

Gesture Recognition For Smart TV Market by Software (2D & 3D Image Sensor), Hardware(Image Sensor, IR Proximity Sensor, IR Temperature Sensor, Light Sensors, & Semiconductor ICS), And Geography (Americas, EMEA, & APAC) - Analysis & Forecast to 2013 - 2020

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Abstracts

Gesture recognition Smart TV technology enables the user to interact with a device without the need of touching it. This report gives a detailed analysis of these technologies and their broad existing and emerging markets. The overall market for gesture recognition Smart TV has been divided into 2D and 3D. These two segments have been further segmented on the basis of different hardware and software technologies.

A Smart TV is an integration of Internet and web applications into the television set which offers more advanced computing ability and connectivity than a contemporary basic television set. In the recent scenario, Smart TV has incorporated with more advancement technologies such as gesture recognition module within it. This technology supports the user to easily interact with the Smart TV. The gesture-enabled devices can be included in the consumer electronics for making the user's experience more interactive with the machines.

It has been noticed that there is a growing demand for gesture recognition technologies in verticals such as banking and finance, and healthcare. The hardware component for this market is anticipated to register improved revenue figures by 2014 due to the introduction of 3D technology in the Smart TV market. The demand for e-passport system has also increased. Issues such as increasing concerns for hygiene, growth in

travel industries and education facilities, and enhancement in user experiences are a few driving factors for gesture recognition Smart TV market. Thus, these types of emerging technologies are expected to have a high growth rate in the years to come.

This report focuses on the market scope for gesture recognition enabled Smart TV in the fields of consumer electronics, automotive, and healthcare. The major challenges faced by the gesture recognition technology are high initial cost and replacement cost of the products and devices. The growth of the gesture recognition market may be hindered due to its reliability and high power requirements by the device to perform the specific given task. The major geographical areas described in the report for gesture recognition Smart TV are the Americas, EMEA, and APAC.

Contents

1 INTRODUCTION

- 1.1 Key Take-Aways
- 1.2 Report Description
- 1.3 Research Methodology
 - 1.3.1 Market Definition
 - 1.3.2 Market Size
 - 1.3.3 Key Data Points Taken From Secondary Sources
 - 1.3.4 Key Data Points Taken From Primary Sources
 - 1.3.5 Assumptions Made For This Report

2 OVERVIEW OF SMART TV GESTURE RECOGNITION SOFTWARE

- 2.1 Introduction
 - 2.1.1 Gesture Recognition Software
 - 2.1.2 Gesture Recognition in Smart TV
- 2.2 Future Trends in Smart TV Gesture Recognition
 - 2.2.1 Asia-Pacific Market
 - 2.2.2 European Market
 - 2.2.3 American Market
- 2.3 Product Analysis
 - 2.3.1 Smart TV Gesture Recognition: Feature Comparison By 2d and 3d Functionality
 - 2.3.1.1 Image Acquisition
 - 2.3.1.1.1 2d Image Acquisition Features
 - 2.3.1.1.2 3d Image Acquisition Features
 - 2.3.1.2 Feature Extraction
 - 2.3.1.2.1 2d
 - 2.3.1.2.2 3d
 - 2.3.1.3 Gesture Classification
 - 2.3.1.3.1 2d Gestures
 - 2.3.1.3.2 3d Gestures
 - 2.3.1.3.2 3d Gestures
- 2.4 Smart TV Gesture Recognition: Product Analysis
 - 2.4.1 Smart TV Gesture Recognition: Feature Comparison
 - 2.4.1.1 Display Technology
 - 2.4.1.2 Gesture and voice Control
 - 2.4.1.3 Device Connectivity
 - 2.4.2 Smart TV Gesture Recognition: Market Share

- 2.4.2.1 Key Growth Strategies
- 2.4.2.2 Developments
- 2.4.3 Smart TV Gesture Recognition: Future Trends
 - 2.4.3.1 Smart TV Will Be A Part of The Unified Communication Devices (UC)
 - 2.4.3.2 Enhances The Gui in Display Technology
 - 2.4.3.3 Artificial Intelligence Paired With Smart TV

3 GLOBAL GESTURE RECOGNITION IN SMART TV

- 3.1 Introduction
- 3.2 Integrated Gesture Recognition Module For Smart TV
- 3.3 Standalone Gesture Recognition Device For Smart TV
- 3.4 Hardware Pricing Analysis
- 3.5 Gesture Recognition Hardware Components: Sensors & Semiconductor ICS
 - 3.5.1 Microcontroller
 - 3.5.2 Image Sensors
 - 3.5.2.1 2d Image Sensors
 - 3.5.2.1.1 Digital Camera Sensor
 - 3.5.2.2 3d Image Sensors
 - 3.5.2.2.1 Time of Flight
 - 3.5.2.2.2 Stereoscopic Image Sensor
 - 3.5.2.2.3 Structured Light Image Sensor
 - 3.5.3 Ir Proximity Sensor
 - 3.5.4 Ir Temperature Sensor
 - 3.5.5 Light Sensor
 - 3.5.5.1 Ambient Sensor
 - 3.5.5.2 Rgb Color Sensor

4 GESTURE RECOGNITION IN SMART TV, BY GEOGRAPHY

- 4.1 Americas
 - 4.1.1 Americas Recognition Smart TV Market: By Technology
 - 4.1.2 Americas Recognition Smart TV Market: By Country
 - 4.1.3 American Gesture Recognition Smart TV Market: Integrated Module
- 4.2 EMEA
 - 4.2.1 EMEA Gesture Recognition Smart TV Market: By Technology
 - 4.2.2 EMEA Gesture Recognition Smart TV Market: Integrated Module
- 4.3 APAC
 - 4.3.1 APAC Gesture Recognition Smart TV Market: By Technology

- 4.3.2 APAC Gesture Recognition Smart TV Market: By Country
- 4.3.3 APAC Gesture Recognition Smart TV Market: Integrated Module

5 KEY PARTICIPANTS – COMPANY PROFILES

5.1 Eyesight Tech

- 5.1.1 Company Snapshot
- 5.1.2 Products and Services
- 5.1.3 Strategies and Insights
- 5.1.4 Developments

5.2 Leap Motion Inc.

- 5.2.1 Introduction
- 5.2.2 Products and Services
- 5.2.3 Strategies and Insights

5.3 LG Electronics Inc.

- 5.3.1 Introduction
- 5.3.2 Products and Services
- 5.3.3 Strategies and Insights
- 5.3.4 Developments

5.4 Panasonic Corporation

- 5.4.1 Introduction
- 5.4.2 Products and Services
- 5.4.3 Strategies and Insights
- 5.4.4 Developments

5.5 Pointgrab Limited

- 5.5.1 Company Snapshot
- 5.5.2 Products & Services
- 5.5.3 Strategies & Insights
- 5.5.4 Developments

5.6 Samsung Electronics Co., Ltd.

- 5.6.1 Introduction
- 5.6.2 Products and Services
- 5.6.3 Strategies and Insights
- 5.6.4 Developments

5.7 Softkinetic

- 5.7.1 Introduction
- 5.7.2 Products and Services
- 5.7.3 Strategies and Insights
- 5.7.4 Developments

- 5.8 Sony Corporation
 - 5.8.1 Introduction
 - 5.8.2 Products and Services
 - 5.8.3 Strategies and Insights
 - 5.8.4 Developments
- 5.9 Tesna Inc.
 - 5.9.1 Introduction
 - 5.9.2 Products and Services
 - 5.9.3 Strategies and Insights
- 5.10 Texas Instruments Incorporated.
 - 5.10.1 Introduction
 - 5.10.2 Products and Services
 - 5.10.3 Strategies and Insights
 - 5.10.4 Developments
- 5.11 Thalmic Labs Inc.
 - 5.11.1 Introduction
 - 5.11.2 Products and Services
 - 5.11.3 Strategies and Insights
 - 5.11.4 Developments
- 5.12 The Linux Foundation
 - 5.12.1 Introduction
 - 5.12.2 Products and Services
 - 5.12.3 Strategies and Insights
 - 5.12.4 Developments

List Of Tables

LIST OF TABLES

Table 1 General Assumptions, Terminology & Application Key Notes

Table 2 Image Acquisition Features: 2d and 3d

Table 3 Technological Advantages: 3d Over 2d

Table 4 Smart TV: Feature Comparison

Table 5 Global Gesture Recognition Enabled Smart TV Market Revenue & Shipment, 2012–2018

Table 6 Global Gesture Recognition Enabled Smart TV Market Revenue, By Technology, 2012–2018 (\$Million)

Table 7 Global Gesture Recognition Enabled Smart TV Market Shipments, By Technology, 2012–2018 (Million Units)

Table 8 Global: Integrated Gr Modules For Smart TVs Revenue, 2012-2018 (\$Million)

Table 9 Global: Standalone Devices For Gr Revenue, 2012-2018 (\$Million)

Table 10 Gesture Recognition Component: Features of A Microcontroller

Table 11 Digital Camera Sensor: Key Features

Table 12 Features of 3d Image Sensor: Time of Flight

Table 13 Features of 3d Image Sensor: Stereoscopic Image Sensor

Table 14 Feature of 3d Image Sensor: Structured Light Image Sensor

Table 15 Features of Gesture Recognition Sensors: Ir Proximity Sensor

Table 16 Features of Gesture Recognition Sensors: Ir Temperature Sensor

Table 17 Features of Gesture Recognition Light Sensors: Ambient Sensor

Table 18 Features of Gesture Recognition Sensors: Rgb Color Sensor

Table 19 Americas: Gesture Recognition Enabled Smart TV Market, 2012–2018

Table 20 Americas Gesture Recognition Enabled Smart TV Market Revenue, By Technology, 2012–2018 (\$Million)

Table 21 Americas: Gesture Recognition Enabled Smart TV Shipment, By Technology, 2012–2018 (Million Units)

Table 22 Americas: Gesture Recognition Enabled Smart TV Shipments, By Country, 2012–2018 (Million Units)

Table 23 America: Integrated Gesture Recognition Modules For Smart TV Revenue, 2012–2018 (\$Million)

Table 24 EMEA: Gesture Recognition Enabled Smart TV Market, 2012–2018

Table 25 EMEA: Gesture Recognition Enabled Smart TV Market Revenue, By Technology, 2012–2018 (\$Million)

Table 26 EMEA: Gesture Recognition Enabled Smart TV Shipment, By Technology, 2012–2018 (Million Units)

Table 27 EMEA: Integrated Gesture Recognition Modules For Smart TV Revenue, 2012–2018 (\$Million)

Table 28 APAC: Gesture Recognition Enabled Smart TV Market, 2012–2018

Table 29 APAC: Gesture Recognition Enabled Smart TV Market Revenue, By Technology, 2012–2018 (\$Million)

Table 30 APAC: Gesture Recognition Enabled Smart TV Shipments, By Technology, 2012–2018 (Million Units)

Table 31 APAC: Gesture Recognition Enabled Smart TV Shipments, By Country, 2012–2018 (Million Units)

Table 32 APAC: Integrated Gesture Recognition Modules For Smart TV Revenue, 2012–2018 (\$Million)

About

Gesture recognition technology is the ability to communicate with machine using human bodily motions, which commonly originate from face or hand. The user can interact with the device to carry out a task without the need of touching it. In gesture recognition technology, a camera reads the moment of the human body and interprets the data to the computer that uses gesture as an input to control the devices or applications. A Smart TV is an integration of internet and web applications into the television set, which offers advanced computing ability and better connectivity than a contemporary basic television set. Smart TV with the help of the gesture recognition technology offers user-friendly features for the end user to interact with it.

The gesture recognition software is mainly concerned with the recognition of images with the help of camera and sensors, which are continuously capturing human motions in the form of 2D images; they capture the motions like wave, swipe up, down, push, and pull. The advanced application of gesture recognition is with the 3D motions wherein the device would be able to track hands, fingers, eyes and their moving mannerism. There is a particular mathematical analog approach used by the software for understanding the 3D gestures more significantly than the 2D motions; that involves the use of the 3D Depth camera. The technology is completely software based with the hardware capability to capture image, which is processed using a standard 2D or 3D camera, and is further executed with 3D stereoscopic sensors, and IR illumination.

The gesture is actually useful for consumer electronics like Smart TV due to its size and distance with respect to the user who is trying to access it. In the gesture recognition software market, there are mainly three participants, namely- PointGrab (Israel), Eyesight (Israel), and Omek Interactive (Israel) who have introduced gesture recognition software in the market. The developers have programmed gesture recognizing for consumer electronics in two ways, close- range and long-range.

Close-range works on the devices, which are nearer to the user. For instance, mobiles, personal computing devices, automobiles and laptop need a close-range interaction for accessing the device properly.

The long-range software tool is used as middleware, and as a tool, that enables the creation of full body tracking and gesture interfaces. The power gesture is based on game consoles, to create immersive digital signage experiences, power hands-free TV interfaces, and for many other applications and industries. The motion tool kit has the

ability to create custom gestures in minutes for the users, in order to interact according to their preference for an interactive experience.

Gesture Recognition software is an interactive tool, which is expected to drive the consumer electronics market in future. The software that is currently developed by many companies programs the whole processing of gestures. This software is able to execute all types of gesture functionalities; however, it is not that reliable when used on a broader aspect and the current technology is based on the 3D depth camera and the gesture recognition software. The whole gesture recognition technology is emerging from the semiconductor level to the end user application, which is continuously evolving.

Smart TV gesture recognition market in this region has a broad scope due to its fast growing economy. The socio-economic trends are continuously increasing their product line, which is cluttering the consumer electronics market. The gesture software companies are mainly from the western Asia, which has been developing its market by narrowing the technologies for specific applications. 3D sensors was first commercialized, in gaming industry and are now gaining popularity in the mass market of smart TV, laptop, and smartphones.

The overall economy of Europe is strong and established; hence, this market can generate a platform for gesture recognition software participants. Currently, the region is recovering from economic downturn. The gesture recognition software market has a good scope in the European market due to advanced technology, and the acceptance towards technology. The Long Term Evolution (LTE) is used as high productivity technology in telecom sector, which would be a supporting factor for SMART TV gesture recognition software participants in this market.

American countries, being developed countries, enjoy better economic conditions compared to other developing nations. The American countries are projected to increase their purchasing power by 2020. The key drivers for the Americas gesture recognition market are the gaming and entertainment industry. Currently, consumer electronics application also contributes more than 99.00% in gesture recognition technology.

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