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24th Annual Needham Virtual Growth Conference January 14, 2022

Safe Harbor

Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995

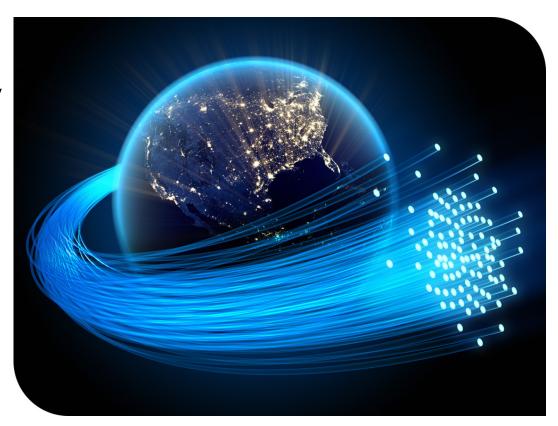
This presentation includes information that constitutes "forward-looking statements" made pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties. These statements include the company's expectations regarding the company's future financial performance, including 2021 guidance, and market recognition of key technologies and demand for its products, backlog, sales growth, the company's overall growth potential, its balance sheet and capitalization and access to capital, its technological advantages and capabilities, its strategic position, and corporate and leadership culture. Management cautions the reader that these forward-looking statements are only predictions and are subject to a number of both known and unknown risks and uncertainties, and actual results, performance, and/or achievements of the company may differ materially from the future results, performance, and/or achievements expressed or implied by these forward-looking statements as a result of a number of factors. These factors include, without limitation, failure of demand for the company's products and services to meet expectations, failure of target markets to grow and expand, technological, operational and strategic challenges, uncertainties related to the ongoing impact of the COVID-19 pandemic and those risks and uncertainties set forth in the company's periodic reports and other filings with the Securities and Exchange Commission ("SEC"). Such filings are available on the SEC's website at www.sec.gov and on the company's website at www.lunainc.com. The statements made in this presentation are based on information available to Luna as of the date of this presentation, January 14, 2022, and Luna undertakes no obligation to update any of the forward-looking statements after the date of this presentation, except as required by law.

Adjusted Financial Measures

In addition to U.S. GAAP financial information, this presentation includes Adjusted EBITDA and Adjusted EPS, which are non-GAAP financial measures. These non-GAAP financial measures are in addition to, and not a substitute for or superior to, measures of financial performance prepared in accordance with U.S. GAAP. A reconciliation of Net Income to Adjusted EBITDA and Net Income to Adjusted EPS are included in the appendix to this presentation.

Luna – Enabling the Future with Fiber

- Positioned as a global fiber optic leader
- Proprietary measurement technology, offering unprecedented combination of resolution, accuracy and speed
- Customers in attractive markets: Military and Defense, Communications, Infrastructure, Energy, Automotive and Aerospace
- Positioned to take advantage of trends such as vehicle lightweighting, smart infrastructure, and increasing demands on data centers and broadband capacity
- Adequately capitalized to fund growth
- Long-tenured, experienced executive team / board
- Corporate culture of innovation and integrity



Luna is a global company



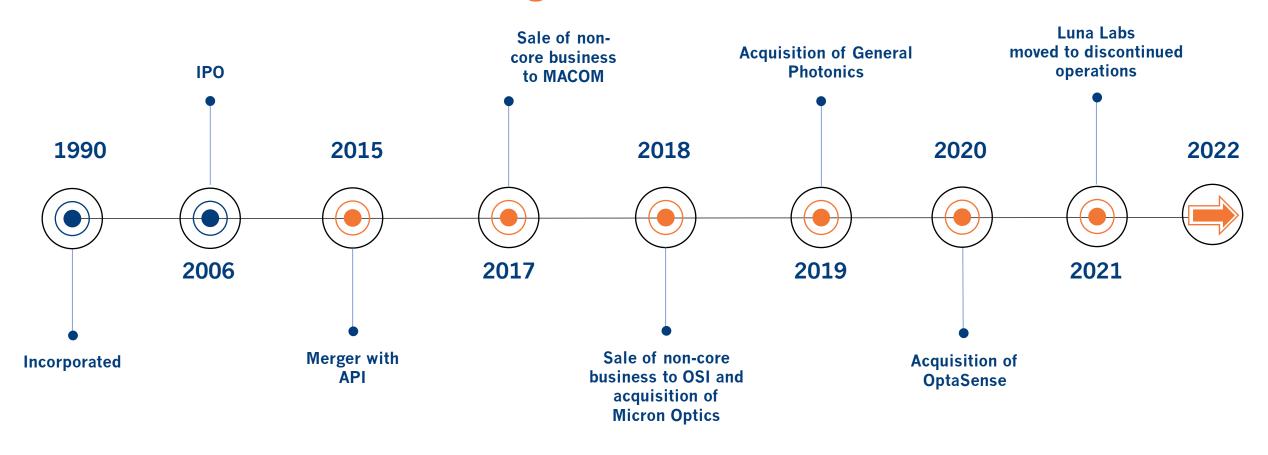
¹ Results shown include the reclassification of Luna Labs to Discontinued Operations.

² Adj EBITDA is a non-GAAP measure. Reconciliation of comparable GAAP measures to non-GAAP measures are included at the end of this presentation.

³ Reflects guidance provided on November 15, 2021. This is not a reaffirmation of guidance.

Luna has a clear vision and established history

Vision: Enabling the Future with Fiber



Luna Today and Into the Future:

A Compelling business model with strong growth potential

Revenue Growth



Organic Growth: Mid-to High-teens

18% to 20%

Strategic M&A

Within core focus and accretive

Bottom-Line Focus



Gross Margin 60%

AEBITDA

15%-20% of Revenue

Shareholder Return

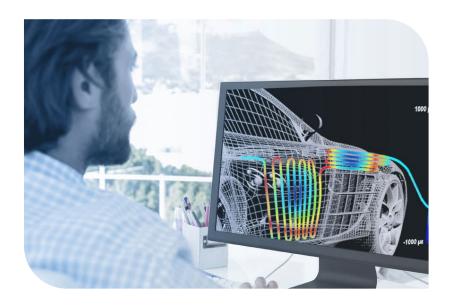


Continued Cash Generation

while investing for growth

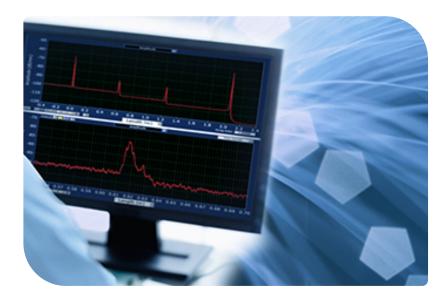
Increasing Non-GAAP EPS

Luna Overview



Sensing

- Short-range, high resolution
- Long-range, high speed
- Long-range, continuous
- Material thickness

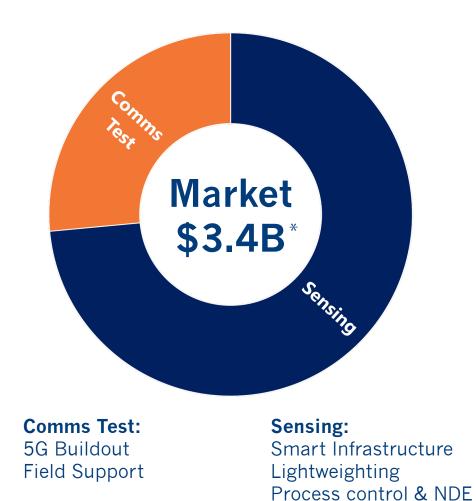


Comms Test

- Components
- Short-haul network

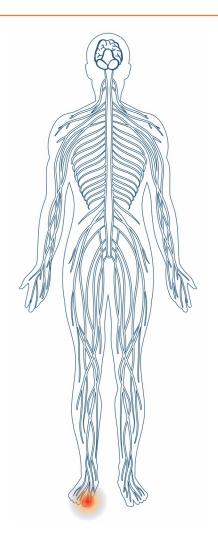
Where Does Luna Play?

	Comms Test	Sensing
Market size*	\$900M	\$2.5B
Luna growth	15%-20%	20-25%
Drivers	5G, Silicon Photonics	Lightweighting, Smart Infrastructure, IoT
Key competition	Keysight, Viavi, Exfo	HBM, Vishay, National Instruments



^{*}Total SAM based on Luna estimates and published market reports

Sensing



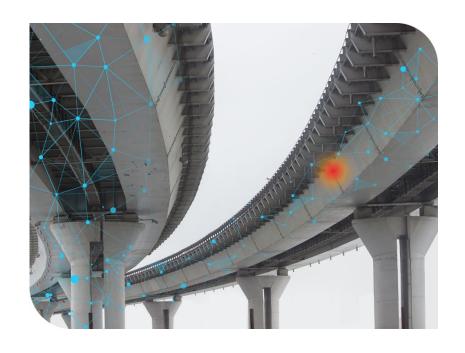
- Fiber optic sensors are the "nerves" of smart materials
- Luna's products are the "brain" that collects and aggregates data from fiber sensor "nerves"
- The new OptaSense acquisition will add missing capability to Luna's Sensing business

Sensing: Short-range, high-resolution



- Product: ODiSI
- High-Definition Fiber Optic Sensing
 - Measuring strain and temperature in composites and other advanced materials
 - Focus on military and commercial aerospace and automotive

Sensing: Long-range, high-speed



- Product: Hyperion
- High-Speed, Long-Range FBG Sensing
 - Measuring strain, temperature, acceleration, displacement and pressure
 - Focus on structural health and security
 - Buildings, tunnels, bridges
 - Perimeter security

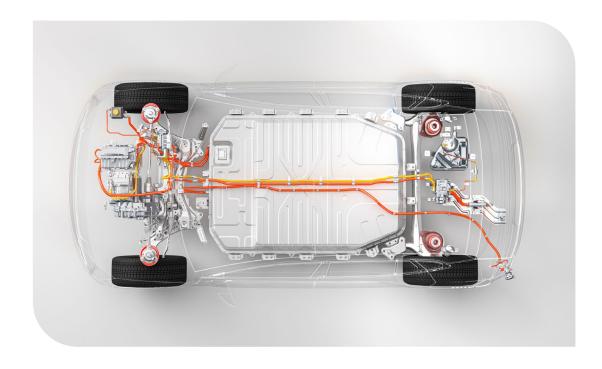


Sensing: Long-range, continuous



- Product: OptaSense
- Market Leader in Long-Range Distributed Acoustic Sensing (DAS)
 - Proprietary distributed acoustic sensing and software analytics
 - Measure acoustic signals continuously using fiber over very long lengths (50 km)
 - Markets
 - Boarders, perimeter security, transportation, pipelines, oil and gas

Sensing: Material thickness



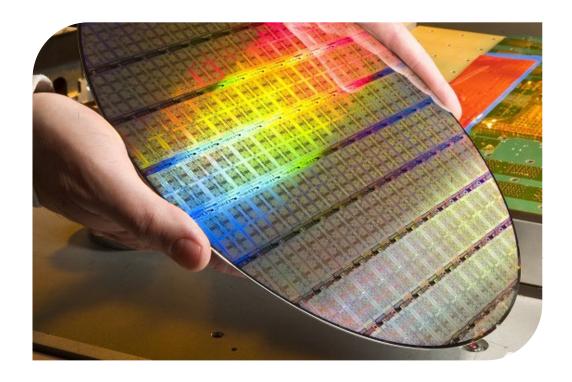
- Product: Terahertz technology
- Layer thickness measurements for process control, inspection and non-destructive testing
 - Advanced technology measures thickness of opaque materials
 - Unique measurement of composites and coatings with easy-to-use hand-held tools
 - Focus on manufacturing environments and field test for military-aerospace
 - Plastic and industrial packaging
 - Used extensively on F35 and F22 for anti-radar surface treatment
 - Optimization of EV battery production

Comms Test



- Increased data and video consumption
 - Video forecasted to represent 82% of all IP traffic in 2022, 34% CAGR
- Growth in mobile and 4G/5G
 - Mobile data traffic growing at 46% CAGR
- Cloud services and adoption of Internet of Things
 - Data center traffic growing at 26% CAGR
 - 28.5 billion IoT networked devices by 2022

Comms Test: Components



- Product: Optical Vector Analyzer (OVA)
- Ensuring speed at the chip level
- Unprecedented visibility inside devices you can't fix what you can't see
- Reduces time and cost associated with the development of high-speed optical components
- Focus on enabling the carriers to move to 5G networks

Comms Test: Short-haul network



- Product: Optical Backscatter Reflectometer (OBR)
- Bandwidth demands continue to drive double-digit connectivity growth
- Delivers unprecedented visibility into short-haul networks
- Emerging market for on-board aircraft communications
- Ensuring network "up time" on Lockheed Martin's F-35



3Q FY21 Results

Third-Quarter 2021: Key Financial Results

- Revenues of \$20.3M; up 32% year-over-year
 - Beginning in Q3 with the classification of Luna Labs to discontinued operations, Luna now reports as one segment
 - Luna becomes a pure play based on its fiber optic technology; Lightwave = Luna
- Gross Margin of 62%, compared to 63% for the prior-year period
 - Increase to the low/mid 60% range, compared to the low 50% range
 - Historically, this metric included the gross margin of Luna Labs
- Operating loss of \$10K, compared to operating income of \$1.2M for the prior-year period
 - Decrease primarily due to increase in operating expenses and amortization related to our recent acquisitions
- Adjusted EBITDA¹ of \$2.1M, compared to \$3.1M for the prior-year period
- Adjusted EPS¹ of \$0.03, compared to \$0.11 for the prior-year period

¹Adj EPS and EBITDA are a non-GAAP measures. Reconciliation of comparable GAAP measures to non-GAAP measures are included in the appendix to this presentation.

Third-quarter 2021 Highlights

- Continued focus on Luna's mission to "enable the future with fiber" by moving Luna Labs to discontinued operations
- Returned to international travel, including onsite visits to OptaSense locations
- Recorded largest backlog in company history
- Continued successful penetration of distributed sensing solutions in key, target markets
 - Infrastructure and security
 - Delivered large order for infrastructure monitoring in the mining space to South American customer
 - First significant order for DAS products with new, "quantitative" features for monitoring strain and temperature
 - Landed large deal for perimeter monitoring system in Indonesia
 - Won competitive bid for a monitoring system for a major bridge in the southeast U.S. using Hyperion and associated sensors
 - Oil and Gas
 - Large, multi-unit order for Hyperion-based monitoring solution for off-shore oil and gas infrastructure
 - Oilfield business for DAS products seeing increasing uptake as confidence grows entering Q4
 - Carbon sequestration market beginning to recognize value of DAS technology with several key wins in Q3
 - Transportation
 - Large win for traffic monitoring system with a western U.S. DOT
 - Further validation of DAS technology for real-time traffic monitoring systems

Third-quarter 2021 Highlights (continued)

- Continued sales momentum for Terahertz products for industrial process control market
 - Record bookings with multiple, large "Blue-chip" customer wins in Q3
- Continued sales momentum for communications test products
 - Record bookings for high-speed optical analyzers (OVA/OBR)
 - Delivered first five OBR 6200, portable test systems for field support of the F-22 aircraft
 - First follow-on sale generated from successful deployment of OBR 6200 units for global fleet support of F-35
- Multiple large orders for laser and module products for multiple, growing applications
 - Significant new orders for RIO lasers from multiple LiDAR manufacturers
 - Large customer wins for polarization modules for applications in medical robotics, medical imaging, and defense-related high-power laser applications

A Flexible Balance Sheet

- Strong balance sheet on September 30, 2021:
 - \$129.7M in total assets
 - \$14.8M in cash and cash equivalents
 - \$49.0M in working capital
- Total debt of \$16.9M outstanding
 - \$9.4M in term debt
 - \$7.5M drawn on revolver
 - \$7.5M available
- Allows us to continue to deploy our capital to generate long-term sustainable growth by increasing organic sales, reinvesting in our business and identifying inorganic opportunities

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NASDAQ: LUNA

Appendix

Reconciliation of Net (Loss)/Income to Adjusted EBITDA¹

(in thousands)	Three Months Ended September 30,					Nine Months Ended				
						September 30,				
	2021		2020		2021		2020			
	(Unaudited)					(Unaudited)				
Reconciliation of EBITDA and Adjusted EBITDA										
GAAP net income/(loss)	\$	355	\$	3,102	\$	(193)	\$	3,355		
Income from discontinued operations, net of tax		699		794		2,371		1,469		
GAAP net income/(loss) from continuing operations		(344)	•	2,308		(2,564)	`	1,886		
Interest expense		110		1		375		2		
Investment income				(1)				(65)		
Income tax (benefit)/expense		224		(1,083)		(1,436)		(930)		
Depreciation and amortization		1,131		709		3,440		1,979		
EBITDA		1,121		1,934		(185)		2,872		
Share-based compensation		689		542		2,133		1,450		
Integration and transaction expense		196				2,073				
Loss on sale of property and facility moving expenses				668				668		
Amortization of Inventory step-up		104				440				
Adjusted EBITDA	\$	2,110	\$	3,144	\$	4,461	\$	4,990		

¹ Results shown include the reclassification of Luna Labs to Discontinued Operations.

Reconciliation of Net (Loss)/Income to Adjusted EPS¹

(in thousands, except per shar data)

	Three Months Ended			Nine Months Ended						
	September 30,					September 30,				
	2021 2020		2020	2021		2020				
	(Unaudited)			(Unaudited)						
Reconciliation of Net (loss)/Income to Adjusted EPS										
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Income from discontinued operations, net of tax		699		794		2,371		1,469		
GAAP net income/(loss) from continuing operations		(344)		2,308		(2,564)		1,886		
Adjustments:										
Share-based Compensation		689		542		2,133		1,450		
Integration and transaction expense		196				2,073				
Amortization of Intangible assets		761		424		2,353		1,236		
Amortization of Inventory Step-up		104				440				
Loss on sale of property and facility moving expenses				668				668		
Total adjustments:		1,750		1,634		6,999		3,354		
Income tax adjustment - benefit (expense)		(438)		(409)		(1,750)		(839)		
Adjusted (loss)/income from continuing operations	\$	968	\$	3,533	\$	2,685	\$	4,401		
Adjusted EPS	\$	0.03	\$	0.11		0.08		0.14		
Adjusted weighted average shares (in thousands):										
Diluted		33,781		32,411		33,586		32,479		

¹ Results shown include the reclassification of Luna Labs to Discontinued Operations.

Historical Quarterly Results¹

(in thousands) Three Months Ended

	Septem	ber 30, 2020	Decem	ber 31, 2020	March 31, 2021		March 31, 2021 June 30, 2021		September 30, 2021		
Revenues	\$	15,350	\$	19,278	\$	20,997	\$	21,965	\$	20,329	
Cost of revenues		5,718		7,523		8,726		9,384		7,745	
Gross Profit		9,632		11,755		12,271		12,581		12,584	
Gross Margin		63%		61%		58%		57%	62%		
Operating expense:											
Selling, general and administrative		5,805		7,714		9,222		11,048		8,717	
Research, development and engineering		1,615		1,996		2,917		1,810		2,920	
Amortization of Intangibles		424		478		826		766		761	
Integration and deal related expense		-		2,204		886		991		196	
Loss on sale and disposal of property and equipment		576		69		-		-		-	
Total operating expense		8,420		12,461		13,851		14,615		12,594	
Operating income/(loss)	\$	1,212	\$	(706)	\$	(1,580)	\$	(2,034)	\$	(10)	

¹ Results shown include the reclassification of Luna Labs to Discontinued Operations.