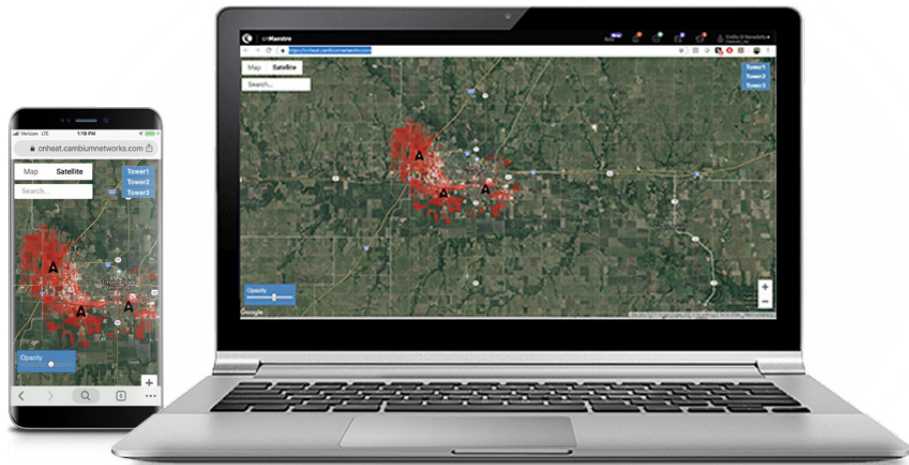


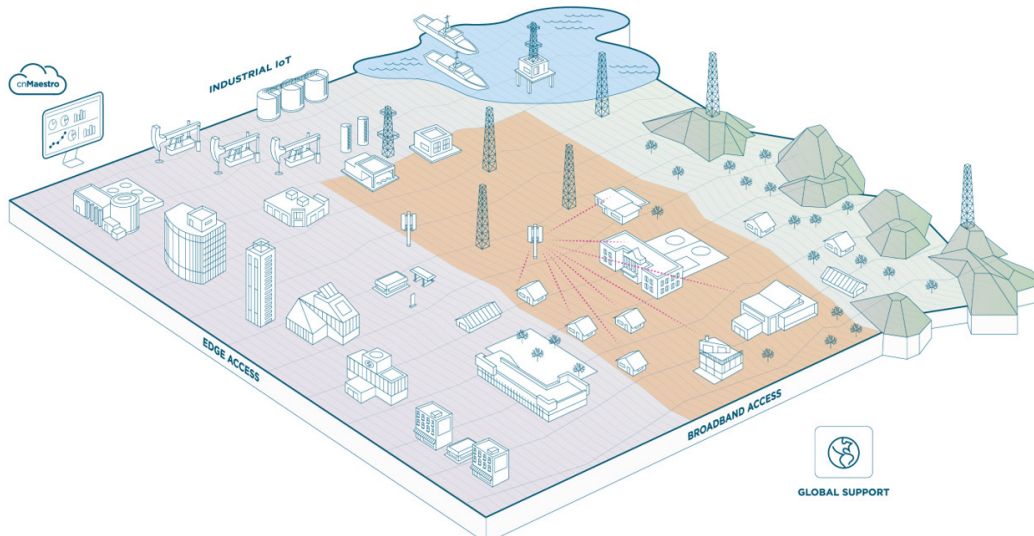
NET NEW CUSTOMERS ADD REVENUE

cnHeat IDENTIFY



INTRODUCING CNHEAT IDENTIFY

Wireless distribution networks play a key role in connecting the unconnected. Cost-effective, last mile point-to-multipoint access networks with MU-MIMO technology connect high-capacity backhaul infrastructure to buildings to support Wi-Fi access networks. Throughput capacity and coverage are essential to customer satisfaction and wireless network operators. After designing wireless connectivity for a site, identifying new customers with minimal costs is important to realizing a positive return on investment for a site with high throughput capacity in a short period of time.



Targeted marketing based on identifying homes and businesses with strong RF coverage for a site is a next generation RF planning mechanism that facilitates realizing a strong, profitable business.

Introducing cnHeat IDENTIFY From Cambium Networks

Cambium Networks announces its latest cnHeat service, IDENTIFY. cnHeat IDENTIFY identifies the buildings in a cnHeat site where RF coverage can be realized at, or better than, a desired RSSI level. For each building identified, the following information is provided: latitude and longitude and street address. This information can be used by service providers to find new customers through targeted marketing.

SM Latitude	SM Longitude	RevGeoAddressLine	RevGeoCity	RevGeoState	RevGeoZIPCode
38.98022	-98.28321	100 SPRING CREEK RD	ANYTOWN	KS	66500
38.96802	-98.31626	1000 TRUNKWOOD DR	ANYTOWN	KS	66500
39.07279	-98.38339	1000 E LEFT ST	ANYTOWN	KS	66500
38.96766	-98.31605	1001 MARSDALE CT	ANYTOWN	KS	66500
38.88447	-98.37309	1003 E 600TH RD	ANYTOWN	KS	66500

Purchase Addresses as Needed

A service provider can purchase addresses for a site as long as they have an active one-year or three-year cnHeat subscription for the site. Addresses can be purchased as needed. A service provider can purchase all identified addresses for a site, or they can purchase a subset of addresses with the minimum quantity being 100 addresses. Addresses are purchased in multiples of 100 addresses.

SAVING MONEY WITH TARGETED MARKETING

Save Money Over Blanket Marketing

Using cnHeat IDENTIFY, a service provider is able to market to those homes and business that can receive wireless service at, or better than, a minimum specified RSSI level. This saves money for the service provider compared to blanket marketing to all homes and businesses in the radius of coverage for the site. Savings include postage, production costs and the time associated with failed installs.

Self-Market or Choose a Pre-Approved Marketing Firm

cnHeat addresses can be provided either directly to the service provider or to a third-party marketing firm.

Service Provider: If the service provider wants to market to the addresses themselves, the addresses are sent to the service provider. The service provider may not provide these addresses to any other company/entity. Marketing using the addresses can only be done by the service provider directly.

Third-Party Marketing Firm: If the service provider wants to utilize a third-party marketing firm, Cambium Networks will provide the choice of pre-approved, industry-leading third-party marketing firm(s) that the service provider can use to market the addresses. Once the addresses are provided to the third-party marketing firm, the addresses will only reside with the third-party marketing firm. Marketing using the addresses can only be done by the third-party marketing firm.

No matter which choice is made, the locations, that is the latitudes and longitudes, for the covered buildings in the analysis are provided to the service provider. This allows the service provider to contact potential customers when in the vicinity or location of a covered building.

Which Parameters Determine the Addresses Provided?

cnHeat uses the following two parameters to identify addresses with coverage.

- Maximum SM height: This is the maximum height at which an SM could be mounted on top of a building. Greater heights offer more connections and hence more addresses, but at the trade-off of increased difficulty to install for addresses requiring higher SM heights. The height must correlate to a cnHeat subscription SM height.
- Minimum RSSI Level (dBm): Only addresses at, or better than, this RSSI level will be provided. This allows the service provider to market only to customers where a minimum service can be identified.

In the picture on the right, homes with coverage that will yield valid addresses are shown with green circles surrounding the coverage.



CALCULATING THE VALUE OF CNHEAT IDENTIFY

Calculating the Value

cnHeat IDENTIFY generates revenue from net new customers and saves money as compared with blanket marketing. How much value cnHeat generates can be roughly determined by answering a few of the following questions for a site.

- How many addresses will be purchased?
- What is the anticipated success rate for targeted marketing (i.e. the percentage of customers won by the service provider)?
- What are the installation costs?
- What is the revenue and length of contract?

Based on these questions, let's look at different examples for a generalized WISP (wireless internet service provider).

Example A: High-Density Suburb, Purchase All Addresses

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| <ul style="list-style-type: none">• Addresses: 10,000• Marketing Percentage Success: 1%• Installation Costs: \$500• Monthly Subscription Rate: \$50• Subscription Duration Average: 36 months• RF Coverage of Buildings at Site: 30%• Failed Truck Roll Costs: \$175• Postage Per Address: \$.19• Production Costs: \$.05 | Revenue Gathered <ul style="list-style-type: none">• Customers Found: 10,000 prospects * 1% success = 100 customers• Installation Costs: 100 customers * \$500 = \$50,000• Revenue: 100 customers * \$50 per month * 36 months = \$186,000• Net Revenue: \$136,000 | Money Saved Compared to Blanket Marketing <ul style="list-style-type: none">• Addresses Cannot Be Provided Service: 10,000 / 30% RF Coverage = 33,333• Failed Truck Rolls Avoided: 33,333 * 1% = 333• Costs Saved: 33,333 * \$.24 + 333 * \$175 = \$66,275 |
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Example B: Medium-Density Rural Site, Purchase All Addresses

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| <ul style="list-style-type: none">• Addresses: 1,800• Marketing Percentage Success: .5%• Installation Costs: \$500• Monthly Subscription Rate: \$50• Subscription Duration Average: 36 months• RF Coverage of Buildings at Site: 20%• Failed Truck Roll Costs: \$175• Postage Per Address: \$.19• Production Costs: \$.05 | Revenue Gathered <ul style="list-style-type: none">• Customers Found: 1,800 prospects * .5% success = 9 customers• Installation Costs: 9 customers * \$500 = \$4,500• Revenue: 9 customers * \$50 per month * 36 months = \$16,200• Net Revenue: \$11,700 | Money Saved Compared to Blanket Marketing <ul style="list-style-type: none">• Addresses Cannot Be Provided Service: 1,800 / 20% RF Coverage = 7,200• Failed Truck Rolls Avoided: 7200 / .2 = 14• Costs Saved: (7,200 * \$.24 + 14 * \$175) = \$4,178 |
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Example C: Light-Density Rural Site, Purchase All Addresses

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| <ul style="list-style-type: none">• Addresses: 700• Marketing Percentage Success: 2%• Installation Costs: \$500• Monthly Subscription Rate: \$50• Subscription Duration Average: 36 months• RF Coverage of Buildings at Site: 25%• Failed Truck Roll Costs: \$175• Postage Per Address: \$.19• Production Costs: \$.05 | Revenue Gathered <ul style="list-style-type: none">• Customers Found: 700 prospects * 2% success = 14 customers• Installation Costs: 14 customers * \$500 = \$7,000• Revenue: 14 customers * \$50 per month * 36 months = \$25,200• Net Revenue: \$18,200 | Money Saved Compared to Blanket Marketing <ul style="list-style-type: none">• Addresses Cannot Be Provided Service: 700 / 25% RF Coverage = 2,100• Failed Truck Rolls Avoided: 2100 * 2% = 42• Costs Saved: 2,100 * \$.24 + 42 * \$175 = \$7,854 |
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SUBMIT YOUR SITE TO CAMBIUM NETWORKS

Conclusion

cnHeat IDENTIFY generates net new customers through targeted marketing of building addresses that can be provided high-level service plans resulting in new, recurring revenue for a service provider. cnHeat also saves money for a service provider through targeted marketing only addresses that can be provided high-level service plans compared to blanket marketing all addresses in a coverage area. Network operators can try out cnHeat and cnHeat IDENTIFY by going to <https://www.cambiumnetworks.com/products/software/cnheat/> and submitting a challenging site.