

# ICC NETWORKING

## Multi-dwelling spaces

*Simple Communication, Tools, & Enablement*

ICC Networking delivers technology to empower associations to make better connectivity decisions for their tenants





# THE GROWTH

Apartments and other multi-dwelling units must handle the explosion of tenant devices. These devices add to the network contention and force the need for more bandwidth and management. Adding to tenant devices are the flurry of building devices (appliances, HVAC, alarm, etc.) that can be a cost benefit by being on a network to reduce cost.

Management firms must balance having the right technology that can address all their needs

## SOLUTIONS REQUIRE

Owner-controlled network environments to drive down costs while driving up satisfaction. Controlling the network allows dwelling units to expand services, select value vendors, and reduce network complexity

## Networks Are Getting Crowded

Connectivity costs will fall while the value of connecting things will rise. Consumer devices - from smartphones/tablets to the Internet of Things - will increase the throughput demands in MDU.

**OVER 1.2 BILLION**  
CONNECTED INTERNET DEVICES IN  
THE U.S. EXPECTED BY 2018

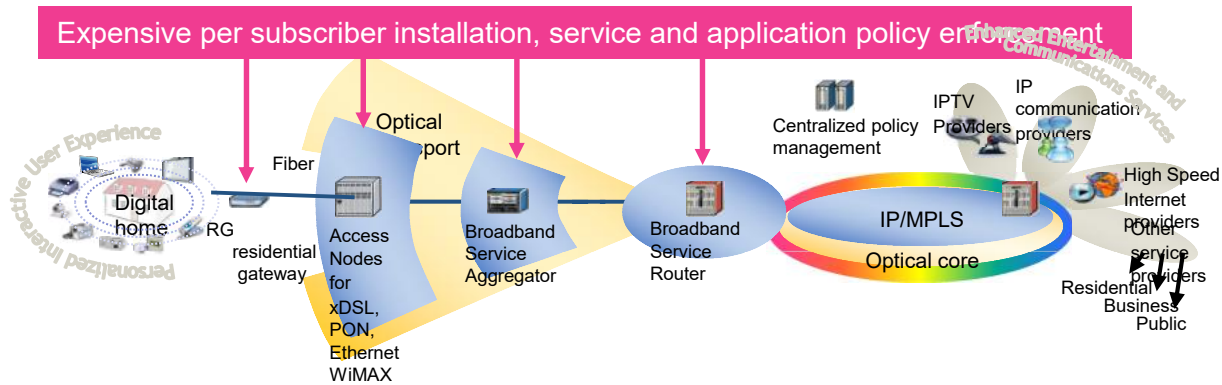
Smartphones **288.3M**  
Connected TVs **197.1M**  
Home Internet of Things **185.1M**  
Tablets **162.7M**  
PCs **130.4M**  
Blu-ray Players **100M**  
Digital Media Adapters **93.4M**  
Video Game Consoles **86.4M**  
eReaders **7.5M**





# THE LEGACY OPTION

Traditional service provider networks deployed at MDUs are complex, proprietary, and lack flexibility. This means it's more expensive and force building owners into longer term contracts and fewer options for their tenants.



# NEXT-GEN IP MDU

The ICC Networking IP internet solution empowers property owners to control internet, upgrade services as needed, expand the network to include green technology and building management, provide users with more application options and deliver a better tenant experience.



16 SSIDs per radio to support any number of wireless IoT and M2M devices per apartment (most vendors only support 4 or 8)

Advanced Layer 3 switch with 10G support for 1G to each apartment

icXcloud for Radius and Captive Portal authentication for wired and wireless devices as well as Data Analytics and Location Services

Per apartment firewall and Router, QoS, Bandwidth Control, and Management

Per apartment segmentation and security. Optimization of services (voice, video, data)

Centralized per apartment management based on service level agreement. Updates to the system occurs within minutes

Encryption to support secure transmission of management data including building systems data to ensure green energy integration

4 Independent 10G interfaces for service provider gateway connections to ensure up to 80Gbps of broadband capability

Data repository platform to allow notice, ads, and other service announcements to be posted to authorized persons



# ICC NETWORKING TECHNOLOGY

## Performance

- High speed 11ac performance
- Patented content control for best experience
- Dedicated QoS for Application performance
- Intelligent device (MAC) filtering



## Authentication

- Intelligent RF management and Roaming
- Captive Portal support
- Firewall and Routing
- Application encryption for selected traffic
- Device bridging



## Flexibility

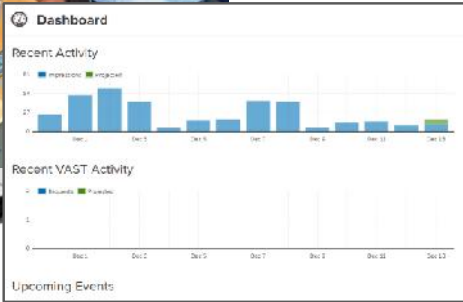
- Outdoor – Indoor setup for common areas
- Ease of deployment and use with a single OS
- Cloud management and control
- Reduce service cost with proactive management



# RETURN ON INVESTMENT

## Developing your Wi-Fi® Network as an asset

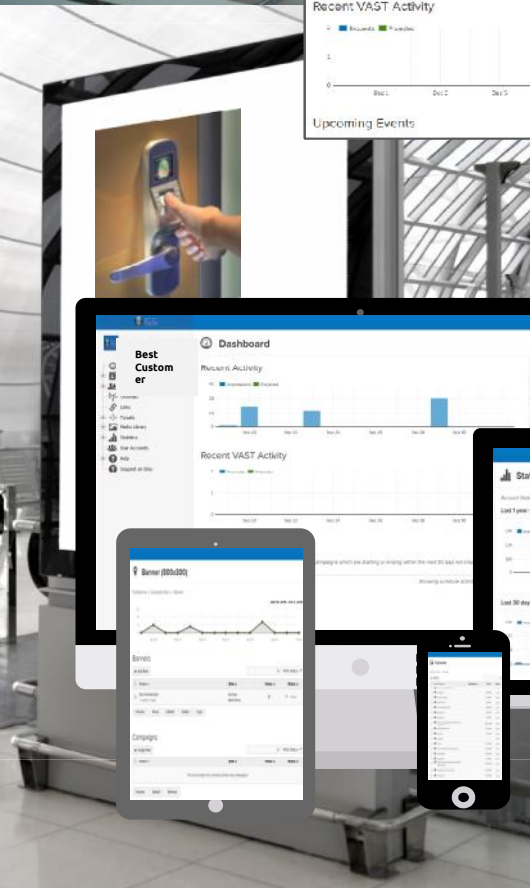
icXcloud gives managers and property owners a platform to see all devices within their system, but more importantly it allows them to push content to these devices



Management groups can now provide electronic dashboards, notices, newsletters, security notices, and other group details directly through the system for access on member devices. Tenants can access the content over the shared network from their apartments, pools or other common areas covered by the ICC wireless ecosystem. icXcloud increases the value of your facility beyond being a utility.

## Track target clients at multiple locations, different devices, and various program

icXcloud platform provides added features for Advertising, marketing, banners, and other items that can drive revenue into the MDU often as a means to of set the IP infrastructure.



ICC Networking icXcloud empowers property management firms to offer tenants with information about local venues, events, and other area attractions willing to pay to get included in those banners.

Initially designed to help cash poor clients, our ad relationships now help a variety of clients monetize their wireless networks from small environments to region-wide ecosystems.

## Access data analytics from anywhere and make quick decisions that increase tenant satisfaction

### Better User Understanding

Track opt-in customers habits, and user dynamics as they visit a deployed location like a mall, restaurant, coffee shop, park, or other location

### Loyalty Programs

Drive loyalty program specials, coupons, and video ads. Develop complimentary advertisers within your network or partners for shared marketing.

### Offset Wireless Network Cost

Significant cash back ad marketing opportunities allow clients to offset the cost of their ICCN wireless network. The more they add the more they can increase revenue.

### Advanced Targeting

Understand customer trends over time for multiple locations, allow bandwidth controls to ensure fair performance across the system, and deliver 3<sup>rd</sup> party ads.



WHEN **COST** AND **RELIABILITY** MATTER MOST

ICCN ENABLES:

# CAPABILITY

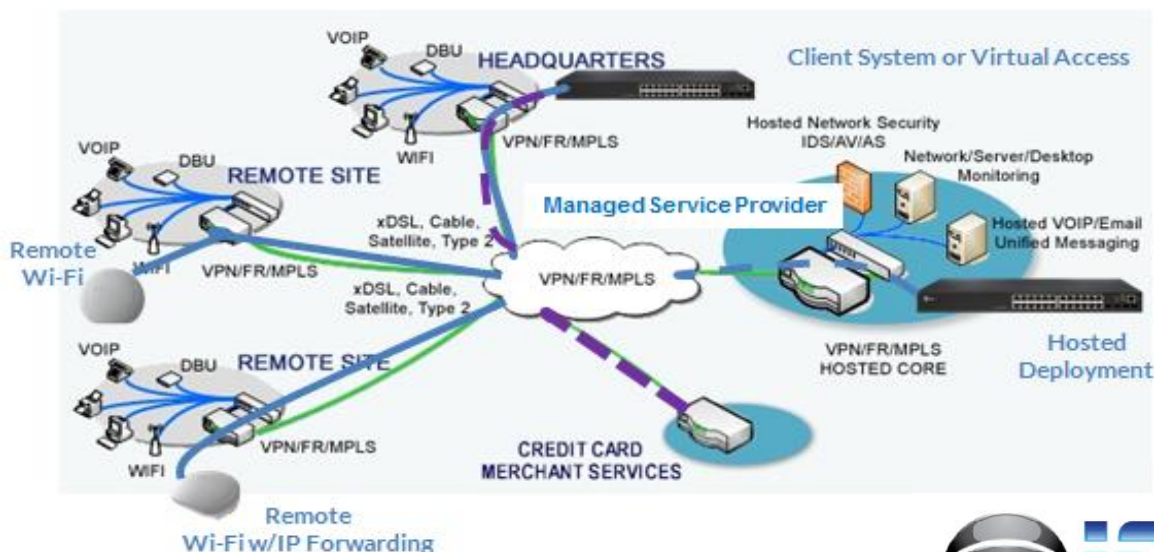
## Smart, Simple, Scalable ACS and UAD solution ensure MSP flexibility

ICC Networking's industry-leading flexible Unified Access Control System (ACS) platform with enhanced capabilities, has added software features, enhanced Security with 11 different Wireless Intrusion Detection methods, Architecture flexibility with premise and virtual capabilities, and enhanced Content Control driven by software features to ensure performance and return-on-investment.

UADs look like traditional access points with both indoor and outdoor versions to support a complete and cost effective solution. Designed with an extended WDS for redundancy, the UAD system supports VLANs, DHCP, and MAC Filtering to control access. The new Adevices extend application support for voice and video with multiple levels of Quality-of-Service and an intelligent Bandwidth Management system to ensure content delivery and performance.



The icXcloud as a platform is used by providers to deploy, manage, and monetize Wi-Fi ecosystems. Designed for use with ICC's advanced controller-based and stand-alone wireless access points, the architecture of the icXcloud system gives providers the ability to have multiple business models at the same time. Providers can deploy directly to their clients in the case of residential or special clients or they can develop a channel of agents or resellers that can deploy their own branded solution.





# ICC Networking

## What we do

ICC designs, manufactures and distributes software-driven unified IP data networking solutions, including Ethernet switching, access points, premise and cloud based control and monetization systems.

## IP Data Networking that is:

Simple – Easy to deploy and cost-effective

Smart – Highly flexible to expand as needed

Performance – Patent-pending optimization

Content-focused – Software-driven IP traffic control

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