

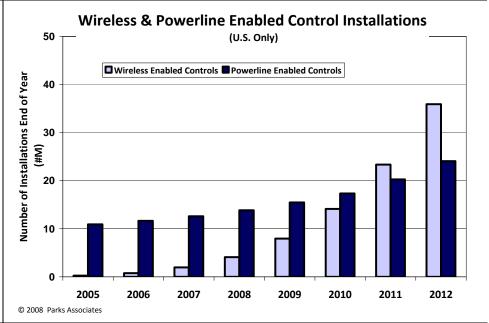
By Bill Ablondi, Director, Home Systems Research, and Peter Shackelford, Research Analyst

4Q 2008

Synopsis

Home controls have remained largely confined to the upper strata of new home construction for decades. New approaches incorporating wireless and powerline technologies, a migration of traditional suppliers to IP-based systems, and the entry of key market movers are driving change. This report examines the state of the market, probes technology alternatives, and sizes up the competition.

Wireless and Powerline Control Installations 2005 - 2012



Publish Date: 4Q 08

"The time for manufacturers of home appliances and control systems to take advantage of recent technological advances in wireless and powerline controls is now," said Bill Ablondi, director of home systems research, Parks Associates. "Consumers are more comfortable with digital technology, industry giants are looking for the 'Next Big Thing,' and communications protocols with low implementation costs and high reliability are a reality."

Contents

The Bottom Line is a concise, executivelevel summary of the current state of the market, evolutionary path, and the implications for companies doing business in this space.

A Parks Associates' Resource Book contains a wealth of consumer survey data and company profiles— a must-have reference

for product/market

planning.

The Bottom Line

1.0 Introduction & Scope of Analysis

2.0 Current State of Wireless & Powerline Control Offerings

- 2.1 Advantages and Disadvantages: Wireless vs. Powerline
- 2.1.1 Wireless Control Technologies: Functionality and Features
- 2.1.2 Powerline Control Technologies: Functionality and Features
- 2.1.3 Other Technologies
- 2.2 Market Momentum of Selected Wireless and Powerline Technologies
 - 2.2.1 Perspectives from Home Systems Integrators
 - 2.2.2 Market Positions of Selected Wireless & Powerline Technologies

3.0 Adoption of Wireless and Powerline Controls

- 3.1 Factors Affecting Adoption
- 3.2 Applications Driving Adoption
 - 3.2.1 Energy Management
 - 3.2.2 Entertainment Controllers
 - 3.2.3 Lighting and Appliance Controllers
 - 3.2.4 Remote Home Monitoring
 - 3.2.5 Security Systems and Monitoring Services
 - 3.2.6 Other Applications



By Bill Ablondi, Director, Home Systems Research, and Peter Shackelford, Research Analyst

4Q 2008

4.0 Forecasts

- 4.1 Methodology and Assumptions
- 4.2 Forecast Summary

5.0 Takeaways and Recommendations

Resource Book

1.0 Introduction

2.0 Profiles

- 2.1 Home Control Companies
 - 2.1.1 Control4
 - 2.1.2 Cooper Industries, LTD
 - 2.1.3 Crestron
 - 2.1.4 Home Automation Inc.
 - 2.1.5 iControl Networks
 - 2.1.6 Intermatic, Inc.
 - 2.1.7 Lagotek
 - 2.1.8 Leviton Manufacturing Co.
 - 2.1.9 Lutron
 - 2.1.10 Powerline Control Systems
 - 2.1.11 Vantage Controls
 - 2.1.12 X10 Wireless Technology, Inc.
 - 2.1.13 Yitran Communications, Ltd.
- 2.2 Alliances
 - 2.2.1 HomePlug Powerline Alliance
 - 2.2.2 EnOcean Alliance
 - 2.2.3 io-homecontrol
 - 2.2.4 INSTEON Alliance
 - 2.2.5 LONMARK Interoperability Association
 - 2.2.6 ZigBee Alliance
 - 2.2.7 Z-Wave Alliance

3.0 Market Forecasts

- 3.1 Outline of Appendix I: Forecasts in Excel Format
 - 3.1.1 Baseline Forecasts
 - 3.1.2 Product Category Forecasts
- 3.2 Forecast Considerations, Methodology and Rationale
 - 3.2.1 New Home Construction Forecasts
- 3.3 Energy Management Systems
- 3.4 Entertainment Controllers
- 3.5 Lighting and Appliance Controllers
- 3.6 Central Controllers
- 3.7 Security & Remote Home Monitoring
- 3.8 Other Home Controllers

Figures

The Bottom Line

Scope of Analysis

Comparison of Wireless and Powerline Technologies: Generic Attributes Comparison of Specific Wireless Technologies

- INSTEON
- Lutron



By Bill Ablondi, Director, Home Systems Research, and Peter Shackelford, Research Analyst

4Q 2008

- Threshold
- ZigBee
- Z-Wave

Comparison of Specific Powerline Technologies

- HomePlug Command & Control (Homeplug Powerline Alliance)
- Insteon (SmartLabs)
- LonWorks (Echelon)
- Universal Powerline Bus UPB (Powerline Control Systems)
- X10 (X10, Ltd.)

Other Control Technologies

- EnOcean
- io-homecontrol

Custom Installers' Familiarity with Selected Wireless & Powerline Control Technologies

- ZigBee
- Z-Wave
- Universal Powerline Bus (UPB)
- INSTEON
- HomePlug Command & Control
- LonWorks

Custom Installers' Opinions about Selected Wireless & Powerline Control Technologies

- ZigBee
- Z-Wave
- Universal Powerline Bus (UPB)
- INSTEON

Market Positions of Selected Wireless & Powerline Technologies

Penetration of Selected Home Systems (U.S. Only)

Energy Saving Measures Taken by U.S. Households

Selected Smart Meter Deployments in the U.S.

Selected Energy Management & AMR/AMI Initiatives

- ZigBee
- Itron
- Z-Wave

Unit Sales of Universal Remote Controllers by Type (U.S. Only)

Evolution of Universal Remote Controllers

Penetration of Selected Lighting Controllers into U.S. Households (2Q08)

Consumer Interest in Selected Home Monitoring Applications (U.S., Spain & Japan)

End-user Revenues for Security Systems and Monitoring Services (U.S. Only)

Total Wireless & Powerline Controller Revenues

Wireless vs. Powerline Controller Revenues

Wireless & Powerline Enabled Control Installations: Year-end Totals

Wireless Enabled Control Revenues: 2008 and 2012

Wireless Enabled Control Installations: Breakdown by Applications

Powerline Enabled Control Revenues: 2008 and 2012

Powerline Enabled Control Installations: Breakdown by Applications

Resource Book

Excel Forecast Outline: Baseline Numbers

Residential Housing Units Started: 1967 to 2007 Actual; 2008 to 2012

rojected

Residential Housing Units Started, Built and Sold: 2003 to 2012 (U.S. Only)



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4Q 2008

Multifamily vs. Single-family Housing Starts: 2005 to 2009 (U.S. Only) Wireless & Powerline Enabled Energy Management Control Installations Wireless Programmable Thermostats: Annual Sales & Installed Base Wireless Programmable Thermostats: Annual Revenue & Unit Sales Household with Smart Meters and Percentage with Wireless Controllers Entertainment Systems: Wireless Enabled Control Installations

Universal Remote Controllers with RF Capability

URCs with RF Capability: Annual Revenues and Unit Sales

Wireless & Powerline Lighting Control Installations

Households with Basic Lighting & Appliance Controllers: % Wireless vs. % Powerline

Annual Installations of BLACs: Wireless vs. Powerline Annual Revenues of BLACs: Wireless vs. Powerline

Advanced Central Home Controllers: Wireless vs. Powerline Enabled

Security Controllers: Wireless vs. Powerline Enabled

Number and Penetration of Households with Self-monitoring Systems Remote Home Monitoring & Control Installations: Wireless vs. Powerline

Enabled

Remote Home Monitoring & Control: % Wireless vs. % Powerline

Attributes

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