



1. Introduction

Pishro Gostar Ertebati Caspian Engineering Company (Avisan brand) was established and registered in 2007. The company, which operates in the field of electricity (power, telecommunications, control, electronics), was founded after carrying out several industrial projects, to eliminate some of the shortcomings in the electricity industry by launching an R&D unit to manufacture and register various products with knowledge approval. Products that compete with foreign samples in the market and due to sanctions, import barriers and also the problem in obtaining licenses, the company's products will replace foreign samples without general or partial dependence.

Today, the company, with its experienced and young staff, in addition to numerous executive and consulting activities in the electricity industry, has also registered 5 knowledge-based products and supports and updates its various products on the agenda.



2- Field of activity

1-2- Power distribution system:

Power supply operation of 20 kV power lines in industrial towns as well as installation of various power distribution networks.

Design and implementation of online and offline solar systems in offices and residential buildings and electricity supply operations in villages without electricity in the province.

Installation of diesel generators and UPS to supply emergency power is one of the most important projects related to this sector.



2-2- IOT based systems:

Pishro Gostar Ertebati Caspian Engineering Company has produced various equipment in the field of electricity. These devices transmit their information via the Internet (via WiFi or GPRS) and are controllable. In fact, the smart devices that work this way are called IOT devices. However, due to the fact that the company has dedicated servers, it also customizes IOT -based systems for its equipment and provides it to users in the form of Android software, IOS or even on the web.



3-2- Telecommunication systems:

For image or data transmission, cable or radio communication is used which is divided into minor items such as network cable, fiber optic cable, etc. As a result, various projects have been carried out by the company in this regard, some of which can be mentioned such as setting up to launch a variety of CCTV systems for radio image transmission and central systems and internal networks of offices and organizations, private and public's layered and usage of relevant switches.



4-2- Consulting and designing:

In addition to implementing various projects in the field of electricity, the company is also involved in consulting and designing various types of protection and security systems and building electricity. Also, cost estimation, design and calculations of solar systems, diesel generators, UPS, etc. are among the services that are provided for the customers for free.



According to the products produced by this company, it is also responsible for supporting and supplying its parts. They are supported and supplied with parts from 2 to 10 years, considering the type of product.

In addition to product support and related systems, Pishro Gostar Ertebati Caspian Engineering Company has been supporting and maintaining a variety of electrical systems and equipment for several years. One of the services in this company is the maintenance of industrial equipment that all kinds of forms, checklists, test sheets, etc. are used in the work system of this company in the case of PM or for special equipment. New forms are designed with a proper schedule according to the equipment sheets stored.



3- Products

1-3- LMD RTU load management:

Today, in the industry, the number of required equipment and automation is increasing day by day, as a result, to protect this equipment, it is necessary to use a variety of control and protection devices, as a result, in addition to the fact that many devices with different working types are used. The number of devices complicates the work. Pishro Gostar Ertebati Caspian Engineering Company, taking into account the above-mentioned issues, while using



IOT equipment for better control of the requirements of the new era of technology, this company has made a device to solve all these issues, which is called LMD RTU load management. This equipment has the ability to connect any type of consumer (resistor, selfie) to it and measure the parameters required by the user and send the measured parameters on the GPRS platform so that the user can, based on the results, make decisions to control the equipment.



Functional specifications of the device:

Working temperature conditions: -15 to +60 degrees Celsius

Ability to operate as a SCADA system

Dust and water resistant IP52

Ability to instantly record input and output information (active, reactive and apparent power, frequency)

Ability to detect overload

Technical Specifications:

Industrial relay control, 4 and 8 channel slots

Compatibility of APN and GPRS communication platforms and telemetry

Analog input (10-0) volts and 20-4 mA

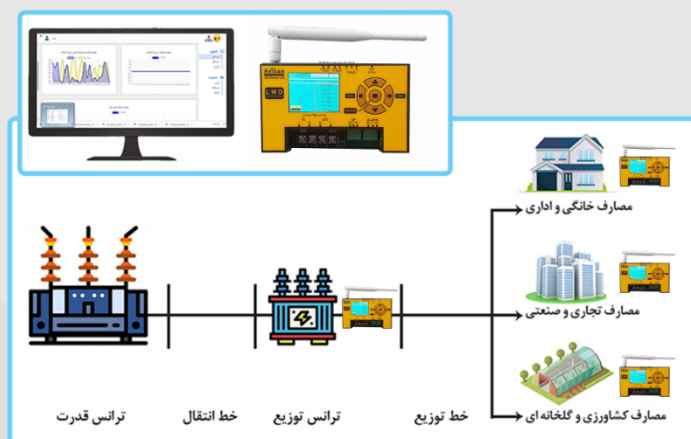
Double Command support

AES Encryption 128

It has RS485, RS232, USB and network input ports

Web monitoring software with data storage capability

Supports Modbus, DPN3, IEC 101 and IEC 104 protocol





2-3- Industrial modem:

In IOT systems, a modem is required to transmit information. The equipment produced today usually has built-in modems, but the equipment used in previous years requires separate modems to transmit information. As a result, industrial modems are used to connect industrial equipment that does not have IOT capability. The modem produced by this company has the ability to receive and send values, under the RS232 protocol, from data loggers. One of the capabilities of this modem is working with all types of SIM cards. So without the need for any settings in the modem, the mobile network associated with any type of SIM card is known. In addition to GPRS, SMS can also be used as a support communication channel in case of emergency.



Functional specifications:

Working temperature conditions: -20 to +60 degrees Celsius

Dust and water resistant (IP54)

Use GSM, GPRS and APN network to send data

Ability to connect to Seba, Lufft data loggers

Has an LED indicator

Support for the first mobile SIM cards, Irancell and Rightel

Technical Specifications:

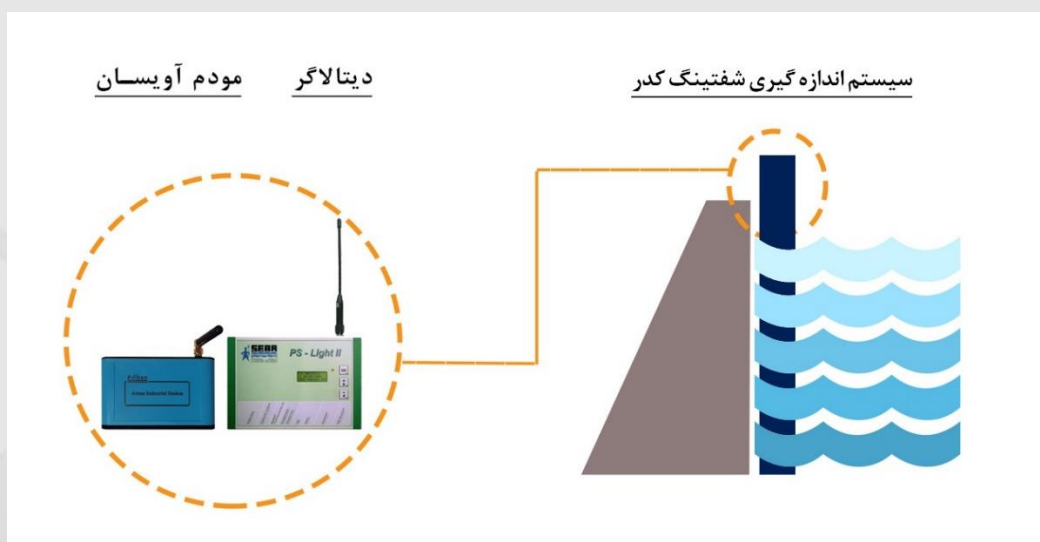
Power consumption about 0.5 watts

Operating voltage 24-12

Customizable data transmission cycle

Ability to connect to RS232 port

Connection to external GPRS antennas 7 and 8 dB



Avisan modem data logger

Coder Shifting Measurement System

3-3- Ultrasonic Level Meter:

This device has the ability to measure the depth of various fluids. Features of this device include remote monitoring and control using telemetry and GPRS / APN and external memory for storing and recording information. This device has the ability to measure the flow through concrete channels and the user can view the entire volume of output fluid along with side parameters based on time.

This system can be installed and used in open channels in water resources management systems.



(Avisan brand)

Functional specifications:

Working temperature conditions: -20 to +75 degrees Celsius

Technological compatibility of the device with different types of fluids

Dust and water penetration resistant (IP54) and sensor (IP68)

Average lifespan of 15 years

Can be used in flood warning and monitoring systems and control center

Measuring accuracy of the device: ± 1 Mm

Ability to provide computational flow

Simple user menu

Technical Specifications:

Operating voltage: 24-12

Power consumption: 5 watts

Flood sound alert

2.4-inch color touch screen

Ability to install a card reader inside the gate

Inputs: RS485 and USB

Communication platforms: N APN, GPRS, telemetry and Bluetooth

Recordable number of records: 100,000 samples



Avisan weather management system

4-3- Smart controller socket:

This device is a multi-way or single-way smart power that allows the user to remotely control electronic equipment. This product has an application that can be installed on the Android operating system that manages the device connected to the socket. This device is connected to the Internet via GPRS / Wifi and will allow the user to control from anywhere in the world where the Internet is available.





Functional specifications:

Ability to control by IR

Working temperature conditions: -20 to +50 degrees Celsius

Dust and water resistant (IP54)

Impact-resistant ABS body

Remote control by Android, IOS and Windows operating systems

Ability to set the schedule

Detects equipment standby mode and turns them off completely

Possibility of economic analysis of consumption based on distribution company tariffs

Intelligent consumption planning according to peak consumption time

Technical Specifications:

Power consumption about 1 watt

Connect via Wi-Fi and GPRS

Has an LED indicator

Working voltage 220-250 volts

Rated current: 10 amps

Rated power: 2200 watts

Operating frequency: 50 Hz

Number of relay operations: 10,000 times

Error less than 1%



5-3- IOT server:

Due to the development of communications and information, the expansion of equipment and products of this company with the ability to control by the Internet, forced the company to design a comprehensive and dedicated server for its products, while expanding and upgrading this server all equipment produced in the IOT platform, which supports MQTT . Important and useful features of the IOT server include displaying variables numerically and graphically, defining operators to execute commands, and storing and categorizing information.



4- The most important projects

1-4- Launching the monitoring and management system of electricity consumption with the employer of the Greater Tehran Electricity Distribution Company, a national pilot project under the supervision of the Ministry of Energy.



2-4- Replacement and installation of sliding electrical panels of LT and MCC substations of Petroleum Products Distribution Company.



3-4- Implementation of various technical projects such as fiber optic network of Industrial Towns Company.



4-4- Launching security systems and monitoring dams in the country.



5-4- Online monitoring system and control of water level of rivers and open canals by rain gauge equipment in regional water companies.



6-4 satkab specialized company for producing intelligent controller socket device and electrical monitoring and management system.

Pishro Gostar Ertebati Caspian Engineering Company

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5- Some employers and customers:

Power distribution companies

Petroleum Products Distribution Company

Regional Water Company

Industrial Towns Company

Banks

Social Security Organization

6- The most important licenses and certificates:

Iso9001

Iso27001

Establishment permit

Contractor qualification certificate

Certificate of safety competence

Technology Unit License

EMC report test confirmation (Product "RTU LMD")

Certificate of ranking and qualification of IT companies

Calibration Certificate (Product: Ultrasonic Level Meter)

Internal patent certificate - Product: Smart socket controller

First rank Startup Weekend Power Distribution Company

Security of production and information exchange space (OFTA abbreviation in Persian)



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