

The World Market for Connected Lighting Controls - 2012 Edition

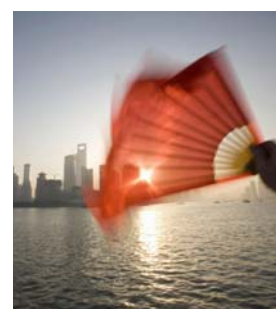
This document outlines the proposed scope for a new study examining the opportunities for connectivity technology in three major lighting applications: residential, commercial and municipal lighting (such as street lighting).

The need to reduce energy usage has led to an increase in the use of more energy efficient lighting technologies such as compact fluorescent lamps (CFLs) and light emitting diodes (LEDs). To reduce energy consumption further, connected lighting systems can be implemented to optimize energy consumption as well as offering other features such as remote control. These systems are typically connected to the lights by a wired or wireless technology which can either be implemented in the fixture, or by the light bulb itself by replacing existing light bulbs with those that contain RF technology.

This study provides market forecasts (to 2017) for the number of connected lighting systems, and individual components shipped globally, with additional segmentation over three major regions (Americas, EMEA, Asia-Pacific). These forecasts include full analysis of the connectivity technology used in these devices, as well as offering segmentation by physical layer, frequency, software, IP-addressable, and by integration method (IC or Module).

Key Questions to be Answered

- **How will the market for RF embedded light bulbs develop? How will this vary geographically?**
- **Which connectivity technology will be the most widely adopted in connected lighting systems and luminaries? When, in what volumes, and how will this vary by application?**
- **How will commercial and municipal lighting applications vary in their use of advanced lighting systems? How will this vary by technology?**
- **How will the uptake of wired connectivity technologies compare to the uptake of wireless technology in connected lighting systems?**
- **How will the launch of new solutions such as Android@Home affect the uptake of wired and wireless technology in residential lighting systems?**



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Report Content

This report will utilize the following segmentation model (as shown in the diagram opposite), providing annual shipment data and forecasts for each of the relevant technologies, applications, and systems forecast within this report, for the period 2010 - 2017.

This report aims to investigate the opportunities for connectivity technologies in connected lighting systems and their individual components in three lighting applications; with annual forecasts provided up until 2017. This includes a full analysis of each type of lighting system; lighting application; connectivity technology; integration method; as well as additional segmentation by software, physical layer, IP-addressable, and frequency.

Worldwide top level data will be presented for all breakdowns, as well as segmentation by three major regions.

The technologies and markets forecast within this report are to be decided in conjunction with early purchase customers, and other industry experts. The table below gives an example of how the data will be displayed within this report

Global Market Overview

Lighting Applications

- Residential Lighting
- Commercial Lighting
- Municipal Lighting

Connected Lighting Systems

- Control Panels/Hubs
- Connected Ballasts
- Connected Switches
- Environmental Sensors
- Occupancy Sensors
- Other Connected Devices
- RF embedded Light Bulbs

Additional Segmentation

- IC
- Module
- IP Addressable
- Software
- Physical Layer
- Frequency

Device Shipments

- Shipments (units)
- ASPs (US\$)
- Revenues (US\$)

Major Region Breakdowns

- Americas
- EMEA
- Asia-Pacific

Connectivity Technology

- BACnet
- DALI
- DECT ULE
- EnOcean
- Homeplug Green PHY
- Insteon
- JenNet/JenNet-IP
- KNX
- LonWorks
- Wi-Fi
- X10
- ZigBee
- Z-Wave
- Proprietary & Others
- (others to be discussed with early purchase customers).

Wireless IC Shipments

- Shipments (units)
- ASPs (US\$)
- Revenues (US\$)

EXAMPLE TABLE

World Market for Connected Lighting Systems in Commercial Buildings

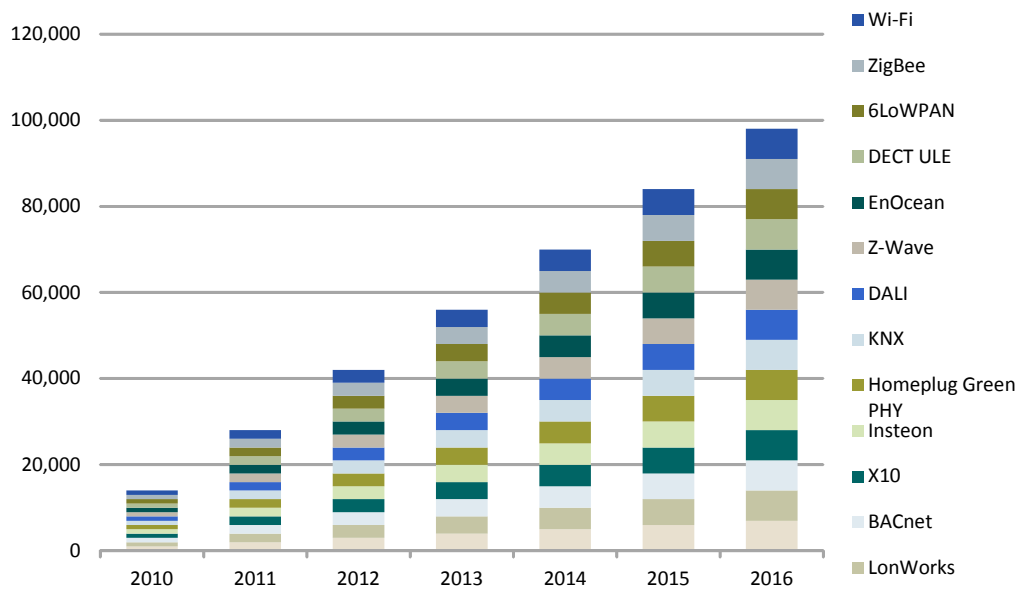
Units Shipped - 000s Units; Revenues US\$ Millions; Average Selling Price US\$

	2010	2011	2012	2013	2014	2015	2016	2017	SUM 10 - 17
Americas									
Units Shipped	10	10	10	10	10	10	10	10	80
Average Price (\$)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Revenues (\$M)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	80.0
EMEA									
Units Shipped	10	10	10	10	10	10	10	10	80
Average Price (\$)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Revenues (\$M)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	80.0
Asia Pacific									
Units Shipped	10	10	10	10	10	10	10	10	80
Average Price (\$)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Revenues (\$M)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	80.0
Units Shipped	30	30	30	30	30	30	30	30	240
Average Price (\$)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Revenues (\$M)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	240.0
Source: IMS Research									Sep-12

Example Figure

EMEA Market for Connected Lighting Systems - By Connectivity Technology

000's Units



Source: IMS Research

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Report Content

I. INTRODUCTION, SCOPE & METHODOLOGY

Chapter 1 of this report will outline the scope of the report. It will detail the issues the report will address and explain how key information has been obtained, the methodology used in the report, and the definitions applied.

II. WIRELESS TECHNOLOGY OVERVIEW

Chapter 2 of this report will provide an overview of the connectivity technologies included in this report. This includes: BACnet, DALI, DECT ULE, EnOcean, Homeplug Green PHY, Insteon, JenNet/JenNet-IP, KNX, LonWorks, Wi-Fi, X10, ZigBee, Z-Wave, Proprietary. .

III. COMMERCIAL LIGHTING: OVERVIEW AND MARKET FORECAST

This section of the report provides detailed analysis of the current status of the commercial lighting market; including examples of current systems and deployments as well as any upcoming developments. Connected lighting systems are increasingly being commissioned for use in a number of commercial environments such as warehouses and office buildings. These systems use energy efficient light sources such as LEDs or CFLs in replacement of traditional light sources such as incandescent and fluorescent tubes. Connected lighting systems offer intelligent control of these light sources to further minimize energy consumption, as well as offering additional benefits such as individual light control in some systems.

The key issues surrounding the uptake of connectivity technology in commercial lighting, including the major market drivers and barriers are assessed within this chapter. Estimates (2010-2011) and forecasts (to 2017) for the number of connected lighting systems and their individual components shipped for use in commercial applications are presented. Additional segmentation by connectivity technology, physical layer, frequency, as well as the integration of ICs and modules is also provided. Further forecasts are provided which segment the commercial lighting market by major region.

IV. MUNICIPAL LIGHTING: OVERVIEW AND MARKET FORECAST

This chapter of the report provides detailed analysis of the current status of the municipal lighting market; including examples of current systems and deployments as well as any upcoming developments. The use of energy efficient lighting and connected lighting systems has increased with a number of institutions and governments hoping to reduce energy consumption and cut carbon emissions by deploying them. Street lighting systems across the globe have been targeted by these systems to reduce energy consumption as well as reduce maintenance costs.

Estimates (2010-2011) and forecasts (to 2017) for the number of connected lighting systems and their individual components shipped for municipal applications are presented in this chapter. Additional segmentation by connectivity technology, physical layer, frequency, as well as the integration of ICs and modules is also provided. Further forecasts are provided which segment the municipal lighting market by major region.

V. RESIDENTIAL LIGHTING: OVERVIEW AND MARKET FORECAST

This section of the report provides detailed analysis of the residential lighting market for connected lighting systems, connected luminaries, and light bulbs with embedded RF; including examples of current systems and deployments as well as any upcoming developments.

The use of connected lighting systems in the home has been limited to date due to the high price of installing a system, however manufacturers of energy efficient lighting have begun adding RF technology directly into light bulbs to enable lower cost lighting controls which are easy to retrofit. These lights can be controlled by using either a dedicated remote control, or by using an “app” on a device such as a tablet or smart phone. Google demonstrated this feature with their Android@Home solution which is believed to be part of the Android 5.0 “Jellybean” operating system scheduled for release later in 2012. An advantage of these types of bulbs with embedded RF is that they can be easily deployed into existing homes as they utilize the same fixture design as current light bulbs available on the market while adding additional functionality.

This chapter provides an analysis of the uptake of connectivity technology in residential lighting. Estimates (2010-2011) and forecasts (to 2017) for the number of connected lighting systems and their individual components shipped are presented in this chapter. Additional segmentation by connectivity technology, physical layer, frequency, as well as the integration of ICs and modules is also provided. Further forecasts are provided which segment the uptake of connected lighting systems in residential lighting by major region.

VI. MARKET DRIVERS AND BARRIERS

There are a number of possible factors which will either hinder or drive the adoption of connectivity technologies in connected lighting systems, connected luminaries and RF embedded light bulbs. This section of the report provides a detailed overview of the different factors which will impact each of the lighting applications considered within this report.

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Develop Report	1st September - 29th September
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Email: Phillip.Maddocks@imsresearch.com

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IMS Research USA

3301 Northland Drive,
Suite 400,
Austin TX 78731,
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T: +1 512 302 1977
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IMS Research China

Room 605, Tower B,
Orient Intl. Plaza,
85 Lou Shan Guan Road,
Shanghai, 200336, PRC

T: +86 21 6270 1823
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IMS Research Taiwan

6F-1, No.8, Lane 18,
Sec.1, Yunghe Rd
YungHe City, 234,
Taipei, Taiwan

T: +86-939-842-065

IMS Research Korea

Room No 1414, 14th Floor
Hyundai 41 Tower, 917-9
Mok 1-dong, Yangchun-Gu,
Seoul, Korea, 158 723

T: +82 70 8661 2035
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IMS Research Japan

18F, Ebisu Garden Place.
4-20-3 Ebisu, Shibuya-Ku,
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T: +81 (3) 5789 5765
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