



**Spectra7 Microsystems Inc.**

**Management's Discussion & Analysis**

**For the Three and Six Month Periods Ended**

**June 30, 2017**

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**Management's Discussion and Analysis**  
**For the Three Months Ended June 30, 2017**

This management's discussion and analysis ("MD&A") of financial condition and results of operations of Spectra7 Microsystems Inc. ("Spectra7" or the "Company") was prepared by management as at August 8, 2017. Throughout this MD&A, unless otherwise specified, "Spectra7", "the Company", "we", "us" or "our" refer to Spectra7 Microsystems Inc. and its subsidiaries. This MD&A should be read in conjunction with the audited consolidated financial statements of the Company and notes thereto for the year ended December 31, 2016 (the "Annual Financial Statements") and the unaudited condensed interim consolidated financial statements for the six month period ended June 30, 2017 (the "Interim Financial Statements" and, together with the Annual Financial Statements, the "Statements"). In preparing this MD&A, we have taken into account information available to us up to August 8, 2017.

The Statements have been prepared by management in accordance with International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB") and interpretations of the International Financial Reporting Interpretations Committee ("IFRIC"). All amounts are expressed in U.S. dollars unless otherwise noted. Other information contained in this document has also been prepared by management and is consistent with the data contained in the Financial Statements.

This MD&A contains commentary from the Company's management regarding the Company's strategy, operating results, financial position and outlook. Management is responsible for the accuracy, integrity, and objectivity of the MD&A, and develops, maintains and supports the necessary systems and controls to provide reasonable assurance as to the accuracy of the comments contained herein.

The Audit Committee and the Board of Directors provide an oversight role with respect to all public financial disclosures by the Company. The Board of Directors approves the Financial Statements and MD&A after the completion of its review and recommendation for approval by the Audit Committee, which meets periodically to review all financial reports, prior to filing.

**CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS**

This MD&A contains certain forward-looking information and statements relating, but not limited to, the Company's future financial position and results of operations, strategies, plans, objectives, goals, targets, and future developments in the markets where the Company participates or is seeking to participate. Forward-looking information typically contains statements with words such as "consider", "anticipate", "believe", "expect", "plan", "intend", "may", "likely", or similar words suggesting future outcomes or statements regarding an outlook, or other expectations, beliefs, plans, objectives, assumptions, intentions or statements about future events or performance. Readers should be aware that these statements are subject to known and unknown risks, uncertainties and other factors that could cause actual results, performance or achievements of the Company to differ materially from those suggested by the forward- looking information and statements, some of which may be beyond the control of management.

Although the Company believes that the expectations, estimates, and projections reflected in such forward-looking information and statements are reasonable, such forward-looking information and statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information and statements. On this basis, readers are cautioned not to place undue reliance on such forward looking information and statements.

Factors which could cause actual results to differ materially from current expectations include, but are not limited to:

- the degree of competition in the business areas in which we operate;
- our ability to secure orders from a limited number of customers;
- our ability to make the substantial research and development investments required to remain competitive;
- our ability to charge prices that will result in favorable gross margins;
- our ability to introduce new or enhanced products on a timely basis;

- market demand and penetration of new markets for our products and services;
- our reliance on a limited number of third party manufacturers;
- the absence of long-term supply contracts with any of the Company's third-party vendors and potential disruption in supply of products or materials;
- our ability to contain and appropriately budget expenses, due to our limited operating history;
- the length of the sales cycle required to establish design wins and bring design wins to production;
- reliance on distributors;
- our ability to deliver our products in the correct product mix required by our customers and ability to control order and shipment uncertainties;
- the substantial quarterly and annual fluctuations in our operating results;
- our dependence on existing members of the senior management team;
- our ability to attract and retain qualified employees and contain payroll costs;
- unforeseen delays, expenses and damage to reputation caused by defects or bugs;
- potential claims of intellectual property infringement;
- our ability to protect our intellectual and intangible properties;
- the use of open source software;
- reliance on third parties to provide services and technology;
- going concern risk;
- impact of negative cash flow from operating activities;
- potential losses to our facilities or distribution system due to catastrophes;
- compliance with various governmental regulations and related costs of compliance;
- cyclicalities in the semiconductor industry;
- conformity of the Company's products to industry standards;
- unanticipated changes in our tax rates;
- fluctuation of share price;
- decline in share price due to the absence of, or negative reports, about the business by securities or industry analysts;
- adverse international economic conditions adversely affect consumer spending;
- general political and economic conditions in the countries in which we operate;
- strain on our resources as a result of the requirements of being a public company;
- litigation risk;
- market price volatility and potential impact on share price;
- our potential need for additional financings in order to meet future capital requirements for our operations;
- our potential to breach certain covenants, representations and warranties in our loan arrangements;
- our ability to declare dividends; and
- our ability to meet significant research and development milestones.

We caution that this list is not exhaustive of all possible factors. Please refer to the disclosure under the heading "Risks and Uncertainties".

The forward-looking information and statements in this MD&A are, unless otherwise indicated, stated as of the date hereof and are presented for the purpose of assisting investors and others in understanding our financial position and results of operations as well as our objectives and strategic priorities, and may not be appropriate for other purposes. The Company does not undertake any obligation to update publicly or to revise any forward-looking information and statements, whether as a result of new information, future events or otherwise, except as required by law.

## **OVERVIEW OF THE COMPANY**

### **Background**

The Company is a high performance analog semiconductor company targeting large, high growth markets in virtual reality ("VR"), augmented reality ("AR"), mixed reality ("MR"), data centers, and consumer connectivity.

The Company was incorporated on October 12, 2010 as a capital pool company named "Chrysalis Capital VIII Corporation" ("Chrysalis") pursuant to the filing of articles of incorporation under the Canada

Business Corporations Act. The articles of incorporation of the Company were amended by the filing of articles of amendment dated April 19, 2011 to remove certain provisions. On February 5, 2013, the Company's articles were amended to consolidate its Common Shares by a ratio of 3.86364:1 and to change its name to "Spectra7 Microsystems Inc."

On February 5, 2013, the Company, then named Chrysalis, completed a reverse takeover transaction whereby Chrysalis acquired all of the issued and outstanding shares of Spectra7 Microsystems Corp. (formerly Fresco Microchip Inc.) ("Fresco"), a company incorporated in Ontario, and Spectra7 Microsystems (Ireland) Limited (formerly RedMere Technology Limited) ("RedMere"), a company incorporated in Ireland. As a result of such transaction, which constituted the Company's qualifying transaction under the policies of the TSX Venture Exchange, the former shareholders of Fresco acquired control of the Company (the "Qualifying Transaction"). From February 19, 2013 until July 22, 2015, the Common Shares of the Company (the "**Common Shares**") were listed for trading on the TSX Venture Exchange under the symbol "SEV". On July 23, 2015, the Common Shares commenced trading on the Toronto Stock Exchange (the "Exchange").

The registered office of the Company is located at 110 Cochrane Drive, Suite 202, Markham, Ontario L3R 9S1 and its head office is located in San Jose, California. The Company also has design centers in Little Rock, Arkansas and Cork, Ireland and a sales office in Dongguan, China. The Company is currently a reporting issuer in each of the provinces of Canada, excluding Québec.

## **Products**

The Company's family of products features a patented signal processing technology used in the design of "active" cables and specialty interconnects which enable longer, thinner and lighter interconnects for VR, AR, MR, in data centers, and for consumer connectivity products. The Company holds approximately 50 patents relating to its products.

### *Virtual Reality (VR)*

The Company's next-generation VR products include the VR7050 which the Company believes to be the industry's first chip capable of enabling lightweight, ultra-thin active interconnects for gesture recognition and motion control backhaul. When used in conjunction with Spectra7's VR7100 high speed video chip, the chipset delivers ultra-high bandwidth data, video, audio and power in a unified, ultra-light, super-thin wearable interconnect while achieving the low latency for a truly immersive VR experience. The Company has also developed AR products that provide similar benefit to the VR Products on thinner, shorter 'wearable' interconnects.

### *Augmented Reality (AR)*

AR-Connect™ is an AR interconnect product line that is powered by the Company's patented wearable network signal processing technology. The Company believes its patented AR-Connect™ is the industry's first integrated cable, connector and embedded chipset product line for AR vision systems and wearable computing devices. AR-Connect™ enables AR glasses to connect to a smart phone, proprietary processing device or a desktop GPU/laptop processing unit, with a single unified and ultra-thin link.

### *Mixed Reality (MR)*

Mixed reality is in effect a VR product that utilizes cameras on the headset to allow the user to see their actual surroundings in addition to their virtual surroundings. MR interconnect products use the same technology as the Company's VR and AR products.

### *DreamWeVR™*

DreamWeVR™ is an extensive product line targeted at next generation 4K Ultra-HD and 5K resolution VR and AR platforms for gaming, health care, architecture and business telepresence applications. The product line includes four new chips (VR8181, VR8050, VR8200 and VR8300) featuring SpectraLinear™ technology, new VR-specific connectors and three new head-mounted display ("HMD") interconnect configurations to support high-bandwidth (up to 50Gbps), near-zero latency VR HMDs and AR glasses with reduced weight and complexity.

## *Data Centers*

GaugeChanger Plus™, featuring high speed active interconnects based on the Company's technology, represents the Company's entry into the data center market. The product line is comprised of the GC2502 - an embedded analog signal processing chip, and GaugeChanger Plus™ – a proprietary ultra-thin copper transmission link. These products allow the construction of a copper cable that combines the high data rate of fiber with the low cost and low power consumption of copper, providing data centers with the best of both worlds. This technology supports the emerging 802.xxx QSFP28 standard on NRZ or Multilevel signaling for the majority of interconnect reaches in today's high-density data centers.

When used together, the GC2502 chip and the GaugeChanger Plus™ combine to enable what the Company believes to be one of the world's fastest, thinnest and lightest copper data center interconnects. As consumers and businesses continue to move their data to the cloud, the need for larger and more efficient data centers is growing rapidly.

At present, fiber is the only alternative for data centers seeking high speed, extremely flexible and thin interconnects as copper is typically too bulky and inflexible at these speeds. GaugeChanger Plus™, however, extends the life of copper with interconnects that are as fast and as thin as fiber, but at a dramatically lower cost and lower power consumption.

### *USB 3.1 consumer interconnects*

The Company's active chipset family is the industry's first for ultra-thin implementations of USB 3.1 consumer interconnects, reducing the conductor cross section by up to 90% compared to passive cable implementations. Applications for this interconnect implemented with the new Type-C connector include ultra-thin laptops, tablets, mobile devices, solid state disks and wearable computing devices. The resulting ultra-thin cable enabled by this new Spectra7 technology allows the cable to transfer data at supercomputer speeds (up to 10 times faster) with a plug shell or over-mold and cable strain relief dimension that is thinner than the mobile device itself, a critical dimension when implementing Type-C in tablets and smart phones, and up to 90% lighter than passive cable conductors that would need to be much larger in diameter.

## **Overall Performance**

The Company achieved revenue of \$3.1 million in the second quarter of 2017, representing a 18% increase in revenue as compared to the second quarter of the prior year. The Company significantly expanded its technical and sales support organization in the Asia Pacific region during the six months ended June 30, 2017 in support of its expanding AR/VR/MR and data center customer base. On May 1, 2017, the Company appointed Gerald J. Hamilton to the position of Senior Vice President, Worldwide Sales.

Gross margin as a percentage of revenue for the three and six months ended June 30, 2017 are higher by 8% and 3%, respectively, from the same periods in the previous year. The increased gross margins are due to the greater mix in sales of products with higher margins.

During the three months ended June 30, 2017, the Company secured two Tier-one design wins in the AR/VR/MR industry for a total of five design wins over the six months ended June 30, 2017. One of these design wins is expected to contribute material revenue growth in the second half of 2017.

On June 27, 2017, the Company closed a bought deal offering of units ("Units") for aggregate gross proceeds of CDN \$4,600,000 (the "Public Offering") and the first tranche of a private placement of Units for additional gross proceeds of CDN \$1,312,300 including Units issued for related services (the "Private Placement" and together with the Public Offering, the "Offerings"). Each Unit issued pursuant to the Offerings consists of one Common Share and one-half of one Common Share purchase warrant (each whole warrant, a "Warrant"). Each Warrant entitles the holder to acquire one Common Share at an exercise price of CDN \$0.55 per Common Share until June 27, 2019. The expiry date of the Warrants may be accelerated by the Company at any time if the volume weighted average trading price of the Common Shares on the facilities of the Toronto Stock Exchange (or such other exchange on which the Common Shares trade) is greater than CDN \$0.85 for any 10 consecutive trading days following October 28, 2017. On July 24, 2017, the final tranche of the Private Placement was closed

pursuant to which 200,000 Units were issued representing gross proceeds of CDN \$80,000, bringing the aggregate gross proceeds of the Offerings including Units issued for related services to CDN \$5,992,300.

On May 15, 2017, the Company signed an amendment to its \$6.5 million senior secured term loan facility with MidCap (the "Loan Facility") which amendment became effective on June 27, 2017, which among other things, (i) extended the commencement date for principal payments under the Loan Facility from June 1, 2017 to June 1, 2018, and (ii) allows the Company to extend the maturity date of the Loan Facility by one year upon satisfaction of certain conditions precedent (together with the Loan Facility, the "Amended Loan Facility"). The Amended Loan Facility immediately improved the Company's cash flow over the twelve months from June 1, 2017 to June 1, 2018.

On May 1, 2017, the Company moved its corporate headquarters from Palo Alto, California to a new location in San Jose, California that is nearly double in size.

## Selected Financial Information

The table below sets forth certain key financial results for the three and six month periods ended June 30, 2017 and 2016.

	Three Months Ended June 30,				Six Months Ended June 30,			
	<i>(In thousands, except for loss per share)</i>				<i>(In thousands, except for loss per share)</i>			
	2017	2016	Change		2017	2016	Change	
	\$	\$	\$	%	\$	\$	\$	%
Revenue	3,082	2,601	481	18%	5,744	5,141	603	12%
Cost of sales	1,147	1,167	(20)	(2%)	2,204	2,124	80	4%
Gross margin	1,935	1,434	501	35%	3,540	3,017	523	17%
Expenses	3,690	3,977	(287)	(7%)	7,611	8,093	(482)	(6%)
Net loss	(1,755)	(2,543)	788	(31%)	(4,071)	(5,076)	1,005	(20%)
Other comprehensive (loss) gain	(15)	(2)	(13)	650%	(14)	(12)	(2)	17%
Total comprehensive loss	(1,770)	(2,545)	775	(30%)	(4,085)	(5,088)	1,003	(20%)
Basic and diluted loss per share	(0.01)	(0.02)			(0.03)	(0.04)		
Weighted average number of shares outstanding	147,787	126,985			148,130	126,984		

	As at			
	<i>(In thousands)</i>			
	June 30, 2017	December 31, 2016	Change	
	\$	\$	\$	%
Total assets	12,356	10,491	1,865	18%
Total liabilities	9,394	8,174	1,220	15%
Equity	2,962	2,317	645	28%
Total liabilities and equity	12,356	10,491	1,865	18%

## Revenue and Gross Margin

The table below sets forth the details of revenue and gross margin for the three month periods ending June 30, 2017 and 2016.

	Three Months Ended June 30, (In thousands)				Six Months Ended June 30, (In thousands)			
	2017	2016	Change		2017	2016	Change	
	\$	\$	\$	%	\$	\$	\$	%
Revenue	3,082	2,601	481	18%	5,744	5,141	603	12%
Cost of sales	1,147	1,167	(20)	(2%)	2,204	2,124	80	4%
Gross margin	1,935	1,434	501	35%	3,540	3,017	523	17%
Gross margin %	63%	55%	8%		62%	59%	3%	

Revenue for the three and six months ended June 30, 2017 increased by \$0.5 million and \$0.6 million, respectively, representing an increase of 18% and 12% over the same periods in the previous year. The increase in revenue can be attributed to the Company's expansion of its sales force in Asia and North America during the six months ended June 30, 2017.

Gross margin as a percentage of revenue for the three and six months ended June 30, 2017 are higher by 8% and 3%, respectively from the same periods in the previous year. Gross margins have increased due to the greater mix of sales with products at higher margins.

## Expenses

The table below sets forth the details of expenses for the three and six months ended June 30, 2017 and 2016.

	Three Months Ended June 30, (In thousands)			
	2017	2016	Change	
	\$	\$	\$	%
Research and development, net of investment tax credits and including amortization of licenses	1,586	2,439	(853)	(35%)
Sales and marketing	431	427	4	1%
General and administrative	954	904	50	6%
Depreciation of property and equipment	153	154	(1)	(1%)
Amortization of intangible assets other than licenses	-	-	-	
Share-based compensation	364	(125)	489	(391%)
Finance expense - interest and fees	-	-	-	
Accretion expense	217	224	(7)	(3%)
Change in fair value of derivative liability	(25)	(54)	29	(54%)
Foreign exchange loss	(6)	8	(14)	(175%)
Loss on disposal of capital equipment	16	-	16	
	3,690	3,977	(287)	(7%)

**Six Months Ended June 30,**

*(In thousands)*

	<b>2017</b>	<b>2016</b>	<b>Change</b>	
	\$	\$	\$	%
Research and development, net of investment tax credits and including amortization of licenses	3,347	4,470	(1,123)	(25%)
Sales and marketing	868	1,052	(184)	(17%)
General and administrative	1,936	1,772	164	9%
Depreciation of property and equipment	308	303	5	2%
Amortization of intangible assets other than licenses	-	248	(248)	(100%)
Share-based compensation	689	43	646	1502%
Finance expense - interest and fees	-	18	(18)	(100%)
Accretion expense	450	227	223	98%
Change in fair value of derivative liability	(1)	(54)	53	(98%)
Foreign exchange loss	(2)	14	(16)	(114%)
Loss on disposal of capital equipment	16	-	16	
	<u>7,611</u>	<u>8,093</u>	<u>(482)</u>	<u>(6%)</u>

### **Research and Development**

Research and development expenses consist of salaries and related expenses, design software tool costs, travel, consumable materials used in product development such as experimental wafers, non-production tape-out costs, technical services costs and contracted technical personnel. The Company is eligible for Irish refundable Scientific Research and Experimental Development ("SR&ED") investment tax refunds for certain eligible expenditures incurred in Ireland. These tax refunds are netted against the Company's research and development expenses.

Research and development expenses for the three and six month periods ended June 30, 2017 decreased by 35% and 25%, respectively, from the same periods the previous year. The decreases are due primarily to the fewer number of engineering full mask tape-outs carried out in the three and six months ended June 30, 2017 as compared to the same periods ended June 30, 2016. There were no full mask tape-outs during the three and six months ended June 30, 2017 whereas two full tape-outs were carried out during the three and six months ended June 30, 2016. Full mask tape-outs typically cost \$200,000 to \$250,000.

### **Sales and Marketing**

Sales and marketing expenses consist primarily of salaries and related expenses, travel and the cost of trade shows, product promotion, customer technical support and market research.

Sales and marketing expenses for the three months ended June 30, 2017 increased by 1% from the same period of the previous year. During the first quarter of 2017, the Company began the expansion of its sales force in Asia and North America to more effectively address and grow its customer base. In May 2017, the Company appointed Gerald Hamilton as Senior Vice President, Worldwide Sales. As a result of these additions, payroll and travel costs in sales and marketing have increased during the second quarter of 2017.

Sales and marketing expenses for the six months ended June 30, 2017 decreased by 17% from the same period of the previous year. Prior to the expansion of the sales team, the Company had taken steps starting in 2016 to manage costs through reductions in expenses relating to part-time hourly staff and external contractors. In addition to these actions, sales and marketing expenses benefitted from the reclassification of resources to research and development.

## **General and Administrative**

General and administrative expenses relate to finance and administration and consist of salaries and related expenses, provision for vacation liability, legal and audit fees, insurance, expenses related to public reporting and compliance, travel, and other corporate expenses.

General and administrative expenses for the three and six month periods ended June 30, 2017 increased by 6% and 9%, respectively from the same periods the previous year. The increase in general and administrative was mainly due to higher compensation costs related primarily to the expansion of the Company's operations staff in North America and Asia.

## **Amortization of Intangible Assets other than Licenses**

Intangible assets other than licenses include the software and technology and customer relationships acquired from RedMere in February 2013, and were amortized on a straight line basis over their estimated useful lives of three years. The period during which the assets were amortized ended on January 31, 2016. Accordingly, there was no amortization during the three and six months ended June 30, 2017 and one month of amortization during the six months ended June 30, 2016.

## **Depreciation of Property and Equipment**

Depreciation of property and equipment for the three and six month periods ended June 30, 2017 decreased by 1% and increased by 2%, respectively from the same periods the previous year. Other than new office furniture and leasehold improvements for the new US headquarters in San Jose, the Company has not made significant capital purchases during the three and six months ended June 30, 2017.

## **Share-based Compensation**

Share-based compensation is the expense associated with the fair value of options and restricted share units ("RSUs") granted to employees, officers, directors and consultants and are estimated at the date of grant using the Black Scholes option pricing model.

The share-based compensation expense recovery during the three months ended June 30, 2016 and the significantly lower expense recognized in the six months ended June 30, 2016 were as a result of the cancellation of unvested stock options and RSUs on the passing in May 2016 of the former CEO, Tony Stelliga.

## **Finance expense - interest / fees**

Finance expense - interest / fees represents interest and other costs related to financing. Finance expense - interest / fees for the six months ended June 30, 2016 relate to the interest on the previous bank term loan and the pay-off fees charged by the bank on the full repayment of the loan on March 30, 2016.

## **Accretion Expense**

Accretion expense started on March 30, 2016 with the closing of the Loan Facility. Pursuant to the terms of the Loan Facility, the Company issued to the lenders an aggregate of 855,010 Common Share purchase warrants (each, an "Initial Loan Warrant") with each Initial Loan Warrant being exercisable into one Common Share until March 30, 2021, at a price of CDN \$0.60 per share, subject to adjustment in certain circumstances.

At the inception of the Loan Facility, since the number of Common Shares to be issued by the Company upon the exercise of the Warrants is not fixed and fail the "fixed-for-fixed" criteria for equity classification, the Initial Loan Warrants have been classified as a derivative liability and accounted for separately from the Loan Facility. The fair value of the Loan Facility was then determined as the difference between the face value of the Loan Facility and the fair value of the derivative liability. Subsequently, the Loan Facility is being carried at amortized cost. Accretion expense represents the change in the stated value of the Loan Facility measured at amortized cost and also includes interest expense for the period.

On May 15, 2017, the Company signed the Amended Loan Facility that became effective on June 27, 2017 upon the satisfaction of certain conditions. In consideration for entering into the Amended Loan Facility, the Company paid \$48,850 of financing costs and issued warrants to purchase up to 750,000 Common Shares (the "Loan Amendment Warrants") with each Loan Amendment Warrant being exercisable until June 29, 2022 into one Common Share at an exercise price of CDN \$0.39, subject to adjustment in certain circumstances. Since the number of Common Shares to be issued by the Company upon exercise of the Loan Amendment Warrants are not fixed and fail the "fixed for fixed" criteria for equity classification, the Loan Amendment Warrants have been classified as a derivative liability. Since present value cash flows under the Amended Loan Facility, including the financing costs and cost of warrants issued, differed less than 10% from the present value of the remaining cash flows of the Loan Facility, the Amended Loan Facility has been accounted for as a loan modification by adjusting the carrying value of the loan facility for both the financing costs paid and cost of the Initial Loan Warrants and the Loan Amendment Warrants issued.

Accretion expense for the six months ended June 30, 2017 represents loan amortization for the period from January 1, 2017 to June 30, 2017 whereas accretion expense for the six months ended June 30, 2016 represents the loan amortization from the start of the Loan Facility on March 30, 2016 to June 30, 2016.

### **Change in Derivative Liability**

The value of the derivative liability at December 31, 2016 and March 31, 2017, which represents the value of the Initial Loan Warrants, was \$0.039 million and \$0.063 million, respectively. The Loan Amendment Warrants added to derivative liability on June 27, 2017 was valued at \$0.069 million. The derivative liability on June 30, 2017, representing the aggregate values of Initial Loan Warrants and the Loan Amendment Warrants on June 30, 2017 of \$0.037 million and \$0.070 million, respectively, was \$0.107 million. The change in the value of the Initial Loan Warrants since the previously reported value on March 31, 2017 and the change in the value of the Loan Amendment Warrants since their issuance on June 27, 2017 are recognized in the statement of loss and comprehensive loss.

The value of the Initial Loan Warrants and the Loan Amendment Warrants are determined using the Black Scholes option pricing model using assumptions in the risk free interest rate, expected life of the warrants and expected volatility of Company's share price.

### **Foreign Exchange Loss**

The loss or gain on foreign exchange is caused by changes in the value of the Canadian dollar and Euro relative to the US dollar, the amount of exposed assets and liabilities such as cash, accounts receivables and accounts payable and the difference in exchange rate at the time expenses in Canadian dollars and Euros are booked and paid. Gains occur when the non-US currency strengthens and the Company holds exposed net assets in those funds or when the non-US currency weakens and the Company holds net exposed liabilities. Conversely, losses occur when the non-US currency weakens and the Company holds net exposed assets in those funds or when the non-US strengthens and the Company holds net exposed liabilities.

The Company incurred a foreign exchange gain during the three and six month periods ended June 30, 2017 in comparison to the foreign exchange losses incurred in the same periods of the previous year. The foreign exchange loss in the previous year stems from non-US currencies held by the Company during a period of a devalued US dollar.

### **Net Loss and Other Comprehensive Loss**

Net loss for the three and six months ended June 30, 2017 were \$1.8 million and \$4.1 million, a decrease of 31% and 20%, respectively from the net loss for the same periods of the previous year. The decrease in net loss is mainly due to the higher sales revenue and reduced operating expenses during the current year.

Other comprehensive loss relates to the unrealized foreign currency effect of translating the Company, whose functional currency is Canadian dollars, to US dollars for financial reporting purposes.

### **Loss per Share**

Basic earnings and loss per share is calculated by dividing the profit and loss attributable to Common Shares by

the weighted average number of Common Shares outstanding during the period. Diluted earnings and loss per share is calculated by adjusting the earnings and number of shares for the effects of dilutive options and other potentially dilutive securities. The weighted average number of Common Shares used as the denominator in calculating diluted loss per share excludes un-issued Common Shares related to warrants, RSUs and stock options, as they are anti-dilutive.

Basic and diluted loss per share for the three and six months ended June 30, 2017 were \$0.01 and \$0.03 per share, respectively as compared to \$0.02 and \$0.04 per share for the three and six months ended June 30, 2016.

### Summary of Quarterly Data

The table below sets forth selected financial data for the most recent eight quarters ended June 30, 2017.

*(In thousands, except for loss per share)*

	Fiscal 2015		Fiscal 2016				Fiscal 2017	
	Sept 30	Dec 31	Mar 31	Jun 30	Sept 30	Dec 31	Mar 31	Jun 30
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	938	1,557	2,540	2,601	1,045	2,460	2,662	3,082
Cost of sales	368	838	957	1,167	474	991	1,057	1,147
Gross margin	570	719	1,583	1,434	571	1,469	1,605	1,935
Expenses	4,859	4,128	4,116	3,977	3,609	4,522	3,921	3,690
Net loss	(4,289)	(3,409)	(2,533)	(2,543)	(3,038)	(3,053)	(2,316)	(1,755)
Other comprehensive (loss) gain	(72)	(6)	(10)	(2)	1	(14)	1	(15)
Total comprehensive loss	(4,361)	(3,415)	(2,543)	(2,545)	(3,037)	(3,067)	(2,315)	(1,770)
Loss per share								
Basic and Dilutive	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)

Revenues in the consumer semiconductor industry are subject to seasonality driven by consumer purchasing cycles and manufacturers unique product development cycles. The Company also licenses intellectual property which may have significant one time payments that can increase revenue in the quarter it is recognized.

Historically, the Company's operating results have fluctuated on a quarterly basis and management believes they will continue to fluctuate. If anticipated sales and shipments in any quarter do not occur as and when expected, expenses and inventory levels will be disproportionately high and operating results for that quarter and future quarters may be adversely affected. In addition, because of historical variations in the operating results, the limited operating history of the Company and the rapid evolving nature of the business, period to period comparisons of the Company's operating results, including gross margin and operating expenses as a percentage of total revenue, are not necessarily meaningful and should not be relied upon as indication of future performance.

### Issued and Outstanding Share Capital

The Company's authorized capital consists of an unlimited number of Common Shares, of which 162,840,711 Common Shares are issued and outstanding as of the date of this MD&A.

At the annual and special meeting of holders of Common Shares (the "Shareholders") held on June 15, 2017, Shareholders approved amendments to both the Company's stock option plan (the "Stock Option Plan") and the restricted share unit plan (the "RSU Plan") to provide that the combined maximum number of Common Shares reserved for issuance under both the Stock Option Plan and the RSU Plan, inclusive of existing stock options

and restricted share units ("RSUs"), shall not exceed 29,450,000 Common Shares, representing approximately 1% of the issued and outstanding Common Shares as of the date of this MD&A.

As of the date of this MD&A, options to purchase an aggregate of 6,019,152 Common Shares are outstanding, 7,485,161 RSUs are outstanding, 2,635,072 Common Shares have been issued under the RSU Plan and an aggregate of 15,945,687 Common Shares are available for grant or award under the Stock Option Plan and/or the RSU Plan.

As of the date of this MD&A, there are outstanding compensation options to purchase up to 2,100,941 Common Shares, Initial Loan Warrants outstanding to purchase up to 855,010 Common Shares, Loan Amendment Warrants outstanding to purchase up to 750,000 Common Shares and Warrants outstanding to purchase up to 7,679,124 Common Shares.

## **Loan Financing**

On March 30, 2016, the Company closed the Loan Facility. The Loan Facility is for a 36 month term with interest payable monthly in arrears at an annual rate of one month LIBOR plus 8.50%, subject to a LIBOR floor of 0.50%. Interest only is payable for the first 12 months of the term with the principal and interest thereafter amortized on a straight-line basis until the maturity date. The Loan Facility is secured by a first charge over all of the existing and subsequently acquired assets of the Company and each of its subsidiaries other than its subsidiary located in China. The Company used a portion of the net proceeds from the Loan Facility to repay the remaining indebtedness under the Company's prior secured bank loan.

Pursuant to the terms of the Loan Facility, the Company issued to the lenders an aggregate of 855,010 Warrants with each Warrant being exercisable into one Common Share until March 30, 2021 at a price of CDN\$ 0.60 per share, subject to adjustment in certain circumstances.

On May 15, 2017, the Company signed the Amended Loan Facility that became effective on June 27, 2017 upon the satisfaction of certain conditions. In consideration for entering into the Amended Loan Facility, the Company issued the Loan Amendment Warrants.

The agreement governing the Amended Loan Facility imposes covenants and obligations on the Company, including a covenant to meet certain trailing revenue targets. In particular, the Amended Loan Facility contains certain covenants and representations and warranties, the breach of which could result in a default and the acceleration of maturity of the Amended Loan Facility, the lenders realizing on their security, or diminished availability of refinancing alternatives or increase the associated costs thereof. At June 30, 2017, the Company was in compliance with the covenants contained in the Amended Loan Facility.

The Company plans to address the risk of default by endeavoring to meet the revenue covenants and other obligations in the Amended Loan Facility. There is no assurance, however, that the Company will be in compliance with covenants in the future due to unforeseen events or circumstances and if the Company was to default there is no assurance that an amendment or waiver will be granted by the lenders.

## **Liquidity and Capital Resources**

Historically, the Company has funded its operations from the sale of equity securities and from debt financing.

On June 27, 2017 and July 21, 2017, the Company closed the Offerings. The Public Offering was underwritten by a syndicate of underwriters led by Canaccord Genuity Corp. and including Eight Capital and Echelon Wealth Partners Inc. (the "Underwriters") for aggregate gross proceeds, including Units issued for related services, of CDN \$5,992,300.

In consideration for the services provided by the Underwriters, the Company paid commissions to the Underwriters in the form of \$94,765 (CDN \$125,000) in cash and 377,500 Units at CDN \$0.40 per Unit. In addition, the Company issued to the Underwriters an aggregate of 690,000 non-transferable compensation options to the Underwriters (the "Compensation Options"). Each Compensation Option is exercisable into one Common Share at a price of CDN \$0.40 until June 27, 2019.

The Company's objectives are to grow revenue by expanding its product lines and entering new markets, to

finance investment in research and development and to ensure that capital resources are readily available to meet obligations as they become due. Liquidity risk arises when the Company is challenged to fund its on-going operations through either the sale of equity or bank loans.

The Company may face challenges in generating sufficient amounts of cash and cash equivalents in the short-term and potentially beyond due to such factors as:

- challenges in the supply chain whereby lead times to secure components can run between 8-20 weeks and often require the Company to prepay or make deposits to secure the components;
- delays in the development of new products which can delay market entry dates;
- acceptance of new products in the market and sales volatility as a result of transitions to new product lines; and
- repayment of the Amended Loan Facility commencing on June 1, 2018 at the rate of \$595,833 per month for 10 months or \$270,833 per month for 22 months, should the Company upon satisfaction of certain conditions precedent choose to exercise the option to extend the maturity date for one year.

The following table summarizes the working capital and cash as at June 30, 2017 and December 31, 2016:

	<b>As at</b>			
	<b>(In thousands)</b>			
	<b>June 30, 2017</b>	<b>December 31, 2016</b>	<b>Change</b>	
	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>%</b>
Current assets	8,939	6,576	2,363	36%
Current liabilities	4,073	4,182	(109)	(3%)
Loan in current liabilities	(311)	(2,167)	1,856	(86%)
Derivative liability	(107)	(39)	(68)	174%
	<u>3,655</u>	<u>1,976</u>	<u>1,679</u>	<u>85%</u>
Working capital excluding loan and derivative liability	<u>5,284</u>	<u>4,600</u>	<u>684</u>	<u>15%</u>
Cash	<u>3,777</u>	<u>2,114</u>	<u>1,663</u>	<u>79%</u>

As at June 30, 2017, the Company had working capital excluding loan and derivative liability of \$3.8 million, compared to \$2.1 million as at December 31, 2016. The higher working capital is due mainly to the higher cash balance on June 30, 2017 from the funds received upon closing of the Offerings on June 27, 2017.

The Company is dependent on growth in revenue in the next year to fund future operations. Should expected revenues not materialize, the Company may require further sale of debt or equity securities, additional bank financing or other sources of funds in order to meet its obligations. See the section "Risks and Uncertainties" below.

The following table summarizes the cash inflows and outflows by activity for the periods indicated:

	<b>Three Months Ended June 30,</b>				<b>Six Months Ended June 30,</b>			
	<b>(In thousands)</b>				<b>(In thousands)</b>			
	<b>2017</b>	<b>2016</b>	<b>Change</b>		<b>2017</b>	<b>2016</b>	<b>Change</b>	
	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>%</b>

	Three Months Ended June 30, (In thousands)				Six Months Ended June 30, (In thousands)					
	2017		2016		2017		2016		Change	
	\$	\$	\$	%	\$	\$	\$	%	\$	%
Cash generated by (used in)										
Operating activities	(22)	(3,576)	3,554	(99%)	(1,151)	(5,293)	4,142	(78%)		
Financing activities	3,252	(169)	3,421	(2024%)	3,093	4,774	(1,681)	(35%)		
Investing activities	(204)	(137)	(67)	49%	(279)	(311)	32	(10%)		
Effect of exchange rate changes	(2)	1	(3)	(300%)	-	5	(5)	(100%)		
Increase (decrease) in cash	3,024	(3,881)	6,905	(178%)	1,663	(825)	2,488	(302%)		

## Operating Activities

The Company's cash used in operating activities over the three and six months ended June 30, 2017 increased by \$3.6 million or 99% and \$4.1 million or 78%, respectively over the same periods in the prior year. The increase is attributed to the higher sales and overall lower operating expenses in the three and six months ended June 30, 2017.

## Financing Activities

Cash inflow from financing activities for the three months ended June 30, 2017 was \$3.25 million as compared to the cash outflow of \$0.17 million in the same period of the previous year. The net inflow during the three months ended June 30, 2017 was due to the \$4.03 million in net proceeds raised from the Offerings that closed on June 27, 2017.

Cash inflow from financing activities over the six month period ended June 30, 2017 was lower by \$1.68 million compared to the same period of the previous year. On March 30, 2016, the Company received \$6.5 million from the Loan Facility and paid \$0.5 million in financing costs and \$0.8 million towards the remaining balance of the bank term loan for a net cash inflow of \$5.2 million.

## Investing Activities

Investing activities for the three months ended June 30, 2017 were higher by \$0.07 million or 49% over the three months ended June 30, 2016. The increase is due mainly to the leasehold and furniture expenditures related to the move in May 2017 of the US office from Palo Alto to San Jose, California. The amount of investing activities during the six months ended June 30, 2017 was consistent with the spending during the same period of the previous year.

## Off-Balance Sheet Arrangements

The Company currently has no off-balance sheet arrangements.

## Transactions Between Related Parties

The Company transacts with key individuals from management and its directors who have authority and responsibility to plan, direct and control the activities of the Company. The nature of these dealings was in the form of payments for services rendered in their capacity as employees and as directors of the Company.

The Company's key management personnel are comprised of the Board of Directors and current and former members of the executive team of the Company.

Certain directors and officers of the Company purchased 843,250 Units pursuant to the first tranche of the Private Placement which closed on June 27, 2017.

Key management personnel compensation is comprised of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	\$	\$	\$	\$
Salaries, fees and short-term benefits	434,999	431,112	859,870	804,783
Share-based benefits	337,139	(193,152)	632,822	(106,805)
	<b>772,138</b>	237,960	<b>1,492,692</b>	697,978

### Critical Accounting Estimates

The Company's significant accounting policies and accounting estimates under IFRS are contained in the Statements (see Note 3 to the Interim Financial Statements for a summary of significant accounting policies). Certain of these policies involve critical accounting estimates as they require us to make particularly subjective or complex judgments about matters that are inherently uncertain and because of the likelihood that materially different amounts could be reported under different conditions or using different assumptions.

### Changes in Accounting Policies

The Statements are prepared in accordance with IFRS. There have been no changes in accounting policies since the publication of the Interim Financial Statements. Please refer to Note 3 of the Interim Financial Statements that report for accounting policies and Note 4 for accounting standards issued but not yet effective.

### Financial Instruments and Risk Management

The Company may be exposed to risks of varying degrees of significance that affect its ability to achieve its strategic objectives. The main objectives of the Company's risk processes are to ensure that the risks are properly identified and that the capital base is adequate in relation to those risks. The principal risks to which the Company is exposed to are as follows:

#### Fair Value

The fair value of cash and cash equivalents, trade and other receivables, investment tax credits, accounts payable and accrued charges, obligations under finance lease and license liabilities approximate their carrying values due to their immediate or short-term maturity.

#### Foreign Currency Risk

The Company's revenues and cost of sales are denominated in United States dollars. The Company incurs expenses in United States dollars, Euros and Canadian dollars. The Company has historically raised capital denominated in Canadian dollars. The Loan Facility is in United States dollars. The Company is therefore exposed to gains or losses due to fluctuations in foreign currency exchange rates. Management believes the foreign exchange risk derived from currency conversions is currently low and therefore does not actively hedge its foreign currency risk.

#### Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in market interest rates. Interest rate risk associated with the Company's previous and new term loan arises from fluctuations in interest rates and the degree of volatility of these rates. The Loan Facility Agreement provides for an annual rate of one month LIBOR plus 8.50%, subject to a LIBOR floor of

0.50%. The Company does not use derivative financial instruments to reduce its exposure to interest rate risk.

### **Credit Risk**

Credit risk is the risk of loss associated with counterparty's inability to fulfill its payment obligations. The Company's credit risk is primarily attributable to trade and other receivables and money held in the Company's bank accounts. The Company mitigates this risk by insuring the majority of its accounts receivables with the Export Development Corporation. For un-insured accounts receivables the Company monitors the credit worthiness of its customers and only dealing with creditworthy counterparties.

### **Liquidity Risk**

The Company's objective in managing liquidity risk is to maintain sufficient readily available reserves in order to meet its liquidity requirements at any point in time. The Company achieves this by maintaining sufficient cash, managing cash from operations and if required through financing activities.

### **Risks and Uncertainties**

The Company is subject to various business, financial and operational risks that could materially adversely affect the Company's future business, operations and financial condition and could cause such future business, operations and financial condition to differ materially from the forward-looking statements and information contained in this MD&A. The risks and uncertainties described herein are not the only ones the Company faces. For a more comprehensive discussion of the risks faced by the Company, please refer to the Company's annual MD&A for the year ended December 31, 2016 available at [www.sedar.com](http://www.sedar.com).

### **Disclosure Controls and Procedures**

In accordance with the requirements of National Instrument 52-109-*Certification of Disclosure in Issuers' Annual and Interim Filings*, the Company's management, including the CEO and the Chief Financial Officer ("CFO"), have designed the Company's disclosure controls and procedures to provide reasonable assurance that the information required to be disclosed by the Company in reports it files is recorded, processed, summarized and reported within the appropriate time periods and forms.

### **Internal Control over Financial Reporting**

Internal control over financial reporting ("ICFR") is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with applicable IFRS. Internal control over financial reporting should include those policies and procedures that establish the following:

- maintenance of records in reasonable detail, that accurately and fairly reflect the transactions and dispositions of assets;
- reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with applicable IFRS;
- receipts and expenditures are only being made in accordance with authorizations of management or the Board of Directors; and
- reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial instruments.

During the three and six months ended June 30, 2017, the Company did not make any significant changes to its internal controls over financial reporting that would have materially affected, or reasonably likely to materially affect, its internal controls over financial reporting.

### **Limitations of Disclosure Controls and Procedures and Internal Control over Financial Reporting**

The Company's management, including the CEO and CFO, believe that due to inherent limitations, any

disclosure controls and procedures or internal control over financial reporting, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that any design will not succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and not be detected. Additionally, management is required to use judgment in evaluating controls and procedures.

### **Additional Information**

Additional information relating to the Company can be found on SEDAR at [www.sedar.com](http://www.sedar.com).

### **Approval**

The Board of Directors of the Company has approved the disclosure contained in this MD&A.