Introduction of Internet of Things
There are several kinds of GPRS Data Transmission Module self-developed by VEICHI

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>AC300-GPRS</strong></td>
<td>SPI Interface, Support Could Platform, Modbus Protocol (Special for AC300)</td>
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<tr>
<td><strong>S200-GPRS(B)</strong></td>
<td>RS485 Bus Connection, Modbus Protocol, Support Cloud Platform (Special for construction hoist)</td>
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<tr>
<td><strong>GPRS-D</strong></td>
<td>APP QR code connection, Wireless connection with cloud platform (Special for SI 20/SI30)</td>
</tr>
<tr>
<td><strong>GPRS-C 1.1</strong></td>
<td>Smaller size, high efficiency, Multi-nodes connection, Support cloudplatform (General inverter)</td>
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</table>
Cloud Platform of VEICHI

Solar Pump IOT

Air Compressor IOT

Construction Hoist IOT

General IOT
VEICHI

Cloud Platform Features

**Real-time Monitoring**
Real-time monitoring, Periodic sampling, Parameter remote inspection & modification, Remote lock and unlock, Run & Stop

**Data Analysis**
inspection and exporting of fault report, Graphical analysis, Statistics of running time

**Fault Report**
Real-time fault report, Fault record & analysis, Fault statistics

**GPS Localization**
Real-time location track, Intelligent location display, GPRS parameter remote inspection & modification

**Device Management**
Device type, Device settings, Expiration maintenance

**Maintenance Infos**
Role management, User management, Data management, Operation record, Password modification
Cloud Platform Features

- Real-time Monitoring
- Fault Statistics
- Fault Report
- Device Focus
- GPS Localization
- Graphical Analysis
VEICHI

Cloud Platform Features

Real-time localization
Remote control / communication / measure / monitoring
Fault statistics & analysis
Maintenance record & reminder
APP IOT Mobile BLE APP

Non-touch Connection
Download by scanning QR Code and connect with GPRS module to achieve non-touch connection.

Intelligent Control
Intelligently control the operation status of terminal devices at real time.

Easy to download APP
Download at anytime and anywhere to update the latest APP with low memory occupation.

Easy to check & modify
Check the information and modify parameters arbitrarily, including unit, function declaration and prompt messages about errors.
GPRS DTU Network Topology

**Application Layer**

**Network Layer**

- Wired Network, LAN, Private Network
- Internet
- Wireless Network, 2G, 3G, 4G and other cellular networks

**Perception Layer**

- Solar pump controller
- Textile, chemical fibers, food packaging controller
- Crane, tower crane, construction hoist integrated machine

**Equipment Layer**
The data transmission module could collect parameters information of terminal devices, monitor the running status and report the fault information forwardly at anytime and anywhere. Wireless and remote connection with cloud platform wireless.

Our R&D team will develop integrated industry solutions according to customer’s requirements.

Process and analyse the data from terminal devices in cloud platform and APP to realize intelligent and professional management.
Application-Solar Pump Inverter

Solution Features:

Data Transmission Module: GPRS-D

Communication Mode: Wireless, Bluetooth

Terminal Devices: SI20, SI30

Solution Advantages:

(1) Provide IOT integrated solutions of solar pump inverter;

(2) Automatically collect and upload without interruption in 7*24 hours to monitor the pump status.

(3) Basing on field conditions, the remote expert consultation function could enhance the ability of accident handling;

(4) Cloud computing calculates the remain time according to the work life of spare parts and reminds the replacement;

(5) Support inquiry by PC and mobile APP.
Application - Construction industry

Solution Features:
Data Transmission Module: S200-GPRS, GPRS-D
Communication Mode: Wireless Transmission
Terminal Device: Hoist, Tower Crane, etc.

Solution Advantages:
1. Provide the integrated solutions of tower crane IOT system;
2. Not bother with small problems through parameter remote modification and 24-hour real-time monitoring;
3. Push fault information the first time by the pre-alarm system;
4. Historical data statistics supplies big data applications and provides support for precise marketing and products upgrading.

Solved Problem:
High-altitude operations, hard maintenance, lower efficiency of inspection; higher after-sales costs, etc.

Cloud Platform

Wireless Transmission Module

Application Cases
Application-Textile and Food Packaging

Solution Features:

- Data transmission module: S200-GPRS, GPRS-D
- Communication mode: wireless transmission.
- Terminal device: AC70C, AC300 series General VFD.

Solution Advantage:

1. Provide IOT integrated solutions for textile production;
2. Real-time monitoring, regular sampling, intelligent analysis and calculation for device operation time and yield, working time coordination of production lines, intelligent pre-alarm and SMS real-time notification of fault information;
3. Historical data statistics supplies big data applications and provides support for precise marketing and products upgrading.

Cloud Platform

- Wireless Transmission Module
  - S200-GPRS
  - AC300-GPRS

Controller

Application Cases