PARKS ASSOCIATES

Opportunities for Wireless and Powerline Controls

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

4Q 2008

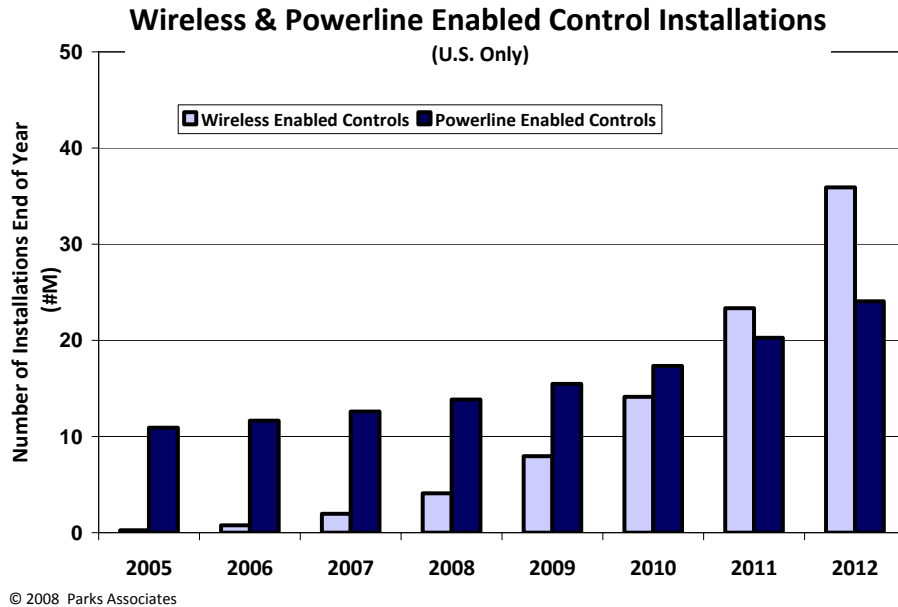| Synopsis	Wireless and Powerline Control Installations 2005 - 2012

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 & Powerline Enabled Control Installations
(U.S. Only)

□ Wireless Enabled Controls   ■ Powerline Enabled Controls

© 2008 Parks Associates

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, executive-level 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

Figures	

The Bottom Line

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

Opportunities for Wireless and Powerline Controls

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

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