



ELECTRICAL POWER, SUPER WI-FI, NOW ACCESSIBLE ANYWHERE

JUNE 2022

INTRODUCING FERRARIS PRODUCTS FOR IoT



OUR STORY

Ferraris Inc. is a Nevada corporation that develops, produces, and supplies contactless electric power generating products using electromagnetic fields. In the past three investments, it has received USD 9.9 MIL to complete core products and its production facilities. It also holds patents in the U.S., Canada, the E.U., Japan, and more. We have approximately 103 reference sites in South Korea from 2017 to 2020.

However, our planned revenue generation has been unsuccessful. From our assessment, we believe the biggest reasons for failure were: We were unable to provide an economically viable above and underground Wi-Fi solution; At first, we attempted to enter the public sector, electric power, and telecommunication markets by solely relying on our technology. However, we are at an impasse due to overwhelming commercial barriers in these markets.

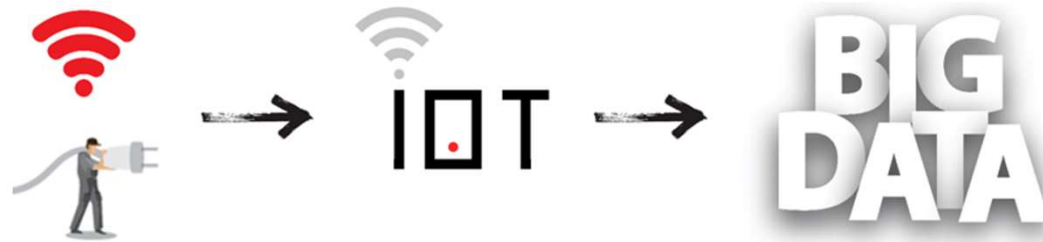
Other U.S. companies have had interests in using our products since 2020-2021; however, business with them is currently pending due to the restrictive nature of the COVID-19 pandemic - the companies were interrupted during their testing process of converting their current power supply devices to Ferraris' products.

Since 2021, we have system integrated the power supply solution with the cost-effective above and underground Super Wi-Fi solution. Further, we have changed our strategy to collaborate with system integration companies in both the U.S. and the Korean markets in our activating to re-open the market and we will be relocating our production facility to the state of Nevada.

NEW CHALLENGE

We have made a breakthrough despite the difficult times of the COVID-19 pandemic.

The biggest hurdle for the system integration companies who are our major customers was finding more “**economical and unrestrictive**” solutions than electric power and satellite, 4G, 5G or LTE for Internet of Things (IoT) equipment both above and underground.



Regarding the Wi-Fi and power supply solutions that transmit observed/measured data from various IoT equipment to the control tower (a cloud platform that generates “Big data”), the installation, operating, and maintenance costs may be too high, and thus, financially burdensome for customers to implement and operate the system.

Since 2021, we successfully implemented, operated, or tested IoT equipment with **Super Wi-Fi solution (TV White space)** and **Power supply solution (Tolenoid C[®], PH4IoTs, and Mini-ERR System)** both above and underground to: provide Free Wi-Fi zones (with CCTV security); underground Manhole status monitoring system; and Remote-control system of the water intake gate.

The reference site transpired and is now discussing confidentially with Korea's biggest system integration company and Big data consulting company, which are currently conducting a Smart Farm and Water monitoring project and discussing confidentially with U.S. Early Wildfire Detection System company.

Ref. "economical and unrestrictive"

- a. Power supply solution: When there are no outlet or transformer where IoT equipment installation point;
 - Transformers: high cost of installation
 - Solar panel: inconsistent power output for devices requiring constant power

- b. Wi-Fi solution: Using satellite, 4G, 5G or LTE for IoT equipment;
 - Requires Base Transceiver Station near by: high cost of installation
 - Requires contract with a network provider: resulting in additional running cost

OUR TECHNOLOGY

By harnessing an innovative contactless and magnetic harvesting technology, Ferraris' products enable the conversion of electromagnetic field energy produced by power lines – regardless of the power line voltage – into an electric power source. Our Power supply solution (Tolenoid C[®] and PH4IoTs) can be used anywhere with nearby power lines to supply electricity for your IoT equipment (CCTV, Super Wi-Fi, access point, and sensors) – even in the absence of transformers or outlets.



The PH4IoTs (Power harvesting for IoT sensor devices) product was developed so that customers may directly connect to an IoT sensor device with DC output; the built-in battery can be charged with the electricity generated internally from the PH4IoTs, so that customers may conveniently supply power to their IoT sensor devices. The PH4IoTs not need to replace the battery. The PH4IoTs.w can remotely monitor the magnetic harvesting power and measure the battery capacity via Wi-Fi transmission.

Our products are not current transformers but power transformers which convert magnetic energy into electric energy when near power lines, regardless of the power line voltage. Our PT is operating not only at linear region, but also at saturation region. Our products its safety standards certificated, such as UL, SEC, and KS and waterproof design (IP65–IP68). To better understand our technology, please see the video description.

<https://youtu.be/Y3IR5djt5hg>

OUR TOLENOID C[®]



Tolenoid C[®]:

Contactless power supply solution, four kinds of Tolenoid C[®] (according to the thickness of the power line); so it is possible to generate electricity from 1.07 Watts to 105 Watts or more, depending on the configuration, power generation and supply to electric equipment by simply attaching Tolenoid C[®] to an existing power line, transformer is not required.

SMPS:

Switching mode power supply, prevent overvoltage, overcurrent, and overload, stability with power line regulation less than 1%.

Multi-adapter:

Connect Tolenoid C[®], SMPS, and separator, able to connect 4ea of Tolenoid C[®] per multi-adapter.

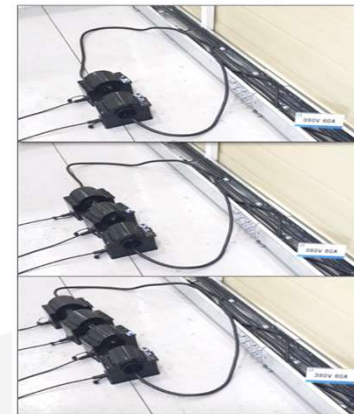
Separator:

The separator eliminates the magnetization that occurs when the Tolenoid C[®] is installed in the magnetic field around the power line and enable safe install or de-installation.

EASY INSTALLATION



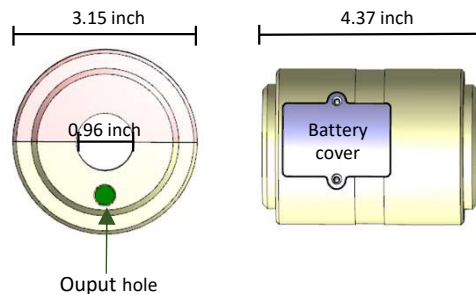
LINEAR POWER SCALABILITY



OUR PH4IoT_s



The PH4IoT_s (Power harvesting for IoT sensor devices) product was designed and developed so that customers may directly connect to an IoT sensor device with DC output; the built-in battery can be charged with the electricity generated internally from the PH4IoT_s, so that customers may conveniently supply power to their IoT sensor devices.



If the customer utilizes PH4IoT_s, they should not need to replace the battery. If the customer utilizes PH4IoT_{s.w}, they can remotely monitor the magnetic harvesting power and measure the battery capacity via Wi-Fi transmission (option).

Which sensors could they be used with:

- Temperature, Humidity, Light Meters, Thermocouple, Water Detection, Gas Detection, Air Quality, Soil Moisture sensor etc.

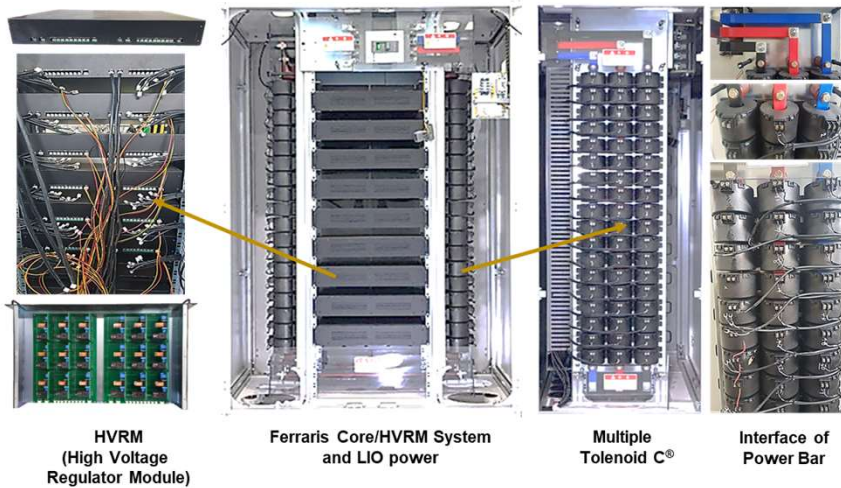
The PH4IoT_s (Power harvesting for IoT sensor devices) can also be used in the following cases with optimal efficiency:

- Inconsistent power line voltage
- Using IoT-related devices 24 hours a day
- When a power cord or a special power source for outdoor operations is needed for any of the wireless IoT devices
- To save electricity cost

OUR ERR (ENERGY RECYCLING RESERVOIR) SYSTEM



Ferraris providing a revolutionary paradigm of efficient electric power generation by the ERR System. We proudly introduce world's first and only ERR System created by Ferraris. The ERR System is decentralized power generator.



ERR System (Power Added Solution) is designed to be multiple contactless core (Linear power scalability technology) attached to incoming power lines to harness induced electric energy from magnetic energy variation produced from power lines. The harnessed electrical energy then can be stored in the battery to be used when needed or real-time distributed to the load, which means magnetic energy harvesting and using power for load are happened at the same time.

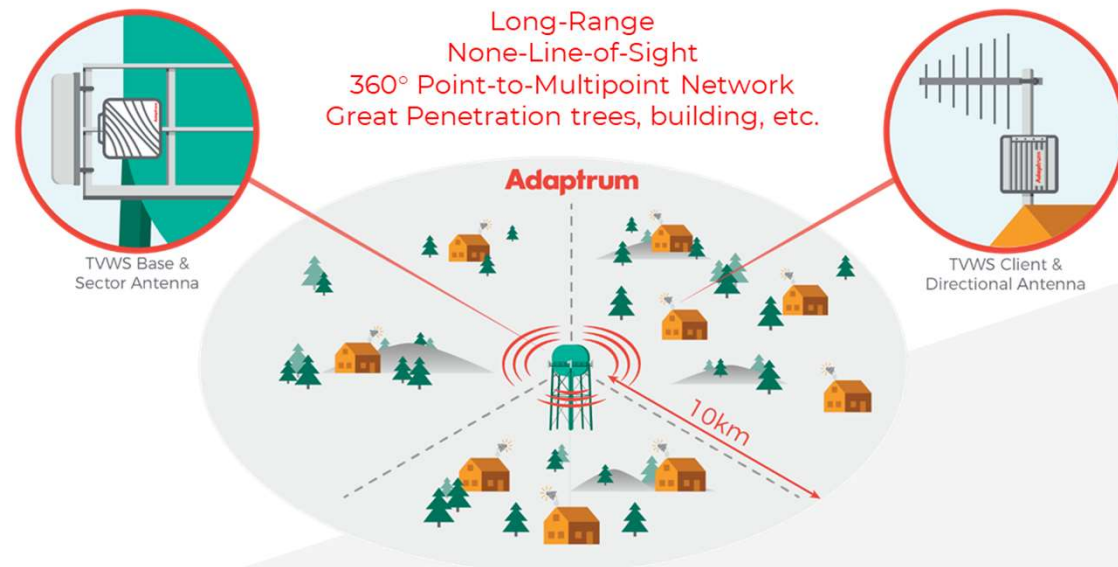
When the ERR System supplying power to low-power factor loads, ERR System can reduce the reactive power (Kvarh) through power factor improvement method. Through experimentation and trial runs using power line current, electrical usage pattern analysis, field environment analysis, application of ERR System has proven its stability in its installation and operation.

SUPER WI-FI SOLUTION (ADAPTRUM, INC.)

TV White Spaces refer to the unused TV channels between the active ones in the VHF and UHF spectrum.

- Long Range Connectivity The low sub-GHz frequencies used by TV White Spaces allow it to propagate farther than higher frequency systems, including those at 2.4GHz & 5.8GHz, used to deliver wireless broadband today.
- Long range coverage translates to covering more customers with existing infrastructure and requiring less investment to expand service footprints.
- Non-Line-of-Sight (NLOS) Beyond long-range propagation, the low sub-GHz frequency allow links to penetrate trees, buildings, and other obstructions – providing true non-line-of-sight (NLOS) connectivity. To better understand our products, see the <https://ferrarispower.com/tv-white-space-for-iot>

DELIVERING FIXED WIRELESS BROADBAND OVER TV WHITE SPACE



APPLICATIONS

Efficiency applications for Electric power,

1. **Above ground:** IoT equipment (power supply to CCTV, Super Wi-Fi, and sensors)
2. **Underground:** Power line monitoring for manholes and Metros (power supply to CCTV, Super Wi-Fi, and IoT equipment)
3. **Power added system:** EV and drone charging station (wire or wireless), Solar farm, Onshore or offshore wind farm, Pseudo battery
4. **Other:** Water monitoring and control, High-voltage overhead power line (OPL) inspection drone, and Wildfire early warning system

Please refer to our website (www.ferrarispower.com), which contains all of our technical and product data, reference applications (12 cases), news, and history.



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Do you have any further questions or would like to get to know more about Ferraris ?

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