



A DERMS PLATFORM
WE DO WHAT OTHERS TALK ABOUT

MISSION STATEMENT

Founded in 1994, Intech 21, Inc. is a privately held company, which designs, develops and manufactures radio frequency based communication technologies, products and systems for a diverse range of control and monitoring applications.

Tens of thousands of Intech 21 wireless smart meters, process sensors and wireless heating control systems have been saving between 20% and 40% of energy consumption while dramatically reducing carbon emissions.

Integration of multiple functions in one smart device allow:

- Immediate cost savings and short payback
- Existing buildings can be retrofitted with virtually no downtime
- Significant cost savings for new construction projects vs. conventional systems

These products combine ruggedness to withstand noise and interference with sleek and unobtrusive design, which also provides sophistication in control strategies and open communications with other systems.

Intech 21's single cohesive enterprise solution offers:

- Remote, web based monitoring and control
- Immediate response to critical situations
- System management from any location
- Remote alarm notification via any media (email, SMS, cell, etc.)

Intech 21, Inc. has pioneered and has over a decade of track record with our patented fully addressable token ring method for communication over power lines as well as a self-healing wireless network.

The New York City Housing Authority has received awards for the implementation and use of the Intech 21 energy system, including Mayor Michael Bloomberg's award for best energy technology of the year.

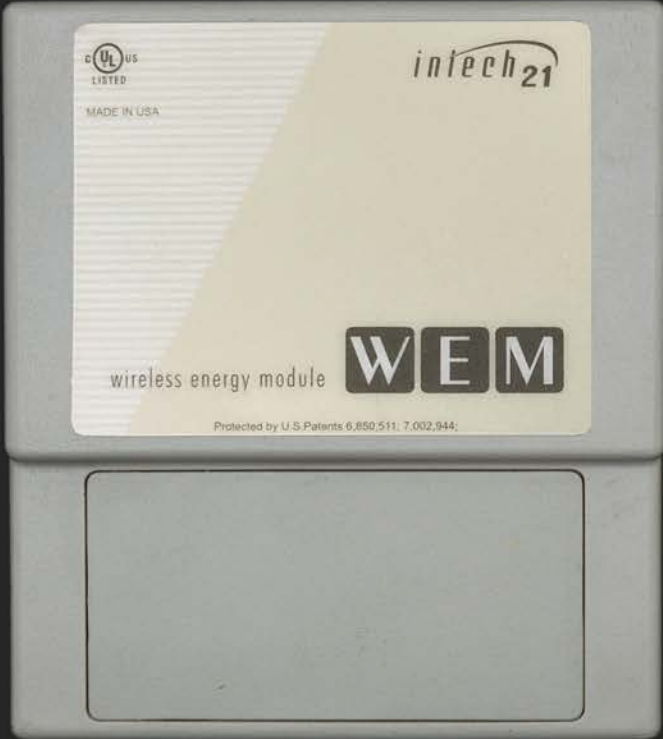
The Intech 21 solution is equally effective in a five apartment building or a campus with more than 100 buildings - plug and save. It enables a standard air conditioner or a standard apartment radiator valve smarter, able to communicate and be remotely controlled. It allows a regular smoke or carbon monoxide detector to be connected into a central system.



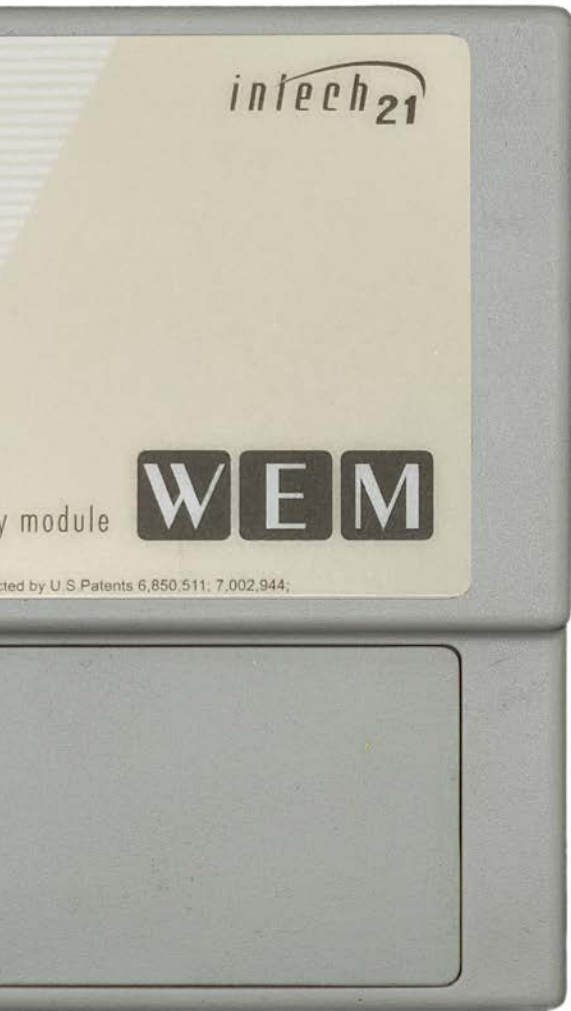
Intech 21, Inc has developed an innovative energy conservation technology that returns immediate and measurable savings for residential buildings. Government run public housing (such as New York City Housing Authority) has seen that they can realize an average of 25% energy savings by retrofitting existing buildings, while also providing significantly higher operating and management efficiencies. Intech 21, Inc has also developed an integrative Smart Grid Technology that creates demand response applications and results.

All Intech 21's product lines (i.e. HVAC optimization, Submetering, Smart Grid, etc.) are driven by a patented wireless network infrastructure that is highly efficient and scalable with close to a zero failure rate in over 50,000 apartments.

WIRELESS ENERGY MODULE



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NEW YORK CITY HOUSING AUTHORITY WORKS WITH ENVIRONMENTAL DEFENSE FUND, FINDS \$56 MILLION IN COST SAVINGS WITH NEW TECHNOLOGY

“...NYCHA installed a new technology known as **Wireless Energy Modules** in the 14 buildings that make up Castle Hill Houses. This technology allows NYCHA to provide consistent, comfortable temperatures to our residents in the 2,023 Castle Hill apartments throughout the year, while actually saving money and energy. NYCHA worked with Environmental Defense Fund (EDF) on this effort. EDF is a national organization widely recognized for innovative solutions to tough problems, such as increasing energy efficiency and reducing carbon emissions.

With the help of EDF Climate Corps, NYCHA analyzed the potential of installing **Wireless Energy Modules** across our entire portfolio. We found that NYCHA could save **\$31 million** in annual heating costs and up to **\$25 million** in annual electric costs and **avoid 177,000** metric tons of CO2 emissions each year.”

“...If NYCHA can save **\$56 million** and avoid tons of emissions each year in New York City alone, just think of the savings that would result from a national commitment from housing authorities and private landlords to improve energy efficiency.”



PID-2104



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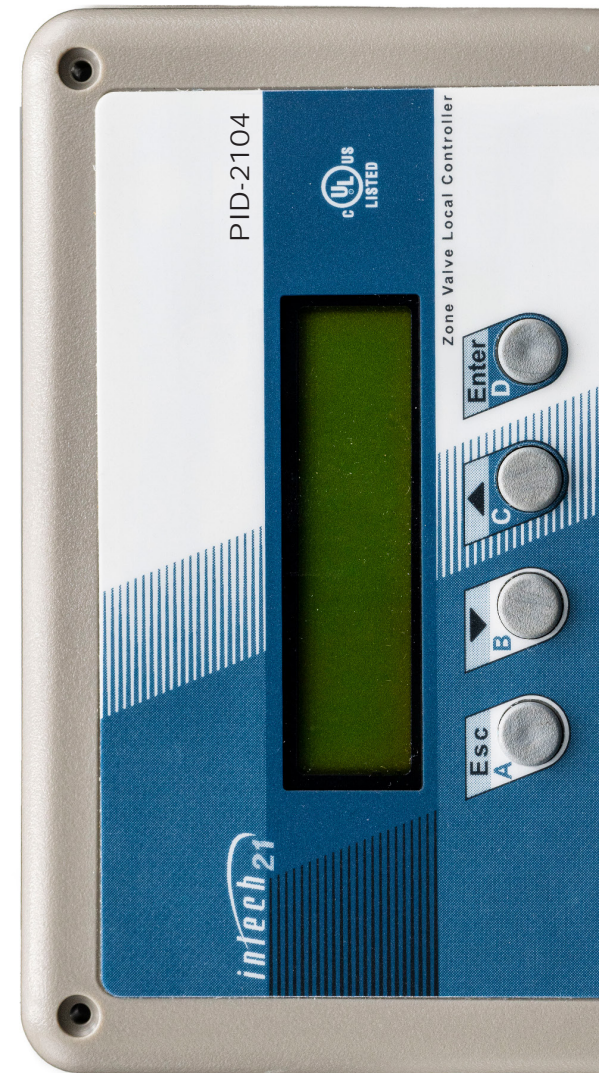
PID-2104

The Intech 21 PID-2100 provides control of the amount of steam in a one pipe heating system or the amount of the mixing valve, heat exchange valve or the burner operation to regulate the amount of heat (thermal energy) supplied to a building. It utilizes a PID logic base where it will automatically control the percentage of flame rate for the lead and lag boilers such that it provides ample heat and ensures the system is running in an optimal performance.

The PID-2100 will cycle the Boiler(s) ON/OFF or the steam Zone Valve Open/Close according to the outdoor temperature; average indoor temperature feedback and condensate return temperature feedback. In addition the PID-2100 controls the boiler flame modulation in order to maintain the required steam pressure during the ON cycle in a one pipe heating system setup.

In a hot water heating system, the PID-2100 adjusts the temperature of the circulating heating water in response to changes to the outdoor temperature. The PID-2100 also controls the motorized valve and the circulating pump. The control can also be provided directly to the burner operation.

PID-2100 works as a standalone controller when it is connected to a communication processor, which furnishes the apartments real time average indoor temperature. It will greatly improve the heating supply efficiency and avoid apartment over/underheating. When the PID-2100 is connected to the Local Server it can be monitored and controlled from the local Intranet and/or Internet with appropriate authentications.





PID-2104 FEATURES

ADJUSTABLE HEATING SEASON

Winter, Summer, Day and Night modes of operation

ADAPTABLE

Adapts to different types of temperature sensors and valve actuators

CALIBRATION IS SIMPLE

Simple calibration procedure for the temperature sensors

REMOTE

Remotely controlled and/or monitored through the RS485 interface

CONTROL ANALOG OUTPUT

PID controlled analog output 4-20mA or digital potentiometer for flame modulations to maintain the required steam pressure during the boiler ON cycle

AUTOMATIC CONTROL

Control of the boiler ON/OFF in accordance with operation settings and measured temperatures or manual setting of the delivered amount of heat

PROTECTED

Password protection for the critical settings

SMART BOILER CONTROLLERS

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SMART BOILER CONTROLLERS



ZVLC-2104

Zone Valve Line Controller provides control of the Building's Steam Zone Valve to regulate the amount of heat (thermal energy) supplied to the Building.



OPLC-2100

One Pipe Line Controller provides control of the Building's One Pipe heating system to regulate amount of heat supplied to the Building.



HWHC-2100

Hot Water Heating Controller provides control of mixing/heat exchange valve or burner operation to regulate amount of heat supplied to the Building.

SMART WIRELESS DEVICES



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SMART WIRELESS DEVICES



WEM

Provides current energy usage information such as demand and energy usage. The Intech 21 WEM is approved by NYS Public Service commission for use as an energy billing data provider. This device also provides temperature feedback for the boiler controllers, serves as a water consumption meter and an electric base board controller.



TS-2100

This device provides temperature sensor feedback to either override thermostat controls or to provide data to the boiler room about the average temperature readout per apartment level so the boiler room knows how much heat to provide or throttle back.



AP-2100

This device collects all wireless data information by the Intech 21 Smart Wireless Devices during operation. This device also conveys commands submitted from the Web back down to the level of all the other devices. The AP-2100 also has an accompanying network node. The data this device submits is encrypted using a high level of security.

SMART WIRELESS DEVICES



RE-2104

This device submits data collected by the AP-2100 and sends it to the Intech 21 servers. This device also provides commands submitted via Web to the AP-2100 for device distribution.



SMART A/C

This device provides the capability of the building owner to provide Air Conditioning to their tenants, but also can control how much that device can cool or heat such that the building owner has full control.



KW-2108

This device acts as a pulse meter and has a plethora of real world scenarios such as water consumption, gas usage; and anything else that needs to be monitored.

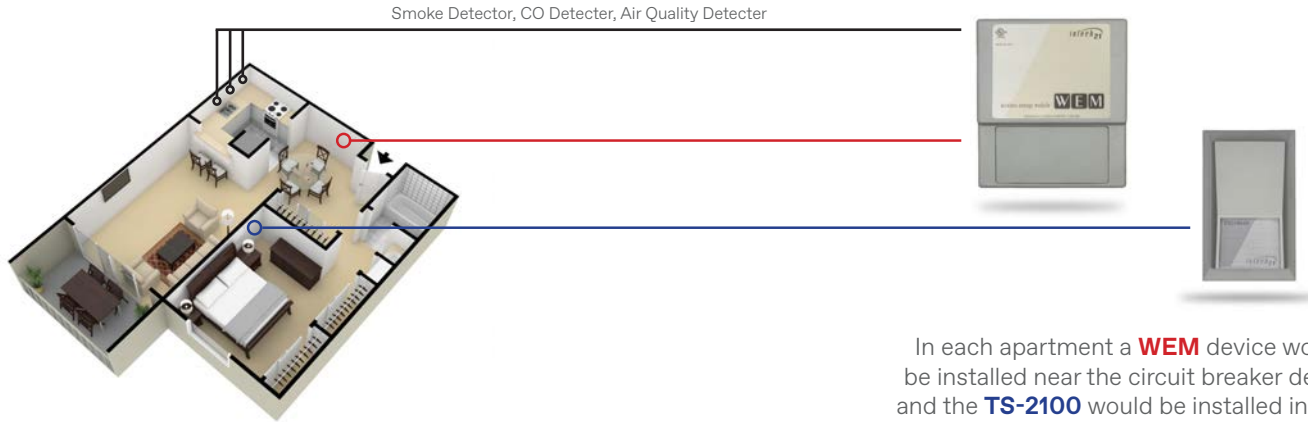
SMART BUILDING SOLUTIONS



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SMART BUILDING SOLUTIONS



An apartment utilizing a **smart building solution**.

In each apartment a **WEM** device would be installed near the circuit breaker device and the **TS-2100** would be installed in each bedroom providing all temperature data for all zones of various sized apartments.



An **Intech 21 Boiler Controller** would be installed in the boiler room to control the heat throughout the building's entire system. The **WEM / TS-2100** would provide data indicating the average temperature; this information triggers provision of adequate heat based on the device's auto settings.



AP-2100 is to be installed at the first level of the building and wired to a **RE-2100**. These two smart devices collect the **WEM / TS-2100** data and provide the data back to Intech 21 servers for real-time viewing.

INTECH 21 PLATFORMS



MASS TRANSIT



OFFICE / COMMERCIAL



COLLEGE CAMPUS

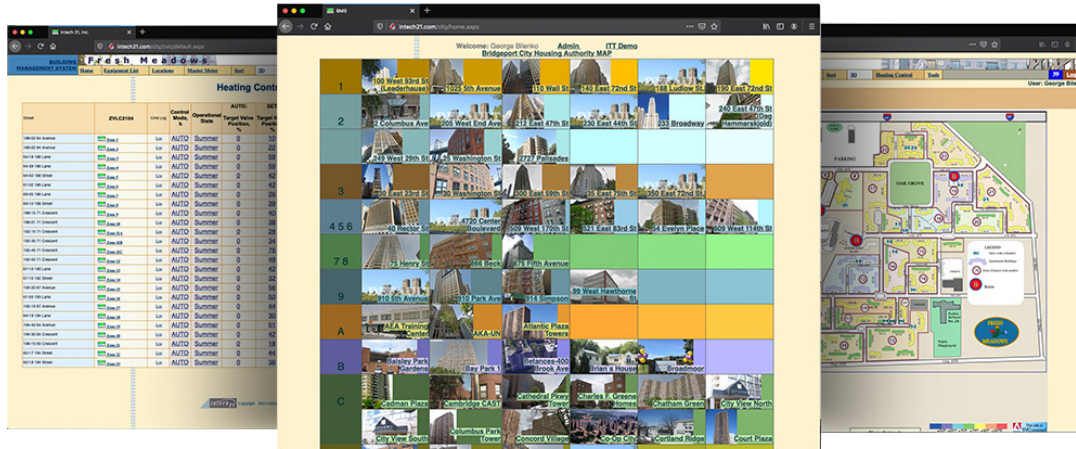


HOSPITALS



RESIDENTIAL

ALL MADE SMART WITH INTECH 21



- A/C Cooling / Heating
- Lights Emergency, Retro-Fit, Metro
- Wireless Heating Automation
- Energy Management & Control
- Fire Safety & Security
- Personnel & Asset Tracking
- Air Quality Monitoring
- Equipment Predictive Maintenance & Analysis

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May 21, 2014

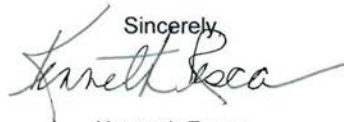
George Bilenko
Intech21
21 Harbor Park Drive
Port Washington, NY 11050

Dear Mr. Bilenko,

The Department of Public Service – Staff has completed our review of the MET Laboratories Incorporated (MET Labs) electric meter accuracy test report for the Intech PM 2104 submeter. The purpose of this report is to ensure the PM 2104 submeter meets the requirements for meter accuracy and performance as indicated in the American National Standards Institute – ANSI C12.1 2008 specifications.

The MET Labs report indicates the PM 2104 submeter can monitor and store energy data, and transmit the amount of energy flow used by end users without incident, and meets the specified accuracy requirements as mentioned in the current ANSI C12.1 specification. As such, the Intech21 PM 2104 residential electric submeter may be considered as a commission recognized revenue grade electricity submeter.

Staff appreciates Intech21 cooperation with the New York electric meter approval process – NYCRR16 Part 93. If you have any further questions regarding the commission approval process for electricity meters, or any other related issue please do not hesitate to contact me electronically at kenneth.resca@dps.ny.gov, or at my office 212 417 4045

Sincerely,


Kenneth Resca
Office of Consumer Policy

Intech 21 pioneered a patented, fully addressable token ring method for communication over power lines. This method now has over a decade of track record and is a self-healing wireless network. Intech 21 has developed the only technology with the capability of providing a wireless solution that can manage thousands of devices within the same infrastructure – flawlessly.

WWW.INTECH21.COM

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