

## The Smart Home - 2012 Edition

This document outlines the proposed scope for a second edition study examining the uptake of low-bandwidth connectivity networks in the home within traditional home automation systems, managed DIY systems, un-managed DIY systems and others (such as 'HAN' systems for smart home energy management). This report analyzes the market for devices within a range of application areas, including safety & security, home monitoring & control, home energy management, and lighting. Please see page 2 for a diagram highlighting the scope of this report.

This report provides market estimates (2010 & 2011) and annual forecasts (2012-2016) for the adoption of different types of residential networks, segmented by device type. This includes full analysis of the type of connectivity technology utilized. Connectivity technologies forecast within this report include both wireless and wired, specifically: ZigBee, Z-Wave, Wi-Fi, EnOcean, DECT ULE, Bluetooth & Bluetooth Smart, proprietary sub-GHz wireless, proprietary 2.4GHz wireless, other wireless, KNX, other powerline communications and other wired solutions.

A global overview is presented for each set of forecasts, along with segmentation by region for: EMEA (Europe, Middle East & Africa) the Americas, and Asia.

### Key Questions to be Answered

- Which applications, such as safety and security or energy management, will drive the adoption of home control networks?
- How will activities of telecommunications companies impact the market? How does this affect the networking technologies used?
- How does uptake of different residential network types vary across EMEA, the Americas and Asia?
- How will the momentum behind standardized connectivity technologies affect the market for proprietary solutions within different low-bandwidth residential networks?
- As smart meter roll-outs become more common, how rapidly will smart grid-enabled devices be adopted? How will these communicate?



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## Report Content

This report examines the uptake of 'low-bandwidth' home network applications, presenting market estimates (2010 & 2011) and forecasts (2012-2016) for uptake (in unit shipment terms) across a variety of application areas, including: smart home energy management devices; 'traditional' home security sensors; remote monitoring devices; and networking lighting.

This report includes both a global overview, and segmentation by major region, along with full analysis of the connectivity technologies employed within each application area.

### SMART HOME ENERGY MANAGEMENT DEVICES

As smart meter roll-outs become more common, there is a growing market for 'HAN' devices. Within this report, 'HAN' or 'Home Area Network' devices refer to in-home devices - such as thermostats, home appliances, plug strips, information displays, and many others - which have been designed with the ability to interact with electricity utility demand-response and/or dynamic pricing networks, with two-way communications (i.e., receive signals, react, and respond).

### HOME SECURITY & CONSUMER REMOTE MONITORING KITS

In some regions, residential security networks are starting to evolve beyond the 'traditional' service, with the launch of a range of 'remote monitoring kits'. These are defined as 'out-of-the-box' systems (typically consisting of a 'hub' which connects to a residential gateway, with interoperable motion sensor and/or door & window contacts). Consumers are able to log into web portals to enable remote monitoring and control of these systems.

### NETWORKED LIGHTING

Historically, networked lighting systems have been high-end devices, used with luxury home control systems. As low-bandwidth network technologies evolve, networked lighting systems will become increasingly main-stream mass-market propositions.

### CONNECTIVITY ANALYSIS

A full connectivity analysis will be provided (with annual forecasts to 2016) for each of the devices shown in the above figure, including regional breakdowns. This also includes analysis of connectivity IC and modules shipments, revenues, and average selling price (ASP) variation over the forecast period.

#### Global Overview

#### Regional Segmentation

Americas  
Europe, Middle East & Africa  
Asia

#### System Type

'Traditional'/high-end  
Managed DIY  
Unmanaged DIY  
Other

#### Hubs & Gateways

Discrete/Standalone  
Integrated

#### Device Market Measurements

Units Shipped  
Revenues (US\$)  
Average Selling Prices (US\$)

#### 'Smart' Home Energy Management Devices

- Smart Meters
- Smart Thermostats
- Other HVAC Controls
- Environmental Sensors
- In-Home Displays
- Other 'HAN' Devices

#### Home Security Devices

- 'Traditional' Sensors
- 'Remote Monitoring Kits'

#### Consumer Remote Monitoring

- Motion Sensors
- Window/Door Contacts
- Door Locks
- Other Safety & Security

#### Networked Lighting

#### Smart Plugs

#### Connectivity Analysis

- ZigBee
- Z-Wave
- EnOcean
- Wi-Fi
- DECT ULE
- Bluetooth
- Bluetooth Smart
- Proprietary Wireless (2.4 Ghz)
- Proprietary Wireless (Sub Ghz)
- Other Wireless
- KNX
- Other Powerline
- Other Wired

#### Integration Analysis

- Modules
- ICs

#### IC & Module Market Sizing

- Revenues
- Unit Shipments
- ASP Analysis

## Example Tables (1 of 2)

The subsequent tables present examples of how data will be presented within this report:

**SAMPLE TABLE**  
**World Market for Smart Home Energy Management Devices - By Device Type**  
000s of Units Shipped; Revenues - US\$ Millions

	2010	2011	2012	2013	2014	2015	2016	2017	SUM 10 - 17
<b>Annual Shipments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Communicating Thermostats	0	0	0	0	0	0	0	0	0
Other Communicating HVAC Contro	0	0	0	0	0	0	0	0	0
Communicating Environment Senso	0	0	0	0	0	0	0	0	0
Smart Plugs	0	0	0	0	0	0	0	0	0
Smart In-home Displays	0	0	0	0	0	0	0	0	0
Other 'HAN' Devices	0	0	0	0	0	0	0	0	0
<b>Annual Revenues</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Communicating Thermostats	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Other Communicating HVAC Contro	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Communicating Environment Senso	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Smart Plugs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Smart In-home Displays	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Other 'HAN' Devices	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0

**Source: IMS Research** **Sep-12**

**SAMPLE TABLE**  
**World Market for Remote Monitoring & Control Nodes - Door Locks**  
Units Shipped - 000s Units; Revenues US\$ Millions; Average Selling Price US\$

	2010	2011	2012	2013	2014	2015	2016	2017	SUM 10 - 17
<b>Americas</b>									
Units Shipped (k)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Price (\$)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenues (\$M)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EMEA</b>									
Units Shipped (k)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Price (\$)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenues (\$M)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Asia Pacific</b>									
Units Shipped (k)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Price (\$)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenues (\$M)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Units Shipped (k)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Average Price (\$)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Revenues (\$M)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

**Source: IMS Research** **Sep-12**

## Example Tables (2 of 2)

SAMPLE TABLE									
<b>Communicating Thermostats - Annual Shipments by Region &amp; Connectivity Technology</b>									
000s of Units Shipped									
	2010	2011	2012	2013	2014	2015	2016	2017	SUM 10 - 17
<b>Americas</b>									
<b>Annual Shipments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
ZigBee	0	0	0	0	0	0	0	0	0
Z-Wave	0	0	0	0	0	0	0	0	2
Wi-Fi	0	0	0	0	0	0	0	0	0
EnOcean	0	0	0	0	0	0	0	0	0
Bluetooth (Classic or Smart-Ready)	0	0	0	0	0	0	0	0	0
Bluetooth Smart	0	0	0	0	0	0	0	0	0
DECT ULE	0	0	0	0	0	0	0	0	0
NFC	0	0	0	0	0	0	0	0	0
Proprietary 2.4GHz	0	0	0	0	0	0	0	0	0
Proprietary Sub-GHz	0	0	0	0	0	0	0	0	0
Other Wireless	0	0	0	0	0	0	0	0	0
KNX (Wired)	0	0	0	0	0	0	0	0	0
Other Powerline	0	0	0	0	0	0	0	0	0
Other Wired	0	0	0	0	0	0	0	0	0
<b>EMEA</b>									
<b>Annual Shipments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
ZigBee	0	0	0	0	0	0	0	0	0
Z-Wave	0	0	0	0	0	0	0	0	0
Wi-Fi	0	0	0	0	0	0	0	0	0
EnOcean	0	0	0	0	0	0	0	0	0
Bluetooth (Classic or Smart-Ready)	0	0	0	0	0	0	0	0	0
Bluetooth Smart	0	0	0	0	0	0	0	0	0
DECT ULE	0	0	0	0	0	0	0	0	0
NFC	0	0	0	0	0	0	0	0	0
Proprietary 2.4GHz	0	0	0	0	0	0	0	0	0
Proprietary Sub-GHz	0	0	0	0	0	0	0	0	0
Other Wireless	0	0	0	0	0	0	0	0	0
KNX (Wired)	0	0	0	0	0	0	0	0	0
Other Powerline	0	0	0	0	0	0	0	0	0
Other Wired	0	0	0	0	0	0	0	0	0
<b>Asia Pacific</b>									
<b>Annual Shipments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
ZigBee	0	0	0	0	0	0	0	0	0
Z-Wave	0	0	0	0	0	0	0	0	0
Wi-Fi	0	0	0	0	0	0	0	0	0
EnOcean	0	0	0	0	0	0	0	0	0
Bluetooth (Classic or Smart-Ready)	0	0	0	0	0	0	0	0	0
Bluetooth Smart	0	0	0	0	0	0	0	0	0
DECT ULE	0	0	0	0	0	0	0	0	0
NFC	0	0	0	0	0	0	0	0	0
Proprietary 2.4GHz	0	0	0	0	0	0	0	0	0
Proprietary Sub-GHz	0	0	0	0	0	0	0	0	0
Other Wireless	0	0	0	0	0	0	0	0	0
KNX (Wired)	0	0	0	0	0	0	0	0	0
Other Powerline	0	0	0	0	0	0	0	0	0
Other Wired	0	0	0	0	0	0	0	0	0
<b>Source: IMS Research</b>									<b>Sep-12</b>

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Conduct Interviews & Perform Secondary Research	May - August 2012
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