

# Synergize<sup>®</sup> RF Electric



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Aclara Technologies LLC is a world-class supplier of smart infrastructure solutions (SIS) to more than 780 water, gas, and electric utilities globally. Aclara SIS offerings include smart meters and other field devices, advanced metering infrastructure and software and services that enable utilities to predict and respond to conditions, leverage their distribution networks effectively and engage with their customers. Aclara Technologies LLC is owned by an affiliate of Sun Capital Partners. Visit us at [Aclara.com](http://Aclara.com) and follow us on Twitter @AclaraSolutions.

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# Synergize® RF Electric

Realize immediate returns in operational efficiency and customer satisfaction

The Aclara Synergize® RF communications network for electric utilities offers unmatched performance and expandability while providing reliable, two-way communications reaching over 99 percent of endpoints during outages. While Synergize® RF is technologically superior to comparable services, it also provides the best total cost of ownership single-infrastructure solution for electric utilities.

## Why Synergize® RF Electric?

- Faster, more reliable data
- Greater reach and reliability
- Reduced interference
- Faster, less costly deployment
- High security
- Efficient data transfer
- Improved throughput
- Lower cost of ownership

## Eight Reasons to Trust Synergize® RF Electric

### Faster, More Reliable Data

The Synergize® RF Electric point-to-multipoint (PMP) network is designed so each meter communicates directly with one or more Data Collection Units (DCUs), a technique that creates efficiency and increases redundancy, resulting in faster and more reliable meter reads.

### Greater Reach and Reliability

The system uses licensed 450-470 MHz spectrum that transmits farther than 900 MHz systems, with reduced signal-path loss. Signals at this lower frequency propagate better in and around buildings and other obstructions to provide consistently dependable coverage that is ideal for urban, suburban, rural and commercial service areas.

### Reduced Interference

The use of an FCC-licensed versus unlicensed channel by the Synergize® RF Electric communications network reduces the chance of interference from other devices, also improving the signal's ability to penetrate homes and buildings to reach devices, no matter where their locations.

### Faster, Less Costly Deployment

As general guideline, halving of the spectrum results in a three-to-four times decrease in the number of DCUs required, since the signal propagates farther. This results in faster deployment and lower capital investment.

### High Security

The utility-controlled, private network operates on its own, independent FCC-issued channels and features industry-leading and NIST compliant authenticated messaging with high level AES-256 encryption for high data integrity.

### Efficient Data Transfer

DCUs provide multiple, independent channels for sending messages to each meter. The channels operate in parallel, allowing simultaneous uploading of meter reading data to the headend and increasing system efficiency and productivity.

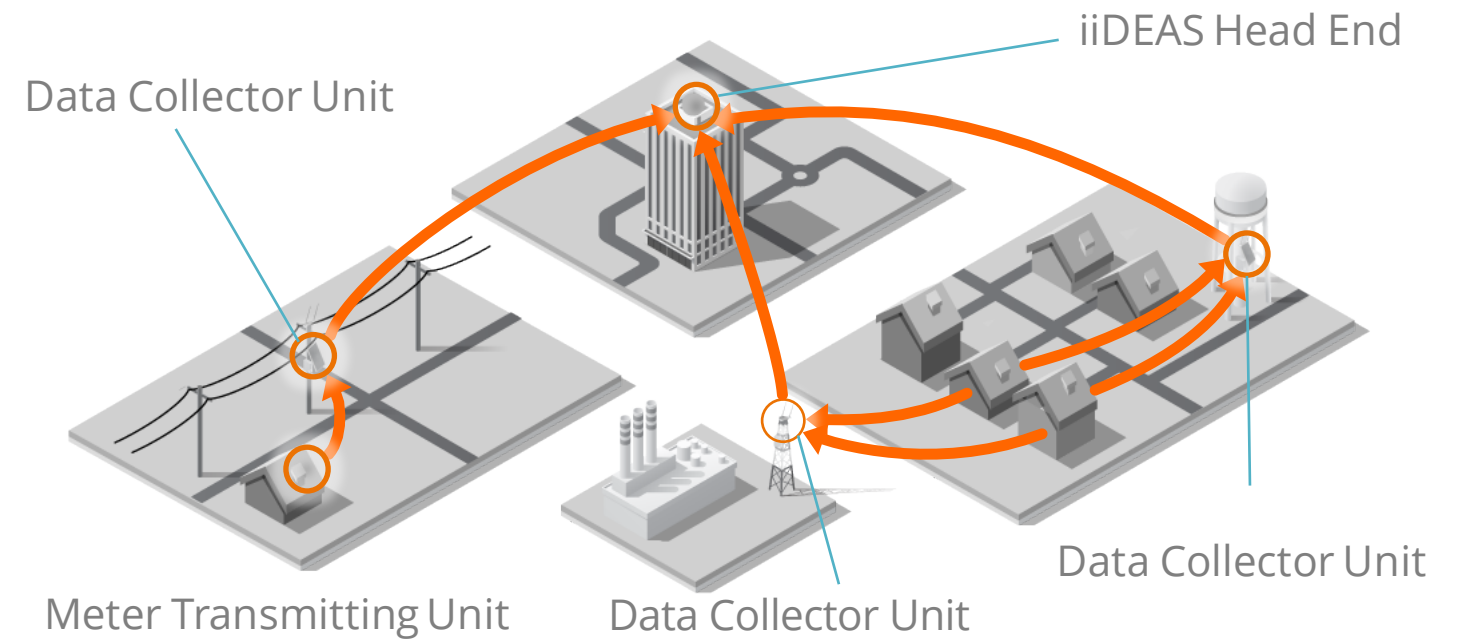
### Improved throughput

The Synergize RF Electric communications system eliminates issues with latency, or the delays data messages encounter in mesh systems as they are stored and forwarded from one node to another. Competitor's mesh systems suffer from latency caused by messages hopping from one meter to another and can cut data speed by as much as 80 percent. For example, after five typical mesh hops, data sent at 150 kbps will see a throughput drop to roughly 60 kbps, limiting capability and significantly hampering efficient system operation. Synergize RF doesn't suffer from this system limitation.

### Lower Total Cost of Ownership (TCO)

Compared with many RF networks, the Synergize RF network requires up to 35 percent less capital investment and on-going operational costs, reducing project cost across the entire system lifecycle. This is in part due to the system's point-to-multipoint design and its use of a higher performance frequency spectrum.

## Aclara Synergize® RF Network



### Total Cost of Ownership Calculator

In addition to upfront capital costs and operating costs, utilities making decisions on meter-reading technologies must take a long view that includes total costs over a time-span of 15 years or more. To help utilities make that decision objectively, Aclara offers a Total Cost of Ownership calculator that illustrates the advantages of fixed RF networks over manual and drive-by solutions, and demonstrates the further long-term advantages of the Synergize® RF Electric PMP network over comparable mesh networks.

The model was verified by The Wired Group, a Denver-based consultancy specializing in and smart grid, demand response and renewable energy.

Contact your Aclara sales representative or **800-297-2728** for more information.

### Flexible User Experience

Aclara's unique iiDEAS platform offers managers, operators, field technicians, and customer service representatives a customizable interface to access the information they need. The software reads meters as well as interfaces with smart-infrastructure devices that monitor and control utility distribution networks. The foundation of the interface is a robust meter data management system that includes validation, estimation and editing capability. Utilities extend the capabilities of the software with modules to perform specific tasks such as viewing data, meter exchange, demand response, fault detection, billing, consumer engagement, and line-loss, voltage, and transformer-load analysis.