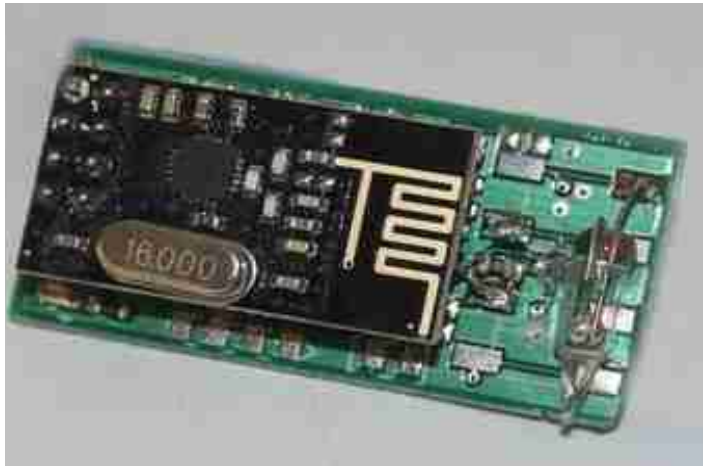
2.2 Strain Gauge Telemetry System

Areas of Usage



Stress and Acceleration Measurement on Movable Systems

2.3 Moving Parts and Temperature Tracking System



System Properties

Motion detector for shafts of conveyor belts. (Shaft turn on or/ not detecting)

Nominal Revolution can be Detected

5 RPM

Communication Mod.

Wireless Communication

Multiple Working at The Same Time

Up to 200 recipients with 1 recipient.

Telemetry Receiver

USB connected.

Telemetry Range

100 m (Rising up to 1 km)

Computer Software and Data-logger

Yes (Destek Moving Parts and Temperature Tracking System Software)

Physical Dimensions

65mmx35mmx35mm, 100 gr

Supply

2 AA size / rechargeable Li-ion batteries (optional)

2.3 Moving Parts and Temperature Tracking System

Destek Otomasyon Movement and Temperature Tracking System transmits the mobility, instantaneous temperature values and supply voltage values to the wireless receiver by the moving of the wireless transmitter circuits to the moving nose.

It is a system with receiver unit, wireless receiver module, embedded computer and touch sensitive screen. Differences in shaft rotation speeds are determined by evaluating the time between the last two signals transmitted by each transmitter. With the software running on the receiving unit, these values can be taken at the same time from a total of two hundred transmitters. The software developed by Destek Otomasyon adjusts the normal rotation speed range adaptively by determining the rotation speed values density under normal operating conditions. When the speed is outside the range, or when it is the milling that slows down over time, the system can warn you with different priority orders without failing. As a result, it can prevent unpredictable and accidental postures.

An important contribution of the system applied to the production line is that the temperature intensity can be determined by registering and evaluating the temperature values continuously from the dispensers along the line. With the evaluation of the records, if the problem of heat insulation is different from the ideal conditions, the problem can be detected.



2.4 Air Gauge Measurement Device



Device Properties	Accurate diameter measurement with air pressure
Accuracy	+/- 1 micron
Display	4.3" TFT LCD Touchscreen
Input Pressure	5-8 Bar
Probe Connections	1 or 2 (Changeable for application area)
Device Dimensions	300mmx150mmx190mm
Operating Voltage	220 V 50 Hz
Attachable Feature	Extra button recording feature

2.4 Air Gauge Measurement Device

The Air Gauge Measurement Device measures the micrometer precision within seconds with the help of the pro- peller using compressed air. Optionally, you can measure with more than one measuring probe on the same device. Thanks to its color display, measurement set-up, adjustment and log-keeping are practiced. Wifi, Ethernet, etc., using the network connections to the user over the local network to the Internet. This system, which is our own design and production, is open to different hardware and usage integrations.

Optionally, the instrument has an option to increase the measuring probe. Thus, the same number of different measurements can be made on the same screen on a single screen. Thanks to its 4.3-inch color touchscreen, the user interface is available with different colors to stimulate unwanted measurements. Thanks to its menu, it can be calibrated quickly and easily for 10 seconds. It works with air pressure with +/- 1 micron measurement accuracy and 5-8 bar range depending on prop type. There is SPC application which is followed on screen and outputs in CSV format via USB. WiFi, ethernet, Rs485 connections are available for Industry 4.0 compliance. On-line support is compatible with the M2M API system. Depending on demand, USB connectivity can be integrated with equipment such as printer, barcode reader, GPS, mobile communication devices.



2.5 Light Measurement Device with Linear Scanner



Light Measurement Sensor	3 pcs, different heights
Unit	Lumen
Motion	Linear motion on one axis
Capability of Light Scanning	Applicable along the system which is measured.
Software and Data-logger	Yes (Destek Otomasyon Linear Scanner Light Measurement)
Operating Voltage	220 V 50 Hz

2.5 Light Measurement Device with Linear Scanner

Areas of Usage
Analyzing of Illumination
Distribution of Cabinets

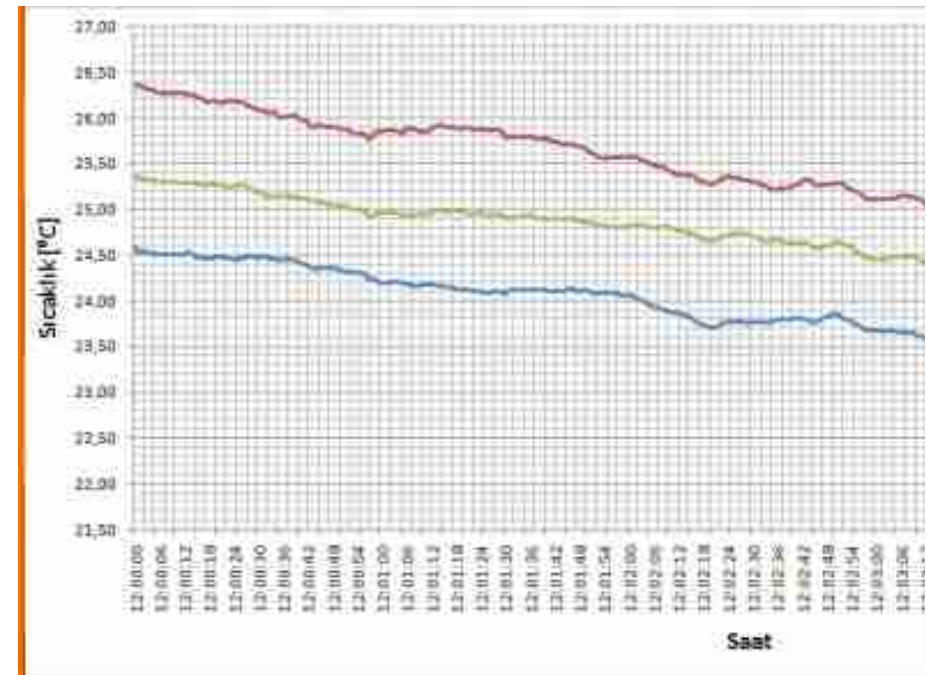
2.6 Temperature Measurement and Data-logger Device with Software



Sensor	Termocouple
Sensor Connections	50 pcs*
Temperature Display	Destek Otomasyon Graphical LCD HMI, computer software*
Computer Software and Data-logger	Yes (<i>Destek Otomasyon Temperature Measurement Software</i>)
Connection Type	Cable/Wireless*
Operating Voltage	220 V 50 Hz
*Changeable for area of usage.	

2.6 Temperature Measurement and Data-logger Device with Software

Destek Otomasyon Temperature Measurement Software



2.6 Temperature Measurement and Data-logger Device with Software



Areas of Usage
Analyzing of Temperature
Distribution of Cabinets

2.6 Temperature Measurement and Data-logger Device with Software

Areas of Usage

Analyzing of Temperature Distribution of Molds and Heating Platforms

2.7 Portable Temperature and Humidity Tracking System and Software



Temperature and Humidity Sensor	2 pieces of humidity 2 pieces of temperature
Hassasiyet	Temperature + - 0.2 ° C Humidity 2%
Measurement Offset	1 second (User-customizable)
Feed	5V 1A / PoE
Communication Protocol	Wifi (WPS)* /USB /Ethernet
Communication Protocol	Modbus (optional)
Record Keeping	Yes (internal energy support unit)
Communication	Cable / Wireless
Physical Properties	82mm x 106mm x 36mm
* The WPS-HRC feature makes it easy to connect to the internet	

2.7 Portable Temperature and Humidity Tracking System and Software

Temperature The Humidity Monitoring System receives humidity and temperature measurements from two different points. This information is transmitted to the user via the graphical display on the screen. Wifi, Ethernet, etc., using the network connections to the user over the local network to the Internet. This system, which is our own design and production, can provide different hardware and usage integrations. Can be used in vehicle follow-up.

On the device, there are two sensors that measure humidity and temperature, which may vary in length depending on need. There is a graphical user interface on the device to read this information and make device settings. There is a battery unit that allows information and warning for a certain period of time in case of power failure. If the specified conditions are not fulfilled, the user is audibly alerted. WiFi, ethernet, Rs485 connections are available for Industry 4.0 compliance. On-line support is compatible with the M2M API system. Thanks to this system, device information can be obtained via internet. Thanks to the USB connection, it can be integrated with equipment such as printer, barcode reader, GPS, mobile communication devices.

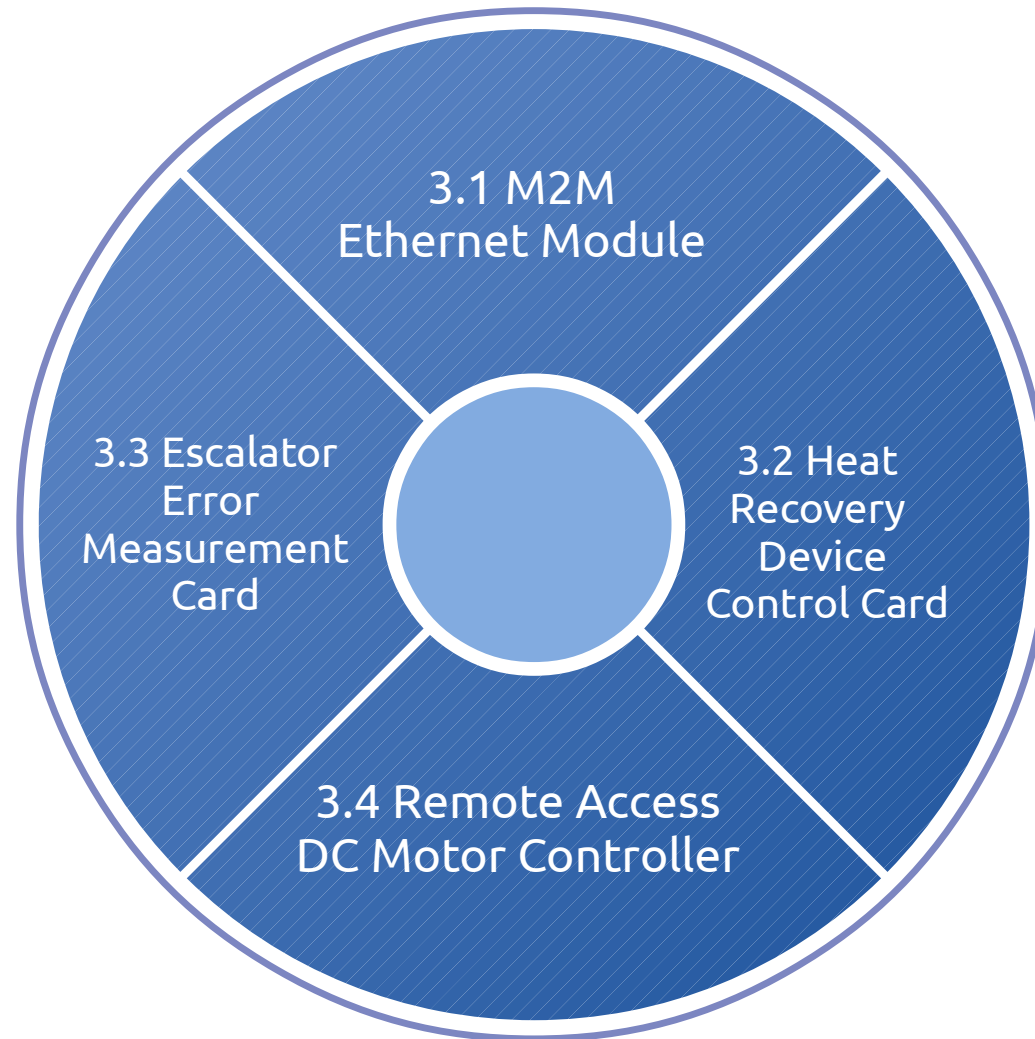
Support M2M web application allows you to follow the desired piece of equipment over the internet or locally. It allows you to access the devices via the browser without requiring an additional installation. It allows you to perform analysis with statistical menus. Mail can be informed in case of alarm.

2.7 Portable Temperature and Humidity Tracking System and Software



Destek Otomasyon Temperature and Humidity Tracking System Interface

3 Embedded Control Systems



3 Embedded Control Systems

Besides Destek Otomasyon standard products, ArGe also carries out specially produced projects carried out in cooperation with companies.

Destek Otomasyon provides remote access to the machine or device connected with the M2M Module. With the remote access feature, the machine or device can be interrupted instantly or the performance measurement and service monitoring can be done regularly.

Destek Otomasyon is embedded systems that can manage complex functions within Control Charts for Heat Recovery Devices, which are special production projects.

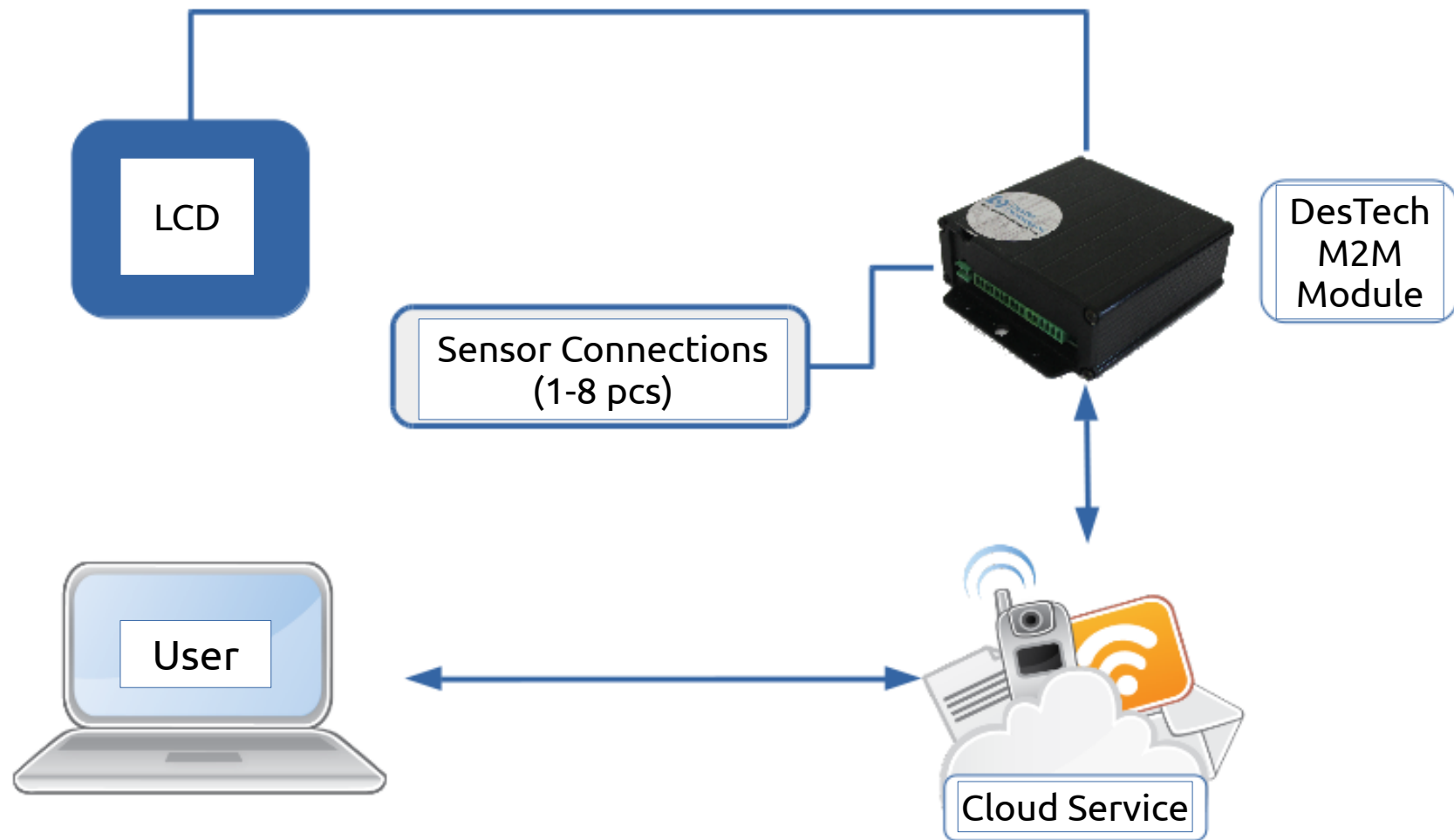
3.1 M2M Ethernet Module



Input Pins	8 digital/analog multipurpose pin*
Output Pins	4 pcs relay output pins*
Communication	RS 485 4X USB 2.0 1X Ethernet
RAM	512 MB
Storage	4 GB
Supply Voltage	External 5V adapter
GPRS/3G/4G	USB Dongle/Module
Dimensions	132mm x 112mm x 41mm, 295 gr



3.1 M2M Ethernet Module



3.1 M2M Ethernet Module

Features

Connection to cloud services

Electrical measurements (Sensors, switches, etc.)

Communication to other devices (Screen, PLC, etc.)



3.1 M2M Ethernet Module

Web Interface

The screenshot displays the web interface for the M2M Ethernet Module. It features a top navigation bar with the date and time '15-12-2015 00:02:31' and the text 'Destek Otomasyon'. The main content area is divided into several sections:

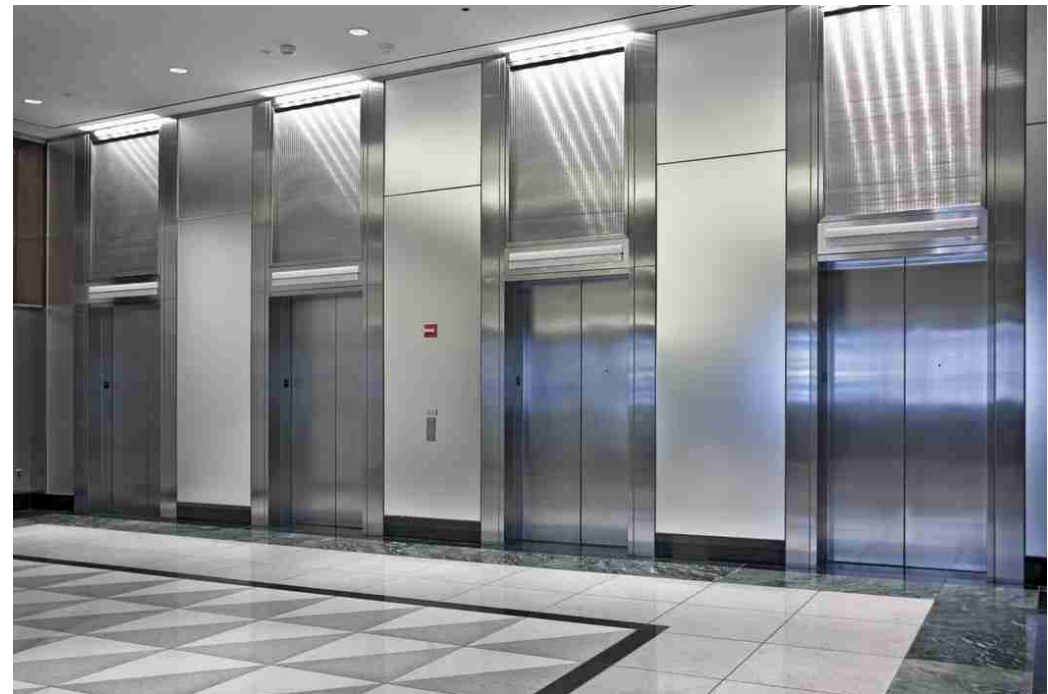
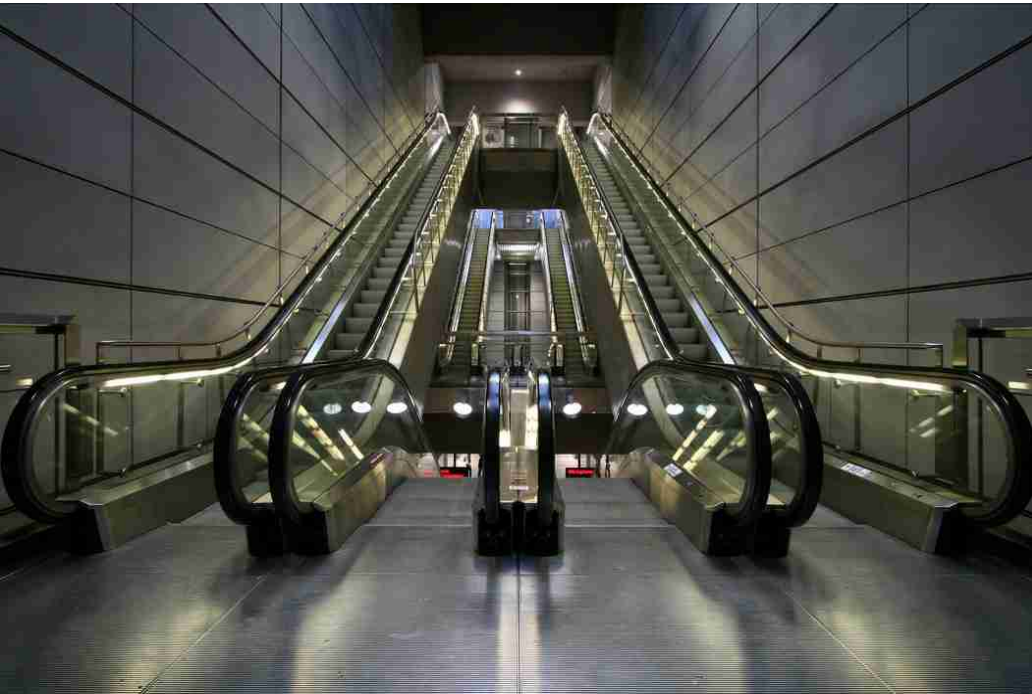
- Left Sidebar:** A 'Merdiven Listesi' (Elevator List) with a search icon and a list of items including 'saha003', 'saha002', 'Destek Arge', 'AVM', and 'Löher Seri Üretim'. A 'Tümünü Göster' (Show All) button is at the bottom.
- Top Bar:** 'Anasayfaya geri dön' (Return to Home) button and a refresh indicator 'Sayfa 09 sn sonra güncellenecektir.' (Page will be updated in 09 seconds).
- Device Information Panel (saha002):** Displays details for the selected device, including 'MERDİVEN DURUM Aktif', 'MERDİVEN TİPİ Smyrna', 'FİRMA ADI Destek Otomasyon', 'FİRMA DURUM Aktif', 'CİHAZ ADI 20101400002', 'CİHAZ YEREL SAATİ 2015-12-15 00:02:31', 'CİHAZ SON HABERLEŞİM SAATİ 2015-12-15 15:02:02', and 'CİHAZ DURUM Bağlantı Kurulamayan'.
- Table:** A table with columns 'Erişim Tarihi', 'Durum Kod', 'Durum Data', and 'Durum Bilgi'. It lists several events with their dates, codes, and status (e.g., 'Bağlantı Hatası', '45-AŞAĞI YÖNDE HAREKET', 'Beklemede').
- Right Panel:** Contains a 'Merdiven Yetki Seviyeniz' (Elevator Authority Level) section with 'Destek Otomasyon' and a 'Yönetici' (Administrator) button. Below it is a 'Kamera' (Camera) section with a video feed area and a 'Komut Gönderi' (Send Command) input field.

Annotations in the image highlight key features:

- List of Device:** Points to the 'Merdiven Listesi' sidebar.
- Information:** Points to the 'saha002' device information panel.
- Device On/Off:** Points to the 'Durum Bilgi' column in the table.
- Status:** Points to the 'Durum Kod' column in the table.
- Operations:** Points to the camera feed area.

3.1 M2M Ethernet Module

Areas of Usage



Performance and Service Monitoring of Escalators and Elevators

3.1 M2M Ethernet Module



Areas of Usage
Performance and Service
Monitoring of HVAC Devices

3.1 M2M Ethernet Module

Areas of Usage



Performance and Service Monitoring of Cooler Cabinets
Remotely Media(Video, Picture, etc.) Sending for LCD Cooler Cabinets

3.2 Heat Recovery Device Control Card



This embedded control card provides communication between fan controller and human machine interfaces. Also it is included a special algorithm for heat recovery devices.

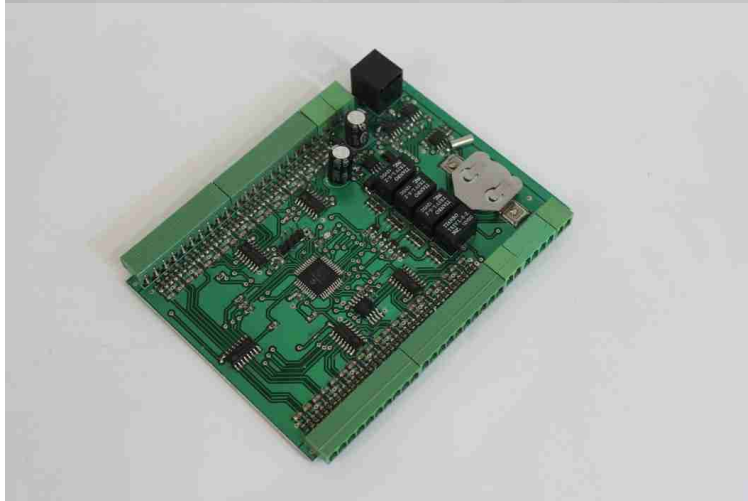


3.3 Error Measurement Card of Escalator



This embedded card is used for retaining errors of escalators and elevators system.

It helps to maintenance process.



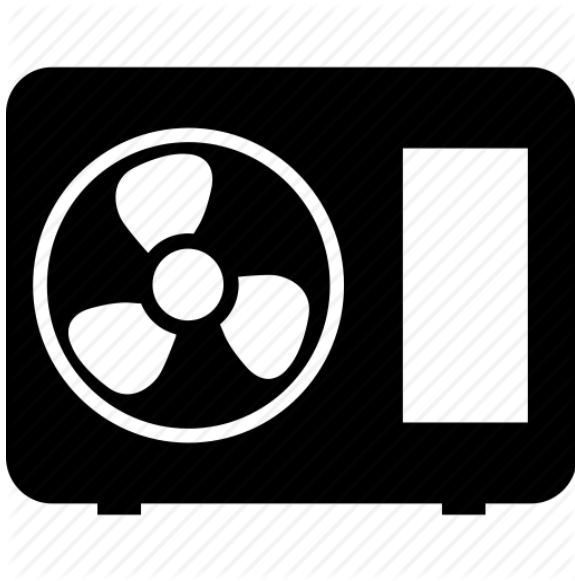
3.4 Remote Access DC Motor Controller



Motor Connections	2 pcs (max 100W /per one)
Communication Protocol	Modbus
HMI Connection	Destek Graphical LCD HMI
Connection	Cable/Wireless*
Battery Charge Ability	Yes. (Li-Po, Li-Ion, Ni-Mh)
Physical Dimensions	105mmx50mmx25mm, 46gr
Supply	12V, 24V

3.4 Remote Access DC Motor Controller

Areas of Usage

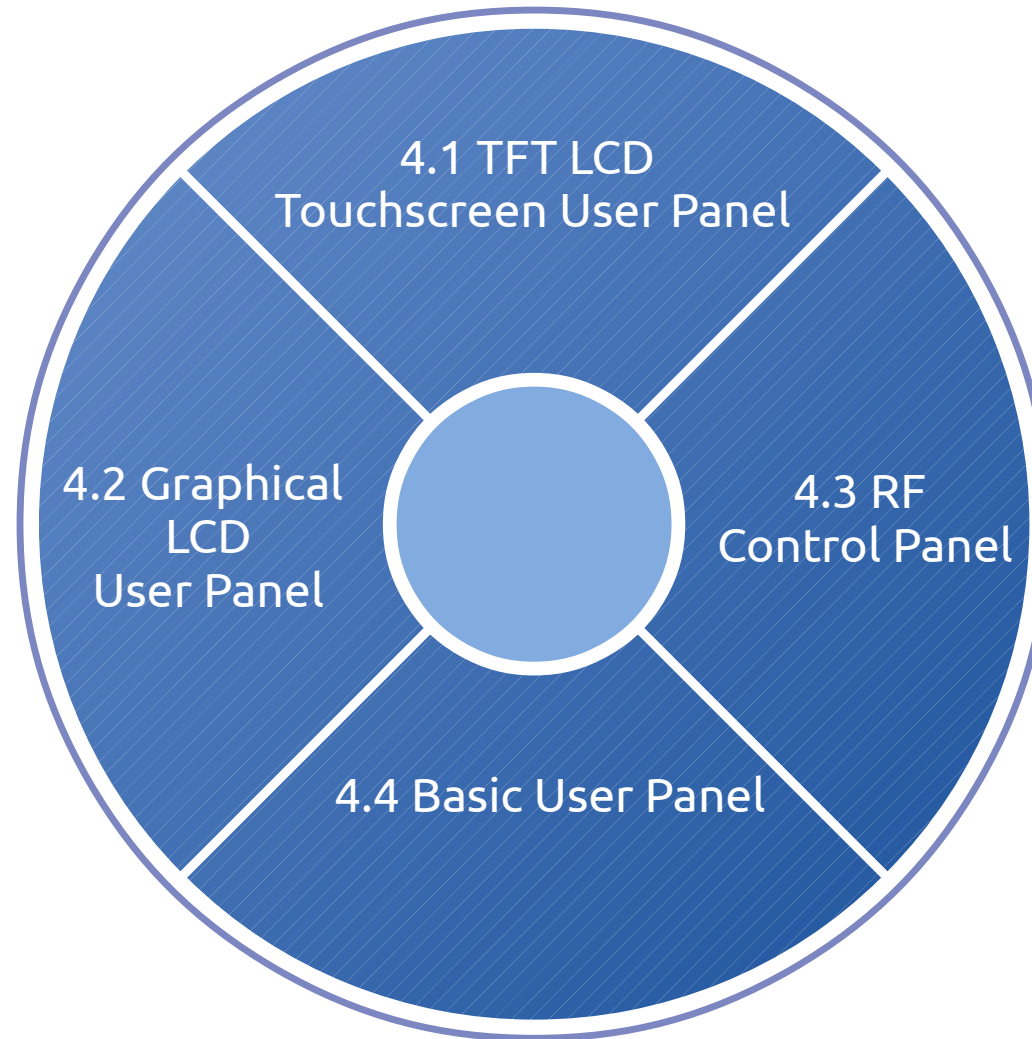


Fan Operations of HVAC Devices



**Remote Control Application of
DC Motors**

4 Human Machine Interfaces



4 Human Machine Interfaces

Destek Otomasyon offers different solutions to its solution partners in accordance with their needs.

Destek Otomasyon TFT LCD Touch Screen Panel is provided with high processing capacity, color display hardware and interface designed to meet the needs of solution partner.

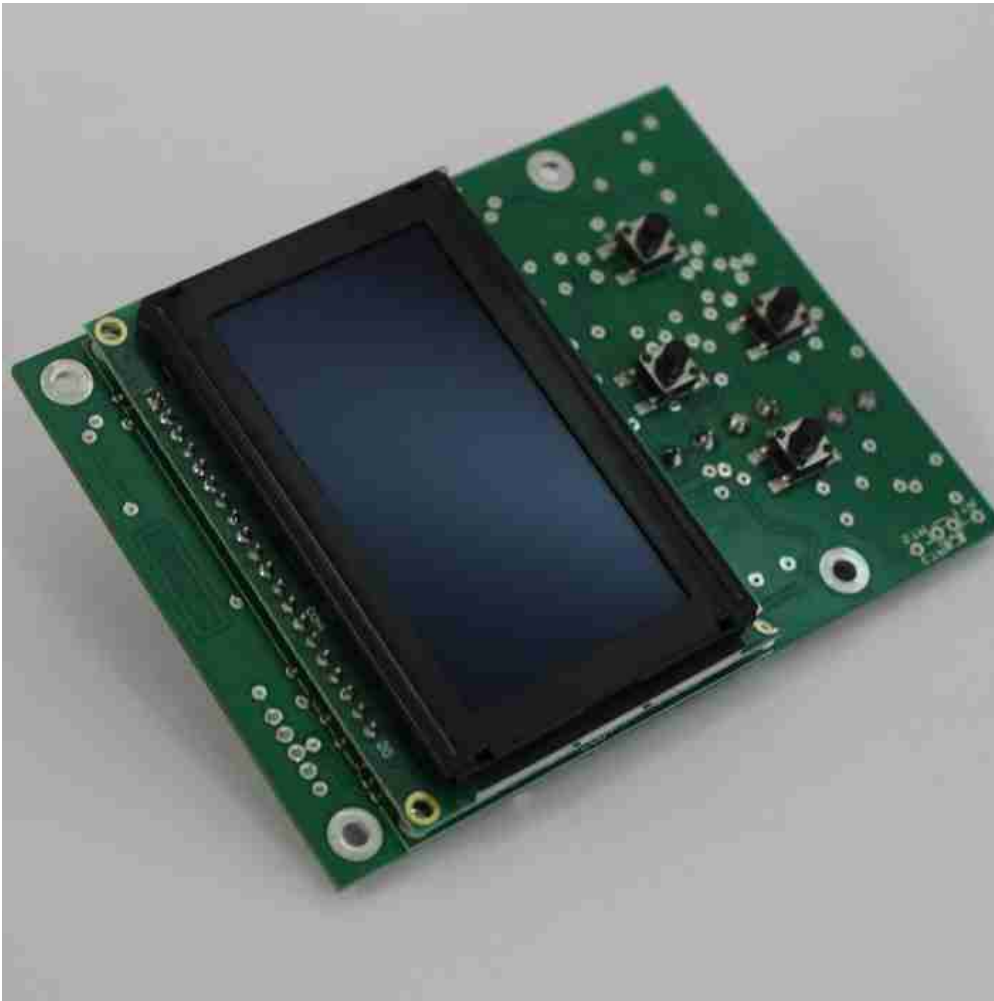
User interfaces developed by Destek Otomasyon are used in a wide range of applications ranging from control panels for climate control devices to operator control panels for road marking machines.

4.1 TFT LCD Touchscreen User Panel



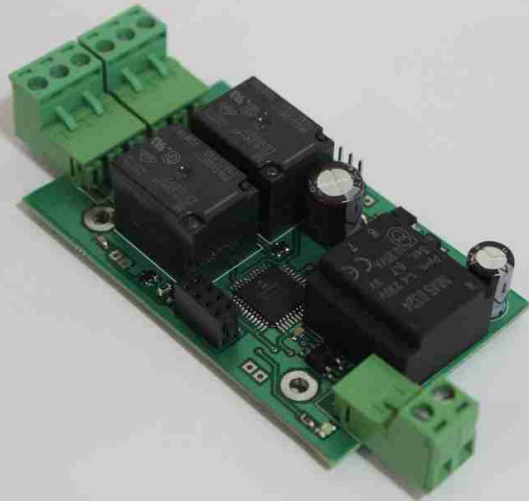
Screen Properties	TFT LCD, 320x480 resolution, 3,5"
Storable Memory	Changeable with micro-SD storage card.
Additional Properties	Special interface design and programming
Communication Protocol	Modbus
Memory Battery	3V - CR2032
Physical Dimensions	100mmx62mmx20mm 64 gr
Connection Type	Cable

4.2 Graphical LCD User Panel



Button	4 pcs, programmable
Screen Properties	Graphical LCD, 128x64 resolution, 2,6"
Internal Temperature Sensor	Yes
Communication Protocol	Modbus
Memory Battery	3V - CR2032
Physical Dimensions	100mmx76mmx21mm, 74 gr
Connection	Cable

4.3 RF Control Panel



Receiver Card Pins

2 pcs relay outputs

Receiver Card Physical Dimensions

80mmx50mmx18 mm, 56 gr

Receiver Card Supply

5V/12V/24V/220V choosable.

Communication Range

100m (*Rising up to 1km*)

1.Option



Ø25mm, L=120mm, 100 gr

AA Battery 1,5V

1 programmable button

Ergonomic, aluminum protective cup

2.Option

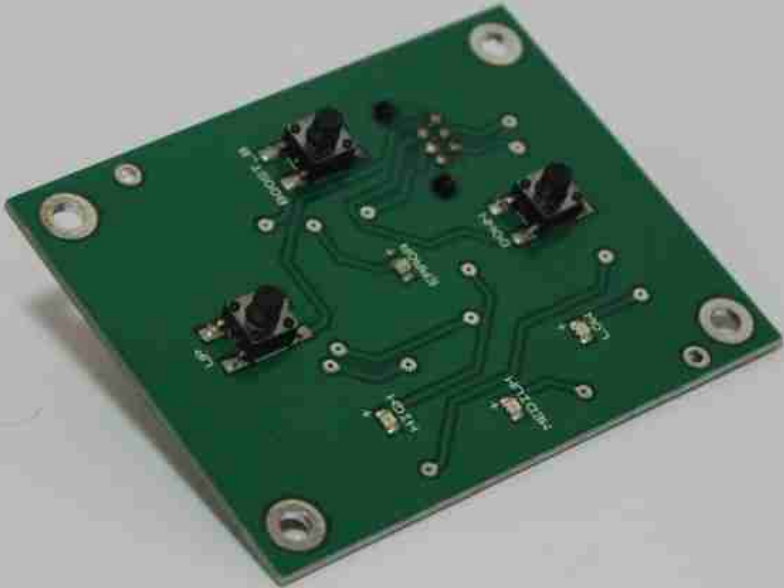


42mmx20mmx10mm, 15 gr

3V - CR2032

2 pcs programmable buttons

4.4 Basic User Panel



Button	3 pcs, Programmable.
LED	3 pcs, Programmable.
Additional Functions	Child proof
Physical Dimensions	70mmx55mmx24mm, 14 gr
Connection	Cable, RJ-12 Socket

4 Human Machine Interfaces

Areas of Usage



Control Panels of HVAC Devices

4 Human Machine Interfaces

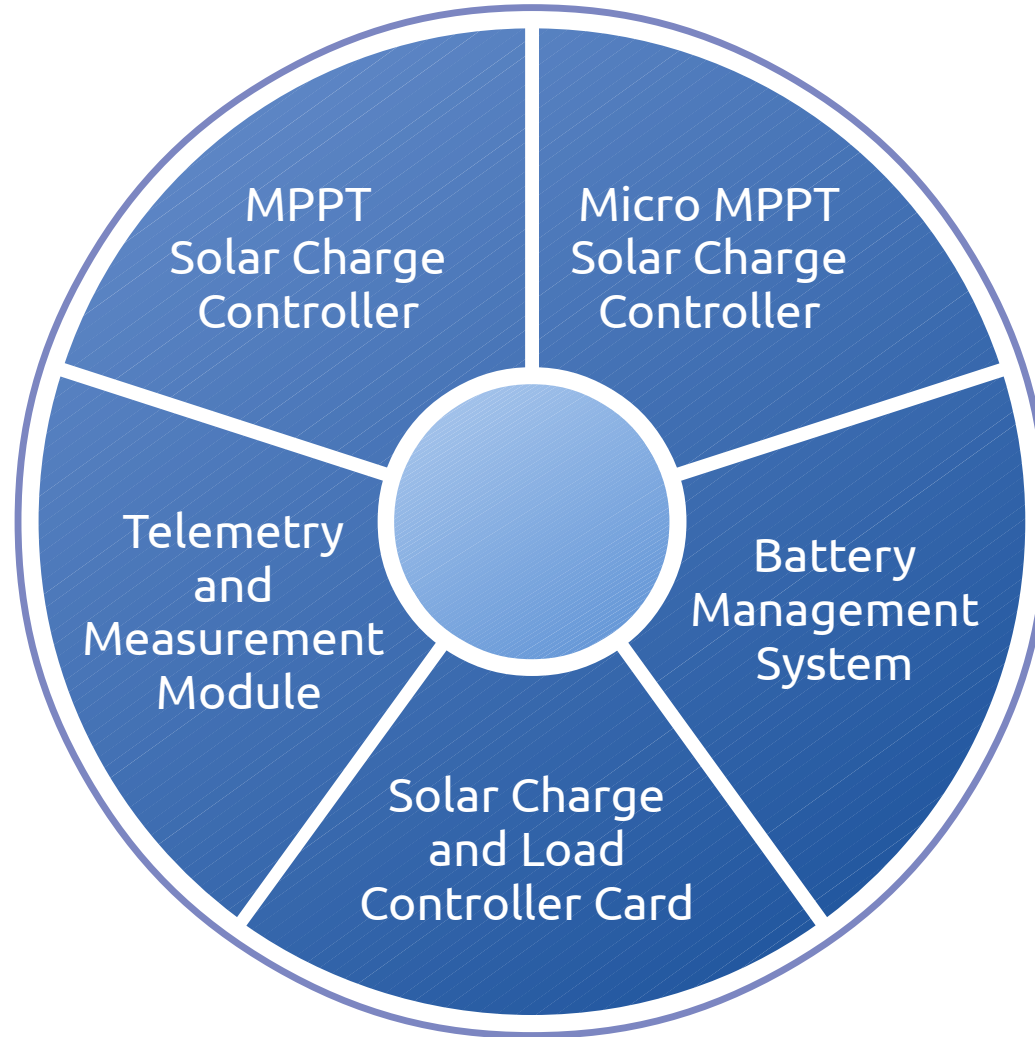


Areas of Usage
Operator Control Panels

4 Human Machine Interfaces

**Areas of Usage
User Panels of Elevators**

5 Renewable Energy



5 Renewable Energy

Destek Otomasyon in the field of renewable energy, especially in solar powered and electric vehicles, we are designing and manufacturing electronic parts used in electric vehicle charging stations.

In order to prevent damage to battery packs of alternative energetic vehicles, the system measures the temperature, voltage and current values and transfers these values to the user.

Destek Otomasyon produces solutions for you in areas such as parks, gardens, summer houses, vineyards, or where it is suitable for other purposes by generating electricity from lighting or solar energy for caravans.

5.1 MPPT Solar Charge Controller



Input Power	500 W
Efficiency	%98
Type	Boost Type
Nominal Battery Voltage <i>(Energy storage for Nom.3.7 V)</i>	88.8-118.4 V <i>(Programmable according to area of application.)</i>
Energy Storage	Li-Ion, Li-Po, LiFePo4, NiMh
Maximum Boost Ratio	1.5
Maximum Output Voltage	140 V
Minimum PV Voltage	24 V
Physical Dimensions	141mmx80mmx64mm, 264 gr

5.1 MPPT Solar Charge Controller

Areas of Usage

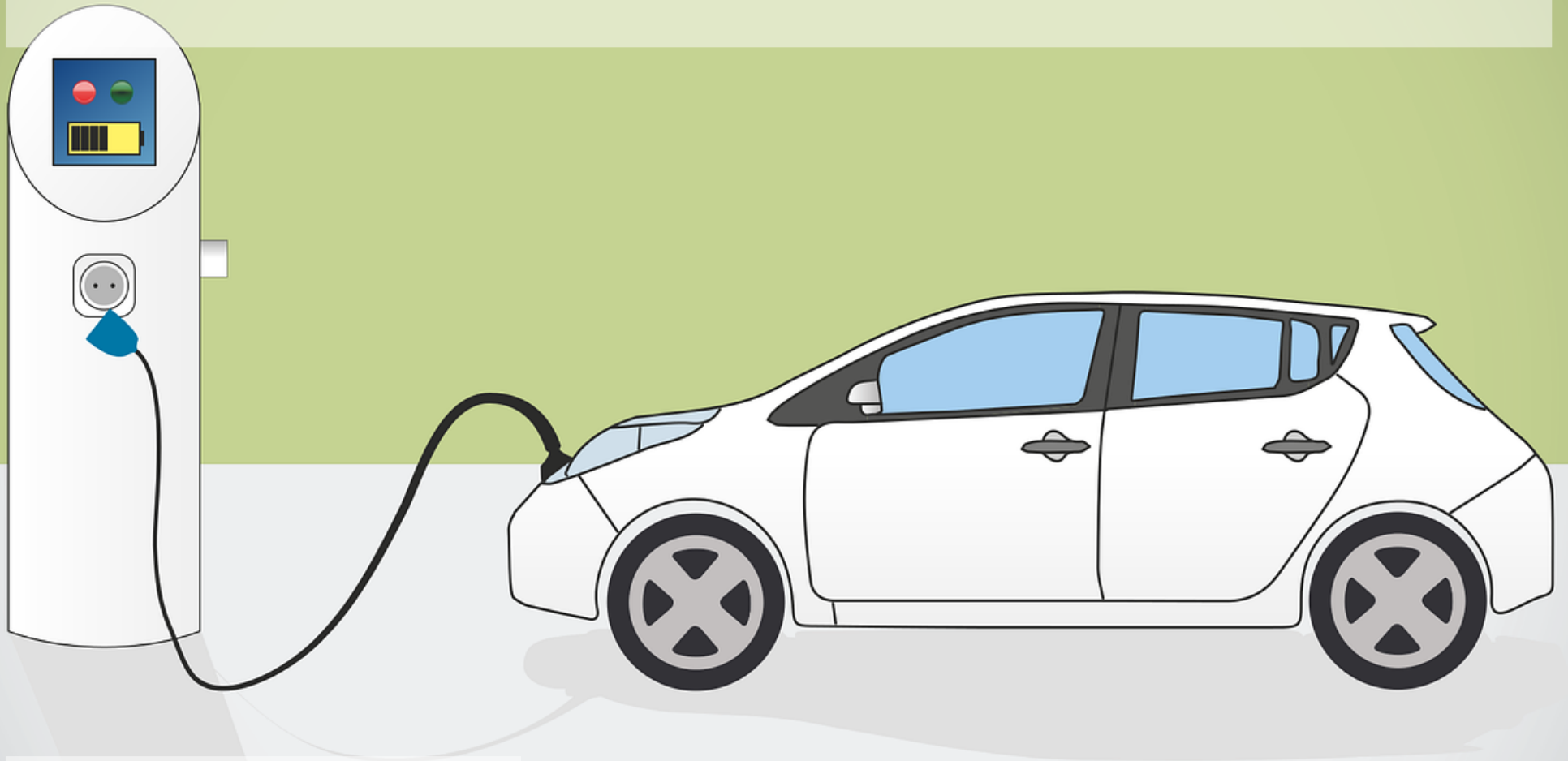


Photovoltaic Applications

5.1 MPPT Solar Charge Controller



5.1 MPPT Solar Charge Controller



Areas of Usage

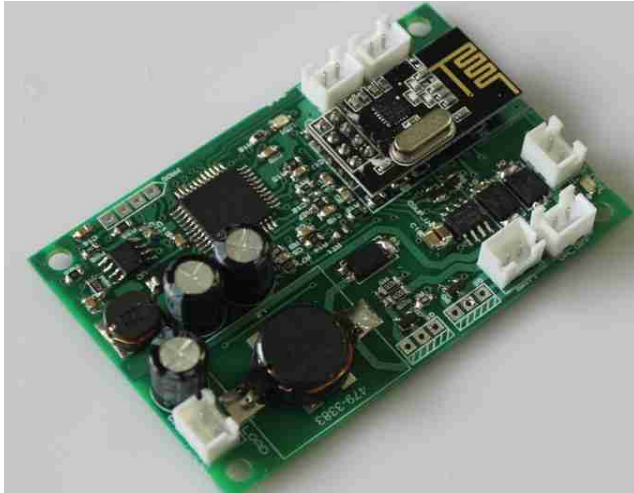
Charging Stations of
Electric Vehicles

5.2 Micro MPPT Solar Charge Controller



Input Power	100 W
Efficiency	%98 ($V_{out} = 1.5 V_{in}$)
Type	Boost Type
Maximum Boost Ratio	2
Input Voltage	12-24 V
Output Voltage	12-35 V
Energy Storage	Li-Ion, Li-Po, LiFePo4, NiMh
Communication Module	RF
Computer Software and Data-logger	<i>Yes(Optional-Destek Micro MPPT Monitoring Software)</i>
Physical Dimensions	80mmx60mmx25mm 58 gr

5.3 Solar Charge and Load Controller Card



Input Power	60 W
Type	Buck-Boost
Sensor Input	1 piece, digital
Additional Function	LED driver (15 W)
Nominal Battery Voltage <i>(Storage for Nom. 3.7V)</i>	11.8V <i>(Programmable according to area of application.)</i>
Energy Storage	Li-Ion, Li-Po, LiFePo4, NiMh
Maximum PV Voltage	24 V
Maximum Charge Current	1.2 A
Communication Module	RF
Computer Software and Data-logger	<i>Optional-Destek Solar Charge and Load Controller Card Software</i>
Physical Dimensions	141mmx80mmx64mm, 264 gr

5.3 Solar Charge and Load Controller Card

Areas of Usage



LED Street Lightings
LED Traffic Signals

5.4 Battery Management System



Connectible Module of Battery	2-8 pcs
Temperature Sensor Connections	8 pcs
Measurement Info	Voltage and current
Relay Output	1 piece
Communication Protocol	Modbus
Communication Module	Two-Way Wireless Communication
Software and Data-logger	<i>Optional-Destek BMS Monitoring Software</i>
Physical Dimensions	100mmx80mmx16mm, 46 gr

5.4 Battery Management System

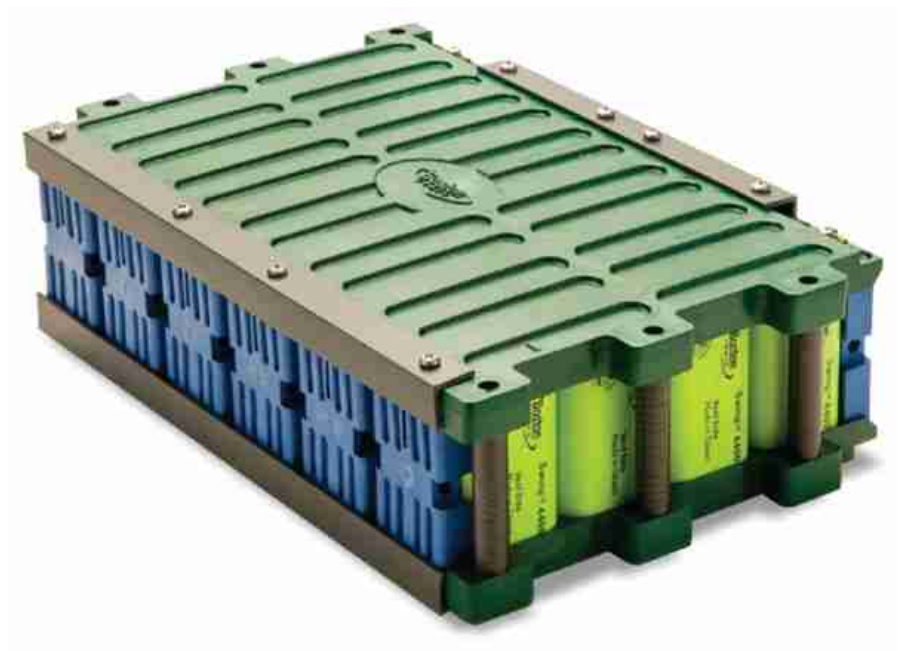
Areas of Usage



Battery Packages of Electric Vehicle

5.4 Battery Management System

Areas of Usage



Charging Stations and Energy Storage Solutions

5.5 Telemetry and Measurement Module



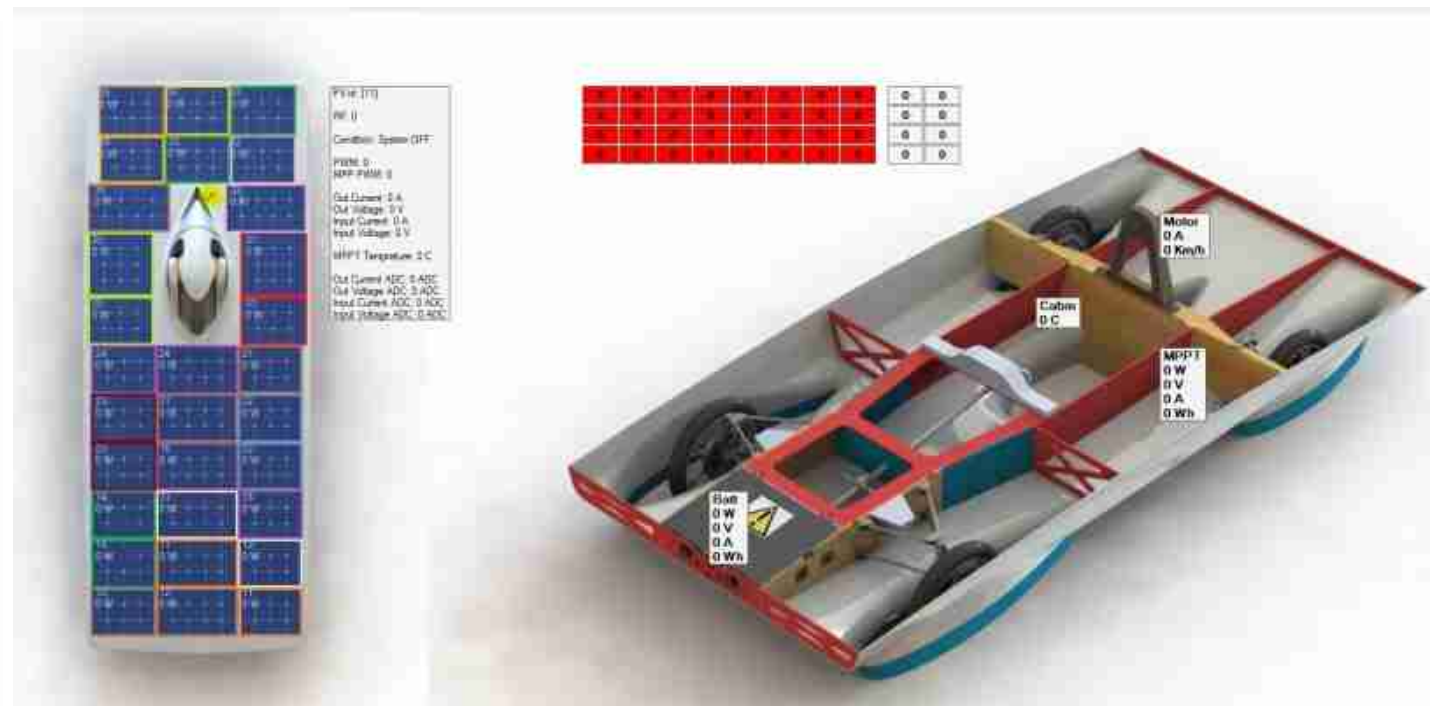
Measurement Info	Current* (Chr-Dechr) Voltage* Temperature* RPM of Motor* <i>*Changeable according to area of application.</i>
Data Sending Speed	2 Mbps
Communication Mod.	Two-Way Wireless Communication
Telemetry Receiver Module	USB connected.
Maximum Telemetry Range	5 km
Computer Software and Data-logger	<i>Var (Destek Otomasyon Telemetry Software)</i>

5.5 Telemetry and Measurement Module

Areas of Usage

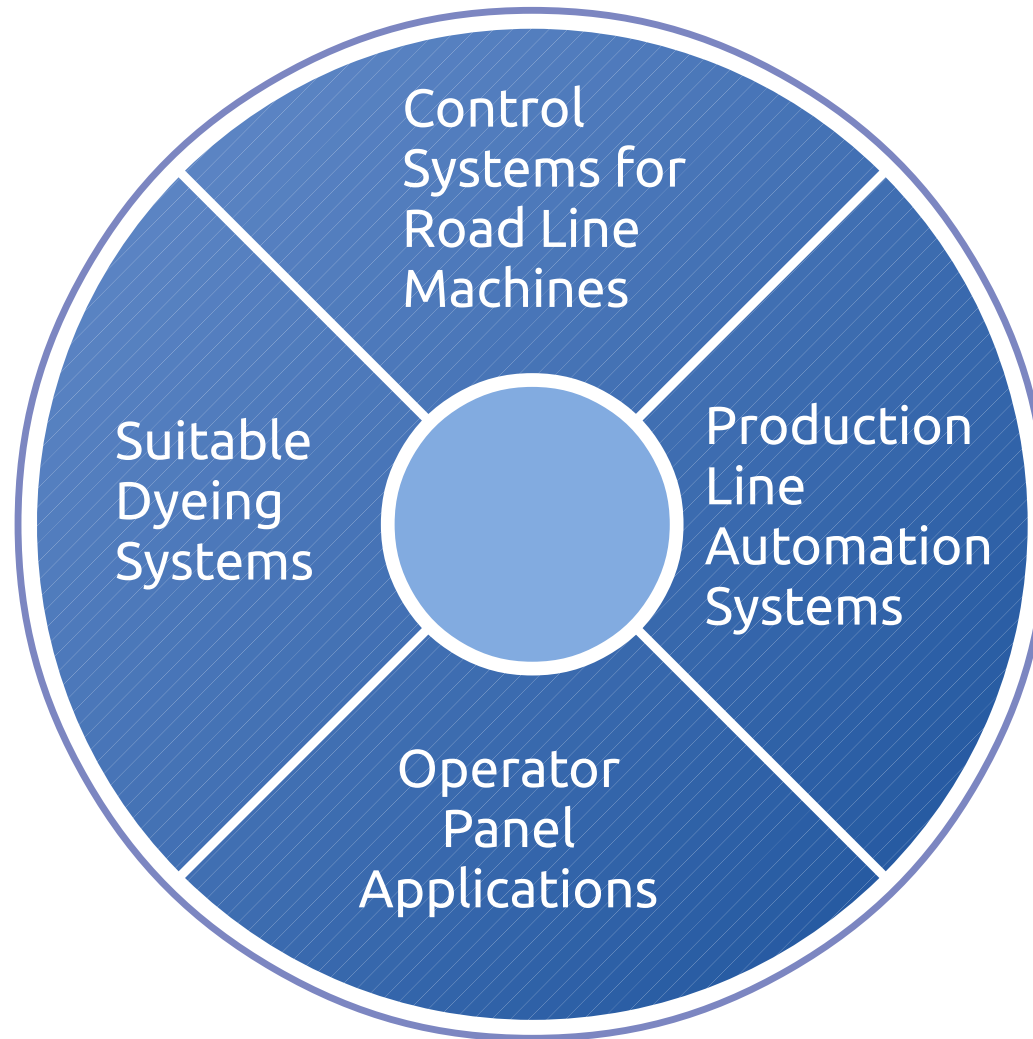
Measurement

- Charge Current
- Discharge Current
- Voltage
- Temperature
- RPM of Motor



Solar Powered and Electric Vehicles

6 Automation Solutions



6 Automation Solutions

Destek Otomasyon can produce faster, more accurate and more efficient systems by producing customized solutions for production line automation and device automation.

Destek Otomasyon reduces the human errors with custom designed systems for solution partners and provides the control of the position control, synchronous movement and the mechanisms required to reach certain positions.

6.1 Control Systems for Road Line Machines



With this unit, it is possible to correct the mistakes caused by human errors in the drawing of the road lines.

Programmable control unit can automatically draw road lines in desired length and full-to-empty ratio.

6.2 Production Line Automation Systems



Areas where the conveyor belts are desired to make more than one synchronous action, such as stopping at the desired point, coming back to certain positions, waiting,
Areas where automatic control of the damping mechanisms of machines such as braking presses, guillotine shears,
Areas where automatic control of the driving mechanisms of the hydraulic presses is desired,

6.3 Operator Panel Applications



Support Automation, production line automation and device automation also produce customized solutions for faster, more accurate and more efficient systems.

6.4 Suitable Dyeing Systems

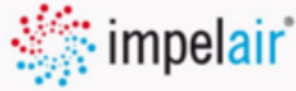


Areas where the conveyor belts are desired to make more than one synchronous action, such as stopping at the desired point, coming back to certain positions, waiting,

Areas where automatic control of the damping mechanisms of machines such as braking presses, guillotine shears,

Areas where automatic control of the driving mechanisms of the hydraulic presses is desired,

References





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