

# The World's Most Advanced and Industry Proven ARC Technology

## Department of Energy's ARC Technology and more

- Enhanced & Integrated Airside Economizer
- Supply Fan Speed Control
- Demand Controlled Ventilation
- Compressor Speed/Capacity Modulation
- Smart Peak Demand Control

## Industry Proven Performance Since 2009

Bes-Tech, Inc. began development of the Digi-RTU® in 2007 and introduced it to the market in 2009. Since then, the Digi-RTU® has been a proven technology

- Satisfies ASHRAE 62.1 and Title 24 IAQ Standards
- Up to 60% HVAC Energy Savings
- Up to 40% Sustainable HVAC Peak Demand Reduction
- Up to 80% Peak Demand Response
- Significant O&M Cost Reduction

## Utility Incentive Program Validation

In 2010, Nebraska's Omaha Public Power District approved the prescriptive Utility Incentive Program to promote the Digi-RTU®. Since then, many Nationwide utility companies followed suit.

In 2011, Digi-RTU® was awarded the 2011 DEED Energy Innovation Award from America Public Power Association through Omaha Public Power District.

## FAQs

**1. What are some benefits to Building Owners who install the Digi-RTU®?**  
The Digi-RTU® provides improved building comfort with payback in less than three years. It also increases the life span of existing systems, improves comfort and reduces energy and O&M costs.

**2. Why do Facility Service Providers recommend the Digi-RTU®?**  
Facility Service Providers have an obligation to reduce energy consumption annually for their clients. Installing the Digi-RTU® will ensure satisfaction of this requirement and significantly reduce O&M efforts and costs.

**3. What important facts should ESCOs and Energy Consultants know about the Digi-RTU®?**  
The Digi-RTU® has a potential market value of over \$50 billion in the USA. This is the most significant opportunity for performance contracting and retrofits for the next 10 to 15 years.

**4. Why should MEP and BAS Contractors install Digi-RTU®?**  
Offering the Digi-RTU® to existing customers can easily double revenue and will also create more long term service contracts with new clients.

**5. Why should CX Providers consider offering the Digi-RTU®?**  
The Digi-RTU® provides the most energy efficient measures. It increases SEER ratings of existing equipment to the mid-twenties or higher, thereby increasing asset values to your customers.

**6. How does the Digi-RTU® perform automatic demand response?**  
When there is an automatic demand response signal from the utility company, the Digi-RTU® will run at minimum speed. When a specific demand limit value is given, Digi-RTU® will modulate speed and on/off status to ensure power within the 15 minute moving window is less than the required value.

**7. In addition to the smart FDD, M&V, IAQ and Comfort & Control features, what makes the Digi-RTU® stand out?**  
All Digi-RTU®s can be optimized and coordinated together in a single building through the Digi-SBM®.

**8. Does installing the Digi-RTU® void any manufacturer warranties?**  
No! In fact, Bes-Tech will take over the existing warranty for you.

**9. How does the Digi-RTU® communicate with an existing BAS or T-stat?**  
The Digi-RTU® receives T-stat analog signals directly and comes with an industry standard Modbus RTU communication protocol that is compatible with others using a communications bridge.

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Servicing North America, Europe and Asia with offices in:  
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# Digi-RTU®

## Ultimate Solutions

Rooftop Units  
Split Units  
Heat Pumps



ESCOs  
CX Providers  
Building Owners  
Energy Consultants  
BAS / MEP Contractors  
Facility Service Providers

## The Digi-RTU<sup>®</sup>

A plug and play optimizer for rooftop units, split units and heat pumps with tonnage as low as 3 tons and as high as 60 tons. The Digi-RTU<sup>®</sup> features:

- Equipped with DCV and advanced economizer control
- Provides Smart Demand Management
- Works under/with existing BAS and T-Stat controllers
- Reduces total electrical consumption by up to 60%
- Reduces heating consumption by up to 15%
- Improves room temperature and humidity control
- Reduces compressor, contactor, fan belt/motor wear and failures
- Modulates both the compressors and indoor fan speed to match building load
- Provides Modbus and other optional communication protocols for BAS integration

## The Digi-SBM<sup>®</sup>

A specialized supervisory controller for multiple Digi-RTU<sup>®</sup>s. It connects to the Digi-RTU<sup>®</sup> through Modbus, and connects to the internet through either wireless or ethernet connection. Human operators can access the Digi-RTU<sup>®</sup> either remotely through the internet or locally through the Digi-SBM<sup>®</sup> display. The Digi-SBM<sup>®</sup> features:

- Graphic overview of parameters such as speed, power and temperature
- Monitoring performance of IAQ, energy/energy savings and mechanical performance
- Scheduling and control functions
- FDD for O&M items such as filter, belt, contactor, fan motor, compressor, refrigerant, damper and VFD
- Building level peak demand controls

## The Digi-SFT<sup>®</sup>

A specialized server for multiple Digi-SBM<sup>®</sup>s focused on large Corporate Account Management or Service Providers. It provides the following functions in addition to the Digi-SBM<sup>®</sup>:

- Displays detailed operation information
- Generates O&M service tickets
- Provides large scale corporate energy and O&M information

## Retrofit Existing Equipment

The Digi-RTU<sup>®</sup> upgrades existing rooftop units, split units and heat pumps to the most energy efficient HVAC equipment.

- Installed inside existing equipment
- Only 3-6 hours installation time
- No impact on occupants
- No impact on existing structure
- No impact on existing BAS and/or T-Stat
- Reduces HVAC energy by up to 60%
- Reduces HVAC peak demand by up to 40%
- Three year simple payback on average

## Replace Existing Equipment

Integrating the Digi-RTU<sup>®</sup> with a standard efficiency unit has been proven as the best option for replacing an old rooftop unit, split unit or heat pump unit.

- Significant installation cost savings
- No occupancy interruption
- Best energy and indoor air quality performance
- Less weight and footprint

## Install Digi-SBM<sup>®</sup> and Digi-SFT<sup>®</sup>

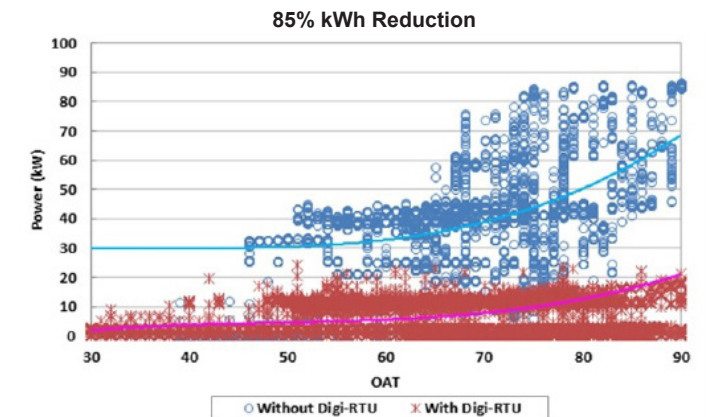
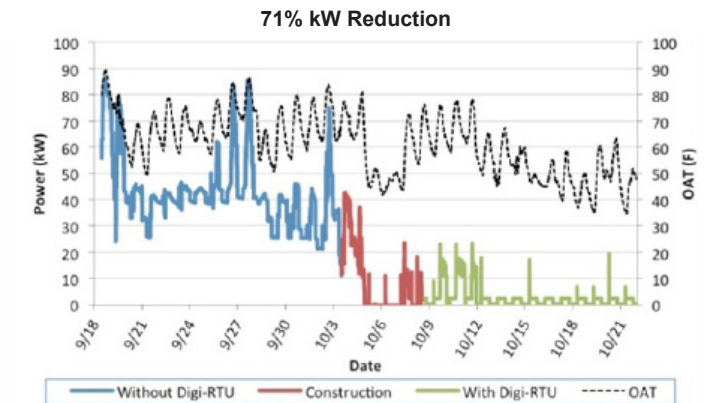
The Digi-SBM<sup>®</sup> provides Building Owners and Service Contractors digital 'eyes' for improved comfort, energy performance and reduced O&M costs.

Installing Digi-SFT<sup>®</sup> provides exceptionally modernized tools for large corporations and Facility Service Providers.

- Plug and play; easy installation and set-up with minimal cost
- Clear and easy graphic view of operational performance
- Fault detection & diagnostic functions
- Prevents excessive HVAC run hours
- Verifies energy savings automatically and remotely
- Simple cost payback within one year
- Reduces O&M costs by generating specific repair lists prior to dispatching a technician

## Case Studies - HVAC Rooftop

DISTRIBUTION CENTER  
ASHRAE CLIMATE ZONE 5



## Water-Sourced Heat Pumps

PUBLIC SCHOOL  
ASHRAE CLIMATE ZONE 5

