



**JAMPRO**  
TRADE & INVESTMENT JAMAICA

# Electronics Assembly Opportunities in Jamaica

Opportunities for development of the  
electronics assembly market  
segment in Jamaica

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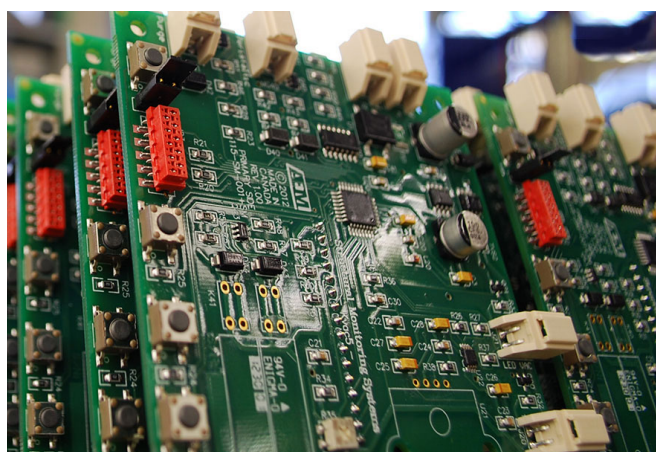
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## 2. Introduction and Background

The Government, in its National Development Plan – Vision 2030, identified the manufacturing sector as a target area to spur the country’s economic development. Despite a relative decline since 1990, manufacturing remains the largest goods-producing sector in the Jamaican economy. The fundamental requirement for the sector is to achieve levels of productivity that will enable it to compete successfully in domestic and export markets. It is envisioned that the manufacturing sector will drive higher levels of productivity and value-added production using efficient technologies and environmentally sustainable processes, with motivated, productive employees, within an enabling business and regulatory environment.

In Jamaica, manufacturing accounts for 19 percent of total employment, US\$723 million in exports and 8.3% of GDP. The sector comprises more than 1000 companies, with electronics assembly and fabrication being identified as emerging segments of this market in Jamaica.



The worldwide electronics assembly market is approximately US\$1.3 trillion in terms of cost of goods sold (COGS) as of 2013. The expansion in this market was primarily fuelled by consumption and replacement of electronic products.

Consumer, communications and computer products are projected to continue to be the leading segments driving the largest growth of the electronics industry. The market is however changing in composition both in terms of outsourcing partnerships and in-house manufacturing. Outsourcing has become a critical element in keeping the electronics assembly segment expanding and driving costs down each year, which in turn further stimulate consumer demand. The trend to move price sensitive manufacturing to low cost regions will impact the manufacturing footprint in the future market for all suppliers.

According to research compiled by New Venture Research, the shift in production to low-cost regions is starting to wane. There is currently a new trend where original equipment manufacturer (OEM) customers are requiring their electronic manufacturing services (EMS<sup>1</sup>) partners to manufacture products near to the regions where they are to be sold. For certain high-volume products like mobile phones and PCs, OEMs need to leverage the lowest cost in manufacturing. However, for other products the labor cost differentials are becoming less significant when weighed against the total cost of production (including transportation and logistical challenges). Offshore product migration will still take place, according to NVR’s forecasts, but it will be at a more moderate pace.

The decision to promote the electronics sub-sector in Jamaica is primarily driven by increased opportunities within the logistics sector, particularly arising from the expansion of the Panama Canal. Jamaica is ideally placed to capitalize on the anticipated growth in the electronics industry, given the proximity of the country to some of the key OEMs located in the US. In addition to location, the country is endowed with a pool of highly educated and talented individuals that are available for employment, at a very low cost. Jamaica offers a

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<sup>1</sup> Electronic manufacturing services (EMS) is a term used for companies that, test, manufacture, distribute, and provide return/repair services for electronic components and assemblies for original equipment manufacturers (OEMs).

number of tertiary and technical training institutions that seek to empower the Jamaican workforce by delivering theoretical and practical training at international standards. Additionally, in recognition of the importance of vocational and continuous on-the-job training on increasing efficiency and productivity, our trainees benefit from industry based experience, from partnership arrangements between some of the educational institutions and enterprises operating in Jamaica. This enables our workforce to operate optimally upon gaining full-time employment. Among Jamaica's premier training institutions are:

- HEART Trust NTA – this institution has trained more than 613,000 individuals and over 200,000 persons have been certified by the National Council on Technical Vocational Education and Training (NCTVET). These individuals serve scores of organisations in various capacities within the hierarchies of international, medium and small businesses.
- The University of Technology – this is a major national institution with a student population of over 11,000. It offers over 100 different programmes at certificate, diploma and degree levels. Its academic offerings and development are modeled on the English polytechnic system with emphasis on flexibility of approach, work-based learning and professional linkages.
- The University of the West Indies (UWI) Mona – this university has a student population of over 15,000 and is a fully-accredited tertiary-level institution with programme offerings available across five (5) Faculties, eight (8) schools and twelve (12) specialist centres.

Jamaica possesses a wide range of skill sets that will prove integral to investors desiring to operate electronics assembly operations in Jamaica, inclusive of:

- System architecture, user interface and industrial design capabilities
- Manufacturing and assembling of electronics products
- Troubleshooting, testing and repairs of electronic products
- Mechanical engineering

Jamaica is therefore well placed to facilitate productive and profitable business enterprises in establishing electronics assembly operations in Jamaica. Interested parties should contact JAMPRO's Ricardo Durrant for further details on this Project.

### 3. Vision and Objectives

The Government of Jamaica is committed to the expansion of the manufacturing industry. As such, its efforts continue to be guided by the strategic actions outlined in the Vision 2013 – National Development Plan. Operations in the industry continue to be enabled by policies and programmes aimed at increasing competitiveness through the improvement of the business environment, promotion of innovation and enhancement of productivity.

The improvements contemplated for the manufacturing industry will also benefit the electronics assembly segment. The key goals set and actions being pursued by the Government, for the manufacturing industry, include:

<b>1 Create highly competitive manufacturing sector</b>	<b>2 Create enabling business environment</b>	<b>3 Facilitate strong inter-sectoral linkages</b>	<b>4 Promote environmental sustainability</b>	<b>5 Support efforts to meet &amp; exceed customer expectation</b>
Develop appropriately skilled & motivated workforce	Reduce bureaucracy in custom clearance, tax payment and strengthen long term planning	Encourage increased backward integration into local economy - manufacturers and other sectors	Promote and support environmental awareness and management	Develop system to track prices and consumers' preferences
Facilitate access to appropriate capital and technology	Support international policies and promotion initiatives which positively impact the industry	Encourage increased forward integration – manufacturers and purchasers in linkage sectors	Encourage adoption of hazard mitigation and emergency management practices	Promote adoption of quality management and production systems and standards
Promote cost efficiencies among manufacturers	Develop systems to facilitate a safer business environment		Strengthen relationship of sector with national disaster preparedness and emergency management system	Promote improved customer service and expand collaboration in regional and international marketing
Establish centres of excellence	Strengthen relevant industry associations (including JMA, JEA and SBAJ) and the Jamaican Diaspora			Enforce intellectual property aspects of Brand Jamaica
	Facilitate availability and access to competitive factory space and			Utilise creative aspects of Brand Jamaica in marketing manufactured

<b>1</b> Create highly competitive manufacturing sector	<b>2</b> Create enabling business environment facilities	<b>3</b> Facilitate strong inter-sectoral linkages	<b>4</b> Promote environmental sustainability	<b>5</b> Support efforts to meet & exceed customer expectation products
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Vision for electronics assembly market

The Government of Jamaica is seeking to achieve at least a 0.50% (US\$6.5B<sup>2</sup>) share of the global electronics market, over a 5-year period. As this market continues to expand, it is anticipated that outsourcing opportunities are likely to increase in tandem. Even as electronic products become more complex and sophisticated, Original Equipment Manufacturers (OEMs) will be faced with increased pressure to lower product costs and churn out new products, due to shorter life cycles. To do so, these companies will seek to employ manufacturing and service providers capable of creating global designs and with manufacturing and supply chain management expertise. This will free the OEMs to then focus on product research, development, marketing and sales.

Jamaica is richly endowed with a talented pool of trained and trainable individuals. The country is also located in close proximity to the North American market, making it an ideal candidate to establish electronics assembly plants. In light of this potential competitive advantage, the Government is committed to providing and/or enhancing the necessary infrastructure and incentives that will yield the following benefits to investors:

Benefits for Investors	Actions to Provide/ Facilitate Benefits
Lower production cost	Provision of highly skilled yet low cost labour pool, tax incentives
Reduced design and development costs and lead time	Provision of highly skilled persons with necessary experience and/or training in electronics assembly operations
Accelerated time-to-market and time-to-volume production	This will be facilitated by the country's ideal location as well as existing transportation access and plans to establish a logistics hub
Lower capital investment requirements and fixed costs	The existence of free zones and proposed establishment of single economic zones will ensure access to ready commercial space for production/ electronics assembly operations
Access to worldwide design, engineering, manufacturing and after-market service capabilities	Training of persons in the requisite areas of specialization (design/ engineering) will be facilitated. This will be augmented with the necessary customer service training necessary for a seamless delivery of quality service.

The ultimate objective of the Government's efforts is to facilitate training of its citizens and increased employment opportunities. This will be reflected in better standards of living and a higher GDP for the country.

<sup>22</sup> The Electronics Assembly industry market size is estimated at US\$1.3 trillion

## 4. Role of JAMPRO

The Jamaica Promotions Agency (JAMPRO) is the country's premier trade and investment promotion agency. It is an Agency of the Government of Jamaica's Ministry of Industry, Investment and Commerce that promotes business opportunities in export and investment to the local and international private sector.

In facilitating the implementation of investment and export projects, the organization is a key policy advocate and advisor to the Government in matters pertaining to the improvement of Jamaica's business environment and the development of new industries.

JAMPRO provides an array of services to the export community – including export registration, export development advice and export promotion (exposure for goods and services entering the export markets). JAMPRO is also an integral partner in Jamaica's implementation of the World Trade Organizations (WTO's) Trade Facilitation Agreement that will ensure that the country reaps the benefits of standardized trade/border practices that will result in reduced transaction costs

As the electronics assembly segment of the manufacturing industry emerges in Jamaica, JAMPRO has begun spearheading initiatives to generate further investment in this productive area. In November 2014, JAMPRO attended the ASSEMBLY Show in Chicago, to increase attendees' awareness of the manufacturing capabilities of Jamaica. Prior to that in October, the Agency staged a forum for local entrepreneurs to highlight the opportunities in the sector.

The organization will continue to identify opportunities for development in the electronics assembly segment and connect investors with the necessary resources to facilitate ease of doing business while promoting expansion in the sector.

As facilitators, JAMPRO can assist you with the following in starting your business:

### Investment Enquiry and Facilitation

- Provision of macro-economic data
- Market intelligence/Sector information
- Identification of land and factory space
- International business networking services

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### Investment Progression and Implementation

- Assistance with investment procedures, incentives and approvals
- Assistance with specialized permits
- High level access to GOJ Ministers and agencies via facilitation meetings
- Provide advice in relation to accessing support for Project management and development



## 5. Investment Opportunity

### 5.1. Overview of electronics assembly market

The worldwide electronics assembly market is approximately US\$1.3 trillion in terms of cost of goods sold (COGS) as of 2013. The expansion in this market was primarily fuelled by consumption and replacement of electronic products. Consumer, communications and computer products are projected to continue to be the leading segments driving the largest growth of the electronics industry.

The market, in order of size, is divided into several segments, namely:

- Computer
- Communications
- Consumer
- Industrial
- Medical
- Automotive
- Aviation/ defense/ other

#### 5.1.1. Global expectations of the electronics assembly market

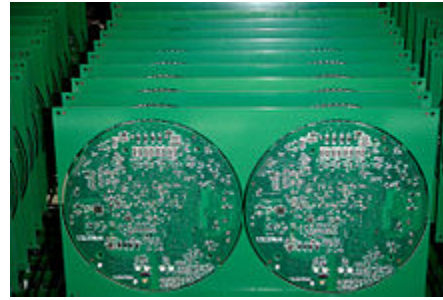
The worldwide electronics assembly market is approximately US\$1.3 trillion in terms of cost of goods sold (COGS) as of 2013. This is broken down in the following segments:

Segment	2007 (\$B)	2012 (\$B)	Compound Annual Growth Rate (CAGR)
Computer	298.6	408.3	6.5%
Communications	219.2	305.3	6.8%
Consumer	221.0	375.0	11.2%
Industrial/ Medical	100.9	136.4	6.2%
Transportation	119.6	160.9	6.1%
<b>Total</b>	<b>959.3</b>	<b>1,385.9</b>	<b>7.6%</b>

Electronics assembly is one of the largest segments in the manufacturing industry, particularly in emerging market. With increasing household income levels, local manufacturing, innovative technological products and rising awareness, the global consumer electronics market is expected to grow at a CAGR of over 10% during 2012-2015, according to the Global Consumer Electronics Market Outlook 2015 report.

These advances translate into greater demands in the electronics assembly sector, evidenced by the latest trend of acquiring consumer electronics for entertainment, health and fitness, among other purposes. The electronics items that demonstrate high growth and are expected to continue doing so in the future include smartphones, tablets, digital radios, 3D and smart televisions.

A key factor for the expansion of the electronics assembly segment is outsourcing arrangements. This is critical in driving costs down each year and in turn further stimulates consumer demand. The trend to move price sensitive manufacturing to low cost regions will impact the manufacturing footprint in the future market for all suppliers.



According to New Venture Research, there is currently a new trend where original equipment manufacturer customers are requiring their electronic manufacturing services partners to manufacture products near to the regions where they are to be sold. For certain high-volume products like mobile phones and PCs, OEMs need to leverage the lowest cost in manufacturing. However, for other products the labor cost differentials are becoming less significant when weighed against the total cost of production (including transportation and logistical challenges). Offshore product migration will therefore still take place, according to New Venture Research's forecasts, but it will be at a more moderate pace.

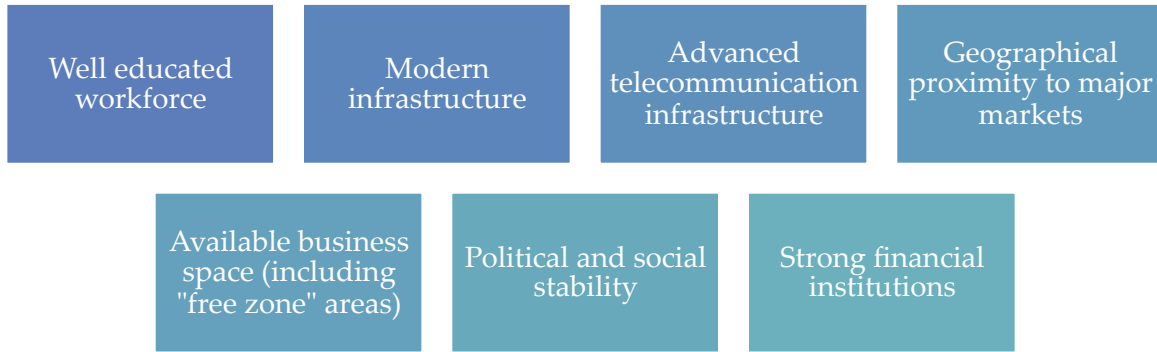
## ***5.2. Value proposition for investing in the electronics assembly market in Jamaica***

The establishment of a successful electronics assembly operation requires robust execution of a number of strategies, aimed at creating a competitive advantage. Among other imperatives, investors must ensure that there is an appropriate level of:

- Talent – hire and retain the best talent to ensure maintain competitiveness
- Customer focus – seek to deliver distinctive products and services in a cost-effective manner, with fast time-to-market
- Market focus – apply a rigorous approach to managing portfolio of opportunities by placing special emphasis on high growth markets and delivering to them a compelling value proposition, such as being responsive to market dynamics and being highly professional.
- Technological capabilities – invest in state of the art technologies to generate cost effective, high quality outputs in a timely manner. As OEMs seek to provide greater functionality in smaller products, they increasingly require more sophisticated manufacturing technologies and processes. It is therefore important to invest in advanced manufacturing equipment

Jamaica is ideally placed to capitalize on the anticipated growth in the electronics industry, given our possession of all the prerequisites for a successful electronics assembly operation. Additionally, Jamaica is located in close proximity to some of the key OEMs located in the Americas.

Some of the key attributes that investors seek and the strengths of Jamaica as an electronics assembly outsourcing destination are as follows:



- **English speaking, well educated workforce** – The aptitude of the Jamaican workforce for spoken English remains a key competitive advantage. This is confirmed by current outsourcing firms who indicate comfort with the Jamaican diction, including the Jamaican accent, pronunciation and general vocabulary.
- **There are over 450 public and independent institutions** that offer secondary, technical, vocational, college and university level education in Jamaica<sup>3</sup>.
- **Modern infrastructure** – There are currently three major international airports (Norman Manley, Ian Flemming and Sangster’s, with over 130 international flights a week). Jamaica is also home to the largest international sea transshipment port in the Region (the Port of Kingston). It also has a fairly good road network (Highway 2000 – the first and only toll road in the region that connects major towns and industrial centers and provides multiple connectivity points between parishes). Other infrastructures include water, electricity and cable.
- **Advanced telecommunication infrastructure** – Jamaica’s world class and robust telecoms infrastructure supports all the requirements for global connectivity and ranks among the most developed in the world when compared to the US and UK. The island boasts an array of high tech state of the art infrastructure facilitating ease of communications locally and internationally.



<sup>3</sup> According to data extracted from the Ministry of Education’s “Education Statistics, 2012-2013”

- **Geographical and cultural proximity to major markets** – Jamaica is an ideal destination based on its proximity to the North American and European market. This attribute is particularly important as firms are increasingly looking to low cost ‘near shore’ options to outsource their electronics assembly requirements.



- **Gateway to multiple destinations** – The country is located in the Eastern Standard Time (EST) zone, making it convenient for doing business with the USA, Latin America and the Caribbean. It is one hour from Miami, and three hours from New York. It is also accessible through the main shipping lanes to the Panama Canal.

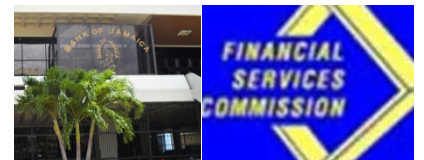
- **Available business space (including “free zone” areas)** – Jamaica offers readily available business spaces within the major ports of Kingston and Montego Bay, which are only minutes away from the two international airports. There are also a number of other public and private spaces available for manufacturing operations and the Government is at an advanced stage of planning for additional economic zones. Electronics assembly operators will also be allowed to establish their operations anywhere outside of a designated free zone space, while still being eligible for a range of benefits under the proposed SEZ regime.



- **Political & social stability** – Jamaica is a relatively stable country politically and socially, with a strong history of democratic governance. While there has been minimal growth in the economy over the past few years, no major meltdown, of the scale that is currently being experienced by other countries is anticipated. With the geo-political situation around the world as it is, Jamaica provides a relatively safe location for businesses to offshore or ‘near shore’ their electronics assembly operations.



- **Strong financial institutions** – Jamaica has a well regulated financial services sector with a broad cross section of financial institutions (local and international).



- The country also has a diversified and well developed capital market, liberal export incentives, liberal import policies and minimal restrictions on repatriation of capital

### 5.3. Investor opportunities – segments of electronics assembly operations

There are a number of niches in the electronics assembly market that international companies can operate in if located in Jamaica. These include:

Electronics Assembly Segment	Components
<p><b>System Assembly and Manufacturing –</b></p> <ul style="list-style-type: none"> <li>□ Printed circuit board assembly</li> <li>□ Assembly of systems and subsystems that incorporate printed circuit boards and electromechanical components</li> <li>□ Electronics products may be assembled on a build-to-order or configure-to-order basis</li> </ul>	<p><b>Enclosure</b> – this involves custom electronics enclosures and related products and services, including the design, manufacture and integration of electronics packaging systems, power and thermal and interconnect subsystems, cabling and cases.</p> <p><b>Testing Services</b> – this involves offering computer-aided testing services for assembled printed circuit boards, systems and subsystems. Test services may include management defect analysis, in-circuit testing and functional testing as well as environmental stress tests of board and system assemblies.</p> <p><b>Materials Procurement and Inventory Management</b> – this consist of the planning, purchasing, expediting and warehousing of components and materials used in the manufacturing process. This may include having third-party suppliers of custom components located in industrial parks to reduce material and transportation costs, simplify logistics and facilitate inventory management.</p>
<p><b>Component Businesses –</b></p> <ul style="list-style-type: none"> <li>□ Printed circuit boards – these are platforms composed of laminated materials that provide the interconnection for integrated circuits, passive and other electronic components and thus are at the heart of almost every electrical system</li> </ul>	<p><b>Rigid and Flexible Printed Circuit Board (“PCB”) Fabrication</b> – The global demand for wireless devices and the complexity of wireless products are driving the need for more flexible printed circuits. Flexible circuits have become a very attractive design alternative for many new and emerging application spaces such as automotive rear light-emitting diode (“LED”) lighting, tablet computers, and miniaturized radio frequency identification tags or smart cards.</p> <p><b>Power Supplies</b> – this involves providing high efficiency and high density switching power supplies. These may include chargers for smartphones and tablets, adapters for notebooks and gaming, and power supplies for server, storage and networking markets.</p>

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**Electronics Assembly Segment**
**Components**


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**Design and Engineering Services –**

- Contract Design Services where the customer purchases engineering and development services on a time and materials basis
- Joint Development Manufacturing Services, where the engineering and development teams work jointly with the customers' teams to ensure product development integrity, seamless manufacturing handoffs and faster time to market

*System Architecture, User Interface and Industrial Design* – involves helping customers to design and develop innovative and cost-effective products that address the needs of the user and the market. These services include product definition, analysis and optimization of performance and functional requirements, 2-D sketch level drawings, 3-D mock-ups and proofs of concept, interaction and interface models, detailed hard models and product packaging.

*Mechanical Engineering, Technology, Enclosure Systems, Thermal and Tooling Design* – this involves offering detailed mechanical, structural, and thermal design solutions for enclosures that encompass a wide range of plastic, metal and other material technologies. It also includes providing design and development services for prototype and production tooling equipment used in manufacturing.

*Electronic System Design* – this involves providing complete electrical and hardware design for products ranging in size from small handheld consumer devices to large high-speed, carrier-grade, telecommunications equipment, which includes embedded microprocessors, memory, digital signal processing design, high speed digital interfaces, analog circuit design, power management solutions, wired and wireless communication protocols, display imaging, audio/video, and radio frequency systems and antenna design

*Component Level Development Engineering* – this involves supporting various component technologies, including power supplies and power solutions, and printed circuit board and interconnection technologies, both rigid and flexible.

## 5.4. Enabling environment for electronics assembly

In December 2013, the Omnibus Incentives Legislation was passed which comprises the:

- Fiscal Incentives Act;
- Income Tax Relief (Large-Scale Projects and Pioneer Industries) Act;
- An amendment to the Customs Tariff (Revision) Resolution; and
- An amendment to the Stamp Duty Act.

The Omnibus Incentive legislation seeks to provide a competitive regime for all sectors and includes the following benefits:

- Stamp Duty – exemptions are provided on raw materials and capital goods;
- Customs Tariff – duty free importation is allowed on capital equipment and raw material. Special categories will be created for persons in manufacturing, tourism and the creative industries to benefit from a duty rate of 0% for industry related consumer goods;
- Employment Tax Credit (ETC) –this will be allowable up to a maximum value of 30%;
- Income Tax Relief – provisions have been made for the designation of large scale projects and pioneer industries to qualify for tax credit under the Income Tax Act;
- Capital Allowance – changes have been effected to the capital allowance regime, including the broadening of the definition of industrial buildings; and
- Tax Losses – revisions have been made to the provisions governing the utilization of tax losses.

*Arising from the country's initiatives to create a competitive environment for businesses, its ranking in the World Bank 2015 Doing Business report improved to 58 (out of 189 economies), up from 85 in 2014.*

### **Trusted Facilitators**

The growth in the electronics assembly market coupled with Jamaica's scope to make significant contributions, make the proposed development of electronics assembly operations in Jamaica a lucrative venture. JAMPRO remains committed to improving, promoting, stimulating and facilitating the development of industry and trade, improving the nation's business climate and fostering economic relationships with key players in international markets.

JAMPRO stands ready to assist all potential investors in taking the next steps to share in the success of the electronics assembly market in Jamaica.

# *Appendix A. - Documents Reviewed*

## *A.1. List of References*

- a) Flextronics annual report, 2014  
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- g) Sherman, Randall: The Worldwide Electronics Manufacturing Market, New Venture Research Corporation,
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- i) Taiwan's Ratings, a Standard & Poors's Rating Partner: Taiwan's Top 50 Corporates, September 2014. <http://www.taiwanratings.com/portal/>. Retrieved 4 February 2015





## Appendix B. - International Operators in Electronics Assembly Market

According to New Venture Research, the top companies operating in this market, with a market share of over 60%, are:

Company	Headquarters	Share	Company	Headquarters	Share
1 Hon Hai Precision Industries (Foxconn)	Taiwan	25.7%	6 Compal Electronics	Taiwan	3.7%
2 Flextronics	Singapore	7.5%	7 TPV Technology	Hong Kong	2.9%
3 Quanta Computer	Taiwan	5.3%	8 Pegatron	Taiwan	2.5%
4 Wistron Corporation	Taiwan	5.3%	9 Inventec	Taiwan	1.8%
5 Jabil Circuit	Florida	3.9%	10 HTC	Taiwan	1.8%

A brief overview of the performance of the top 5 companies is shown below<sup>4</sup>:

1. Hon Hai Precision Industries (Foxconn)	Business Details
Business Activities	IT, communications, automation devices, photo-electricity, precise machinery, auto, production, sales and service related with connectors, casings, radiators, assembled parts of consuming electronics as well as assembly of network cables
	
Revenues/ Profits	US\$130.43B/ US\$3.54B for FY2013
Number of Employees	~1,200,000 worldwide
Products/ Services	3C electronics (Computer, Communication, Consumer)
Locations of Operations	China, Australia, Brazil, Europe, India, Japan, Malaysia, Mexico, Pakistan, South Korea, United States
Key Markets	Greater China. Czech Republic
Headquarters	Taiwan
Major Customers	Acer Inc, Amazon, Apple Inc, Blackberry Ltd, Cisco, Dell, Google, Hewlett-Packard, Microsoft, Motorola Mobility, Nintendo, Nokia, Sony, Toshiba, Vizio
2. Flextronics	Business Details
Business Activities	Flextronics has an extensive network of design, manufacturing and logistics facilities in the world's major electronics markets to serve the growing outsourcing needs of both multinational and regional original equipment manufacturers (OEMs)
	
Revenues/ Profits	US\$26.11B/ US\$0.37B
Number of Employees	~150,000 worldwide

<sup>4</sup> Information retrieved from companies' websites and/or annual reports

2. Flextronics	Business Details
Products/ Services	<p><i>Innovation Services</i> delivered through labs, a café and centers of excellence),  <i>Design &amp; Engineering</i> (system architecture, mechanical engineering, electronic system design)  <i>System Assembly and Manufacturing</i> (electronics enclosures, computer-aided testing services, materials procurement and inventory management)  <i>Component Businesses</i> (rigid &amp; flexible printed circuit board fabrication, full service power supplies, logistics, reverse logistics and repairs)</p>
Locations of Operations	Brazil, Canada, Mexico, United States, Austria, Czech Republic, Dubai, Germany, Hungary, Ireland, Israel, Italy, Netherlands, Poland, Romania, Sweden, Turkey, Ukraine, United Kingdom
Key Markets	China, Mexico, United States, Malaysia, Brazil
Headquarters	Singapore
Major Customers	Alcatel-Lucent, Apple, Cisco, Ericsson, Ford Motor Company, Hewlett-Packard, Huawei Technologies, Microsoft, Google (including Motorola), Xerox
3. Quanta Computer	Business Details
Business Activities	<p>Quanta Computer is the largest notebook computer Original Design Manufacturer (ODM). It also provides enterprise network systems, home entertainment, mobile communication and automotive electronics. Its operations centers manufacture, configure and service products, in addition to providing logistic support to deliver products and services across the globe.</p>
	
Revenues/ Profits	US\$29.05/ US\$0.63B
Number of Employees	>70,000 worldwide
Products/ Services	<p>Notebooks, Smart Phones, Servers, Digital televisions</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Design and manufacturing laptop computer</i> – ODM partner for the top ten PC companies in the world</li> <li><input type="checkbox"/> <i>ODM/OEM business development and manufacturing of IT equipment</i> – high level blade servers, 1U/2U/4U rack servers, server motherboards, 10GbE LAN cards, storage, and L2/L3 networking switches</li> <li><input type="checkbox"/> <i>Other services</i></li> </ul>
Locations of Operations	Asia, America and Europe
Headquarters	Taiwan
Major Customers	Apple Inc., Compaq, Dell, Gateway, Hewlett-Packard, Alienware, Amazon.com, Cisco, Fujitsu, Gericom, Lenovo, LG, Maxdata, MPC, BlackBerry Ltd, Sharp Corporation, Siemens AG, Sony, Sun Microsystems, Toshiba, Verizon Wireless and Vizio.
4. Wistron Corporation	Business Details
Business Activities	<p>Wistron is an ODM that provides a variety of support services related to design, manufacturing and after sales service for information and communication technology (ICT) products.</p>

**4. Wistron Corporation****Business Details**

Revenues/ Profits	US\$20.80B/ US\$0.19B
Number of Employees	>60,000 worldwide
Products/ Services	Design, manufacturing and after sales support services for notebook PCs, desktop systems, server and storage systems, information appliances, handheld devices, networking and communication products.
Locations of Operations	North/ South America, Europe, Asia
Headquarters	Taiwan

**5. Jabil Circuit****Business Details**

## Business Activities



Jabil Circuit provides electronic manufacturing services and solutions worldwide. It offers electronics design, production and product management services to companies in the aerospace, automotive, computing, defense, digital home, energy, healthcare, industrial, instrumentation, lifestyles, mobility, mold, networking, packaging, peripherals, storage, telecommunications and wearable technology industries.

The company's services include integrated design and engineering; component selection, sourcing, and procurement; automated assembly; design and implementation of product testing; parallel global production; enclosure services; systems assembly, direct order fulfillment, and configure-to-order; and injection molding, metal, plastics, precision machining, and automation services. It also provides mobility, display, set-top boxes, and peripheral products, such as printers and point of sale terminals.

Revenues/ Profits	US\$15.8B/ US\$0.24B
Number of Employees	>150,000 worldwide
Products/ Services	<i>Manufacturing</i> – automotive, capital equipment, computing & storage, industrial & energy, networking & telecommunications, point of sale, printing <i>Lifestyle, defense, mobility</i> – consumer lifestyle & wearable tech, defense & aerospace, mobility <i>Healthcare and packaging</i> <i>Solutions</i> – advanced planning & logistics, design engineering, lean six-sigma, product ideation & creation, supply chain management, technology innovation etc.
Locations of Operations	> over 90 locations in 23 countries – North/ South America, Europe, Asia
Headquarters	Florida

## Appendix C. - Business Space Available to Investors

Factories Corporation of Jamaica Ltd is the largest provider of commercial real estate in Jamaica. It has approximately 175,000 sq. m /1,880,000 sq. ft. under management. As at 1 November 2014, it had the following spaces available for rental:

Location	Space Available – Size sf / Unit	
<b>KINGSTON &amp; ST. ANDREW</b>		
121 Duke St. SIC	1,440	C - 2nd Fl West
	720	C2
	1,440	E
	720	L - 2nd Fl East
	720	M - 2nd Fl
	1,320	Q- 2nd Fl
	620	Canteen
225½ Marcus Garvey Dr. SIC	2,992	A
	2,482	H
	1,938	J
	3,060	K
	2,023	N
	2,023	N1
Garmex Free Zone	22,087	6C
2A Torrington Rd.	6,000	Unit 3 – 3rd Fl
<b>RURAL</b>		
<b>St. Catherine</b>		
Charlemont SIC	3,000	Unit 3
Valdez Road	17,000	Lot 36
Valdez Road	29,000	Lot 38
<b>Clarendon</b>		
Denbigh I.E., Foga Road	20,000	
May Pen SIC, 26 Paisley Avenue	3,200	Unit C3
<b>St. James</b>		
Glendevon SIC, Salt Spring Road	1,050	Unit 4
	1,050	Unit 6A
	1,050	Unit 8
	1,050	Unit 9
	2,100	Unit 10B

Location	Space Available – Size sf / Unit	
<b>St. James</b>		
Montego Bay Free Zone	9,000	Bldg. 6
<b>Manchester</b>		
Greyground SIC,	8,000	
	4,000	
<b>St. Thomas</b>		
Goodyear (ITC)	24,000	

In support of the government goals for sustained economic growth Factories Corporation of Jamaica has been mandated to undertake certain strategic activities/projects.

- Development of the Caymanas Economic Zone – North
- Development of an ICT/BPO Park in Naggo Head, St Catherine
- Retrofitting of space in the Montego Bay Free zone
- Development of a Logistic Hub – an expansion of the Caymanas Economic Zone Development – South

These initiatives will serve to provide further physical space to locate potential investors.



# JAMPRO

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