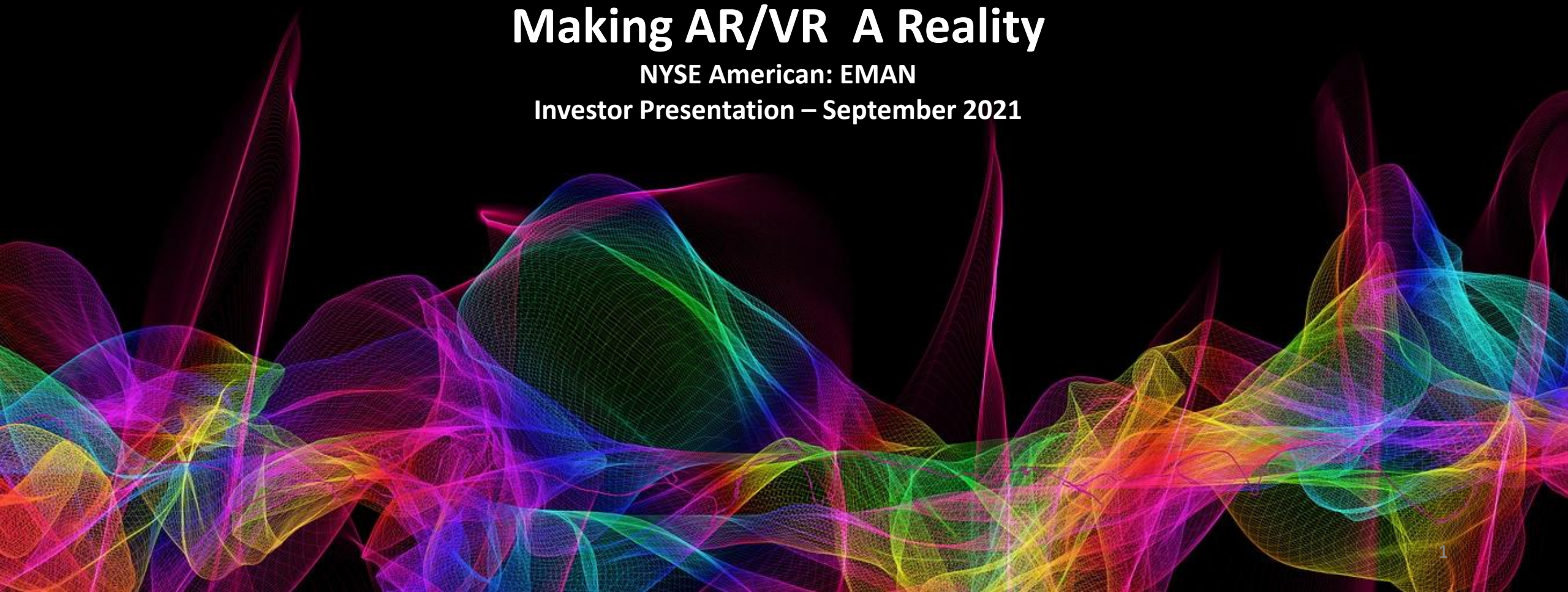




Making AR/VR A Reality

NYSE American: EMAN

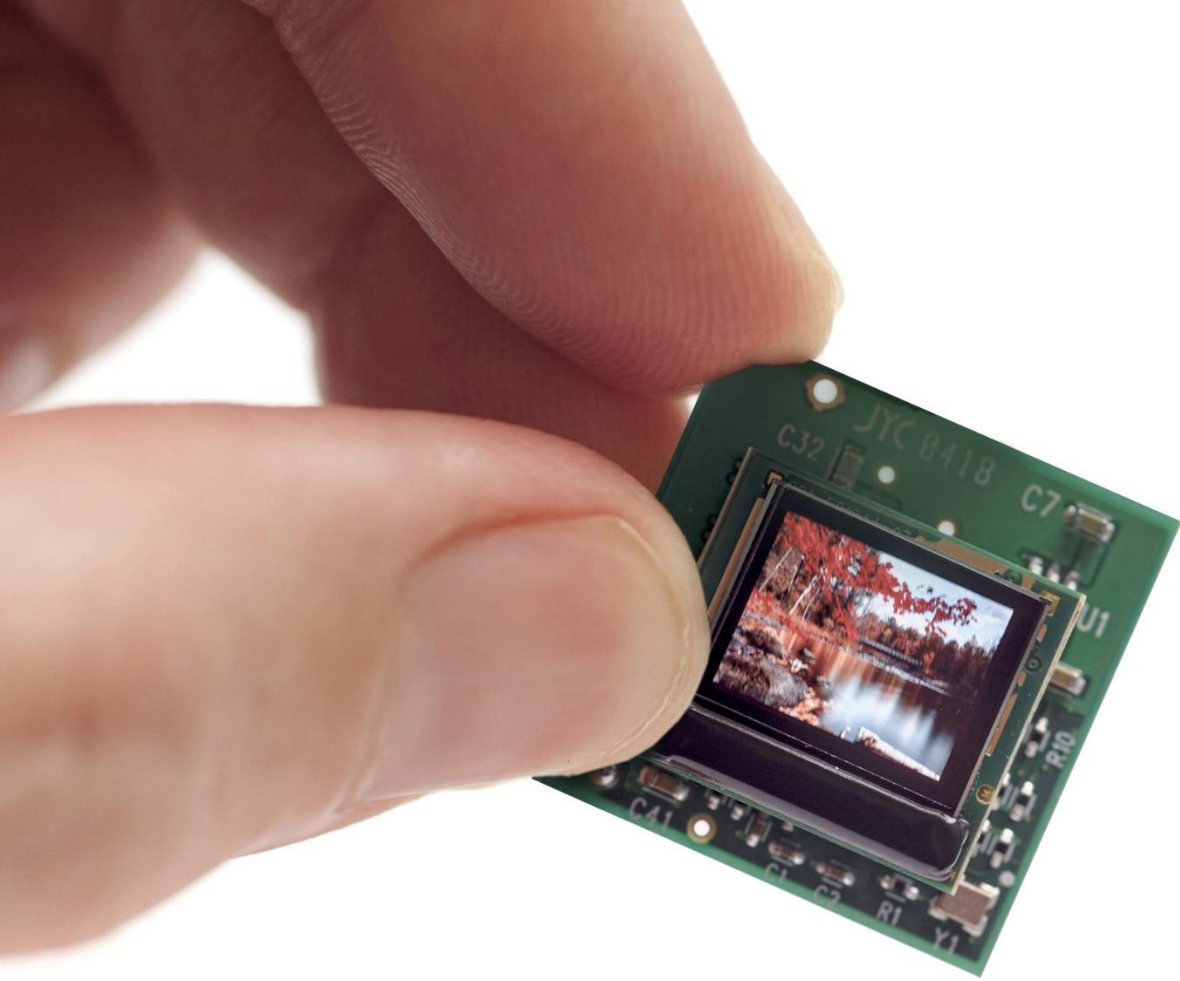
Investor Presentation – September 2021



Disclaimer

Certain statements made by us in this presentation that are not historical facts or that relate to future plans, events or performances are forward-looking statements within the meaning of the federal securities laws. Our actual results may differ materially from those expressed in any forward-looking statement made by us. Forward-looking statements involve a number of risks or uncertainties including, but not limited to, the risks described under the heading “Risk Factors” in the Company’s filings with the Securities and Exchange Commission, including, but not limited to, the Company’s Reports on Form 10-K for the year ended December 31, 2020. All forward-looking statements are qualified by those Risk Factors as well as the Company’s “Statement of Forward-Looking Information” in such filings. All statements made by us in this presentation are further qualified in all respects by the information disclosed in the Company’s filings with the Securities and Exchange Commission. These statements are only predictions. We are under no duty to update or revise any forward-looking statements to conform such statements to actual results or events, and do not intend to do so.

This presentation is the property of, and contains the proprietary and confidential information of the Company and is being provided solely for informational purposes. The projections, estimates and forecasts contained herein have been prepared by the Company in good faith based on assumptions believed by the Company to be reasonable at the time of preparation thereof. Forecasts and estimates regarding the Company’s industry and end markets are based on third party sources the Company believes to be reliable. There can be no assurance however that any particular projection, estimate, forecast or other forward-looking information will prove to be accurate in whole or in part or that any of the information contained herein is reflective of future performance to any degree. No representation or warranty is made with respect to the information included herein.



Vision:

***Enable the visualization
of digital information
and imagery with OLED
technology***

A Pioneering Technology Leader with a Broad IP Portfolio

1

A technology leader with proprietary and patented direct patterning technology (dPd™) for ultrahigh brightness in color, and the sole U.S. manufacturer of OLED microdisplays

2

Uniquely positioned to capitalize on growing addressable markets in military, industrial and consumer applications for high-brightness AR/VR solutions

3

U.S. government funding of approximately \$39 million for manufacturing supports equipment procurement and improvements in growth, innovation and productivity

4

Deep applications expertise and broad IP portfolio that is aligned with diverse customer base and long-term industry trends

5

Well-established military and aviation market presence benefiting from modernization trends; leverageable platform for high growth opportunities in consumer and commercial end markets

6

Highly experienced management team with industry-leading technical expertise enabling a substantial runway for value creation

eMagin at a Glance

Headquarters: **Hopewell Junction, NY**
Manufacturing: **U.S. Domiciled**
Employees: **100+**

Revenue: **\$29.4M in 2020**

- 85% from Product Sales, 15% Contracts
- 56% U.S., 46% International
- 30 countries served

Market Cap: **\$182.7M***
Ticker/Exchange: **EMAN / NYSE American**

Patents: **55 issued, 32 pending**

The technology leader in OLED Displays



Making AR/VR a reality

**Based on closing price on 8/30/21 and approximately 72.6 million shares outstanding.*

Leveraging Our Military Experience to Seize New Opportunities



H1 2021: Improvements in Backlog and Liquidity.



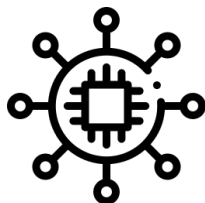
Financial Trends

- H1 2021 Product revenues totaled \$11.8 million, comparable to H1 2020 Product revenues of \$11.9 million
- H1 2021 Contract revenues of \$1.2 million declined from \$2.5 million in H1 2020 reflecting timing of contract deliverables.
- December 31, 2020, backlog of open orders of \$12.2 million, grew to \$16.0 million in July 2021.
- Cash and cash equivalents of \$8.3M as of December 31, 2020 increased to \$10.6 million at June 30, 2021.
- Expecting contract revenues to continue with development and scalability of dPd technology for consumer AR/VR



Operating Trends

- Continuing to supply sole-sourced displays under the Enhance Night Vision Goggle-Binocular (ENVG-B) program as it ramps to volume, as well as other key military programs worldwide
- In December 2020, signed a 10-year lease for 25% of additional space to house the new equipment, including equipment to be purchased for the Company's patented high-brightness dPd production process
- In H1 2021, took delivery of first pieces of equipment under \$39.1 million in U.S. government funding awarded to eMagin to enhance its manufacturing capabilities as the only U.S. provider of OLED microdisplays



Advancing Product Development

- Continue to see strong interest in high-brightness XLE and direct patterned technology
- Steady progress on the development efforts for dPd technology and high brightness product roadmap
- Closer to achieving brightness milestone of 10,000cd/m² for a full-color display using a single stack architecture

Serving a Critical Need in U.S. Defense Capabilities

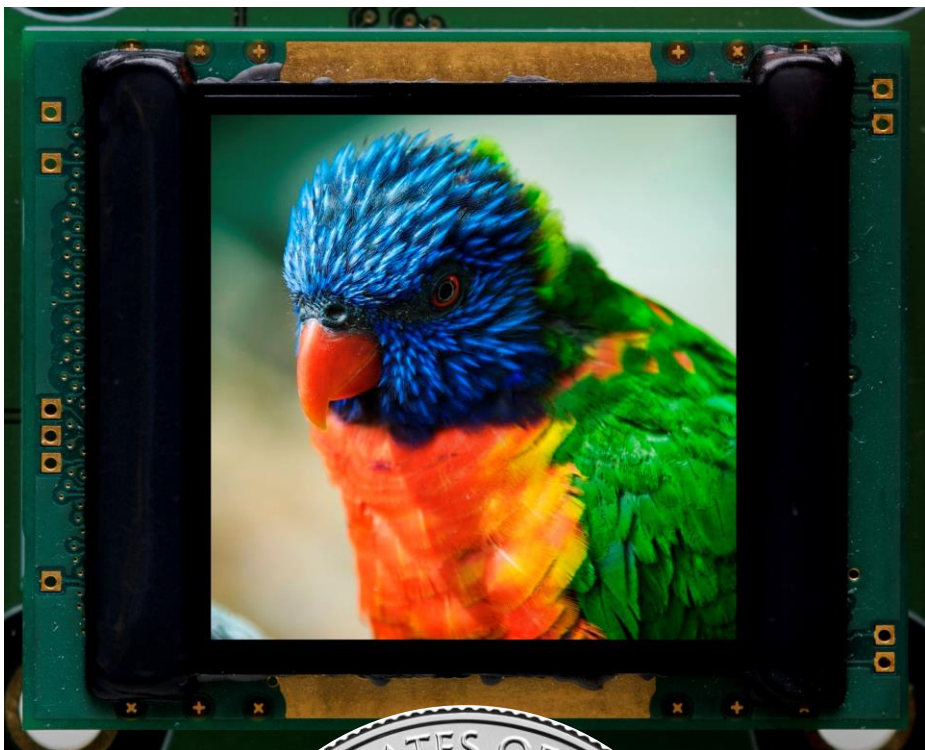


- Recognized by the U.S. Department of Defense (DoD) as the only domestic manufacturer of OLED microdisplays and designated as a cornerstone of the U.S. manufacturing base
- Received \$39.1 million in DoD funding for procurement and installation of capital equipment at the Hopewell Junction facility to enhance manufacturing capabilities and to sustain and enhance U.S. domestic capability for high-resolution, high-brightness OLED microdisplays based on proprietary dPd technology



Our OLED Technology Advantage: Lowest Power, Highest Brightness

- Brightest OLED commercially available – monogreen with peak luminance over 40,000 cd/m²
- Full-color 7,500 cd/m² demonstrated, full color 10,000 cd/m² targeted this year
- Very high contrast – greater than 1,000,000:1
- Lower power consumption yields longer battery life
- More compact form factor
- Lightweight solution
- Field tested for reliability and performance
- Nausea-free operation
- Superior performance and a competitive cost at higher volumes



A History of Technical Leadership Through Fundamental Innovations in Microdisplays

- Developed and shipped first full-color Active Matrix OLED in 2001
- Introduced sequentially higher resolution displays:

• VGA	640x480	SXGA120	1280x1024
• SVGA+	852x600	WUXGA	1920x1200
• DSVGA	800x600	2Kx2K	2048x2048
• SXGA096	1280x1024	4Kx4K	
- Full-color SXGA OLED microdisplay
- First to develop 20k cd/m² monochrome green in 2011
- First to develop 700 cd/m² in full color in 2013
- Recent white with color filter displays exceed 1,500 cd/m²
- Demonstrated unique and proprietary full-color direct patterned dPd™ microdisplay of 7,500 cd/m²

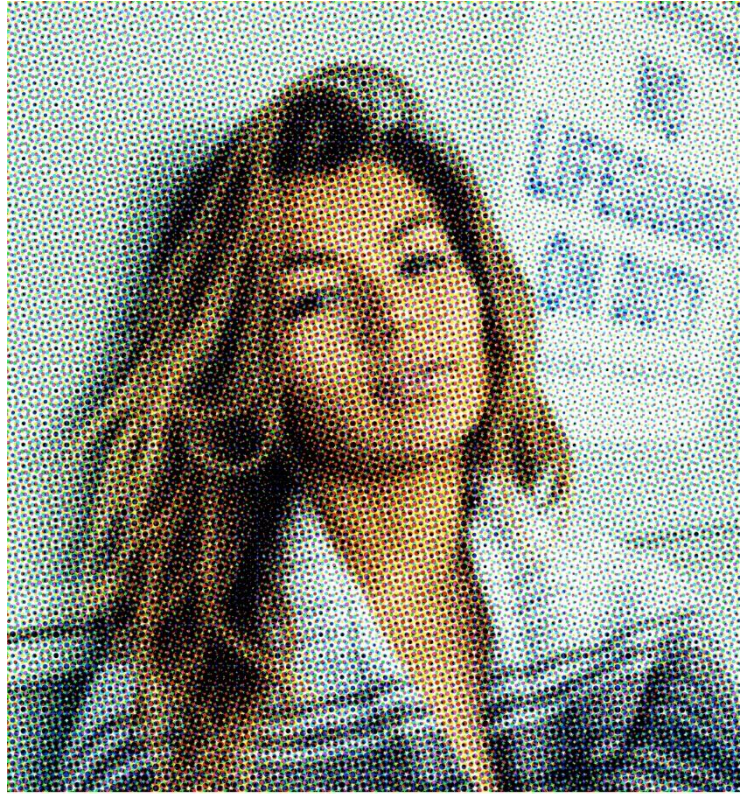


Direct Patterning: The Best Display Solution for AR/VR Applications

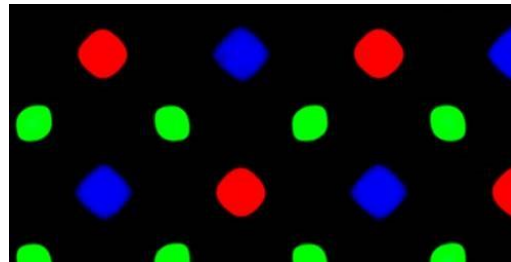
- dPd achieved 7,500 cd/m² brightness on a full-color WUXGA
- Full-color 2k x 2k display demonstrated by using dPd
- 4k x 4k full-color dPd microdisplay demonstrated

OLED Provides a Superior AR/VR Experience

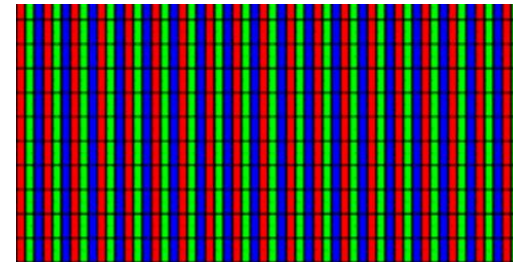
Magnification Highlights eMagin's Superior Fill Factor



OLED Cell Phone Display ~600 ppi



eMagin OLED Microdisplay >2,500 ppi



The Future of AR/VR Powered by dPd™



- Conventional OLED microdisplays use white OLED with color filters
 - Color filters absorb ~80% of the useful light; limited brightness and inefficient
- Only eMagin has Direct Patterned microdisplay technology for direct emission of red, green and blue light without color filters
 - Enables significantly higher brightness; targeting 10,000 cd/m² at year end and 28,000 cd/m² by 2023
 - Higher efficiency, much lower power consumption
- eMagin is ahead today in full-color OLED microdisplay brightness and will stay ahead with dPd

*for illustrative purposes only

Deep Application Expertise and Broad IP Portfolio Create Significant Barriers to Entry

Patents

- 55 patents issued and 32 pending
- Includes silicon backplane, OLED architecture, process and packaging
- Key patents include ultra-high brightness directly patterned OLED displays

Know-how

- Includes silicon backplane, OLED architecture, process and packaging
- Back-plane design
- Anode patterning
- Direct patterning of OLED
- Thin film encapsulation
- Packaging methodology

Well-established Military and Aviation Business

Profile

- Predominately sole-source supplier
- Differentiated performance and leader in brightness
 - Visible in bright sunlight
 - High contrast for detail
- First mover in AR/VR for domestic and foreign military applications
- Global market leadership – International and U.S. Army, Air Force, Special Forces, Navy/Marines
- Proven track record of performing in demanding applications and environments
- Long-standing customer relationships and extended program and product lifecycles
- Military microdisplays addressable market expected to increase
- Accelerating activity and program wins in aviation
- Trend away from LCD to OLED for better contrast and brightness

Customers



Products



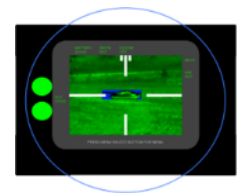
Enhanced Night
Vision Goggle



Helmet
Display



Laser Range
Finder



Simulation Training
Devices

Commercial and Medical Markets Represent New Growth Opportunities and End-market Diversification

Profile

- Products provide high reliability in stressful environments
- Visualize digital information and imagery
- Successful in supplying to medical imaging devices, veterinary ultrasound viewers, thermal cameras and hunting scopes

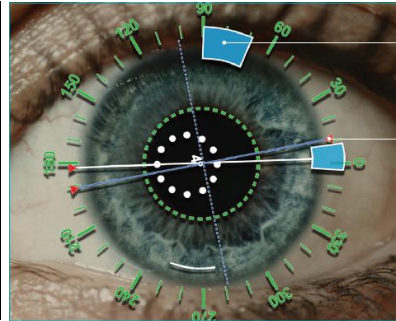
Products



LASIK Surgery



Cataract Surgery



fMRI
Visual System

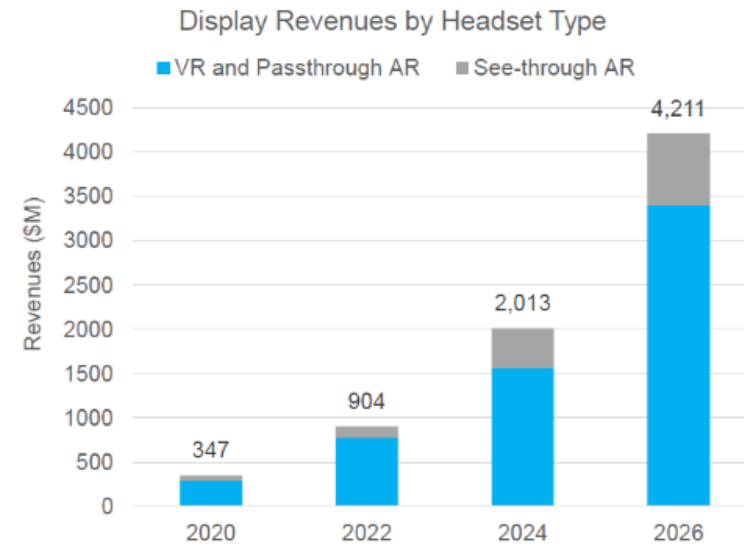
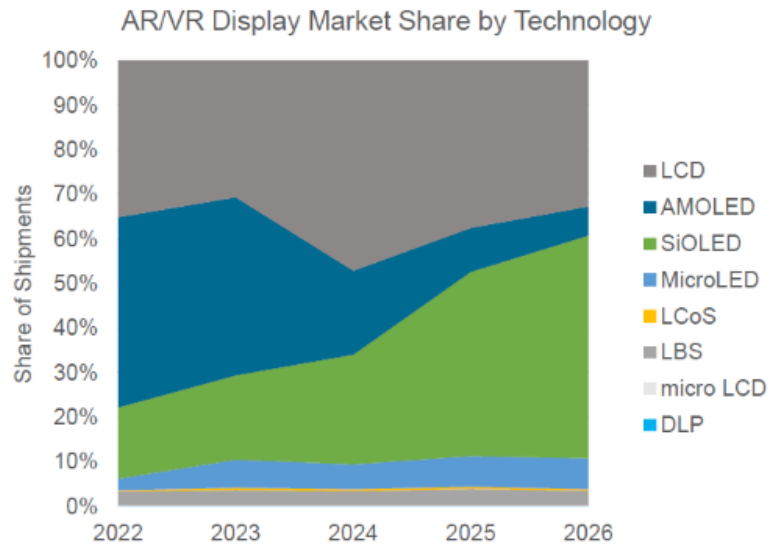


Veterinary Ultrasound

Hunting Scopes

Display Market Share and Revenues

- ▶ OLED on silicon (SiOLED) will capture the largest share of shipments from 2025, with LCD in second place.
- ▶ We expect that AMOLED will lose popularity in the long term, due to the limitations in pixel density.
- ▶ Revenues for AR/VR displays will grow at a CAGR of 51.6%, from \$0.3B in 2020 to \$4.2B in 2026.



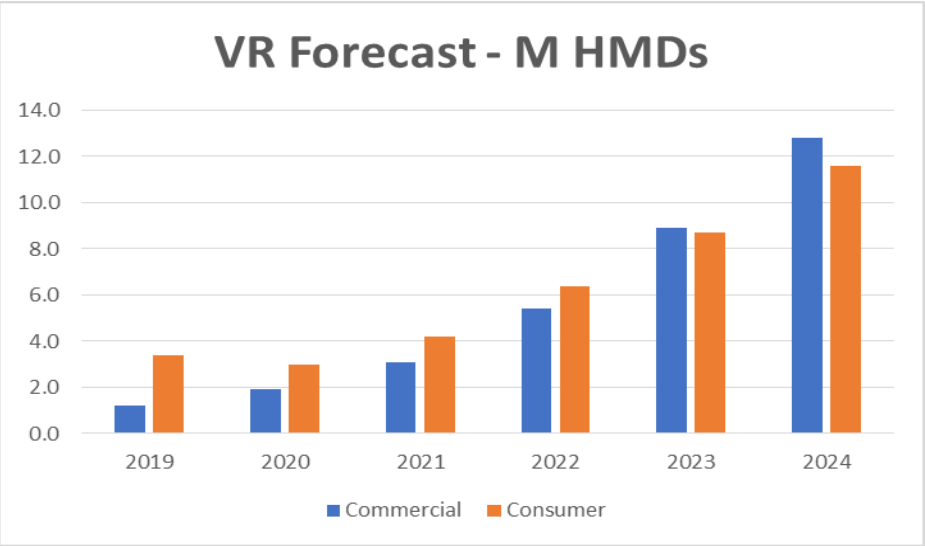
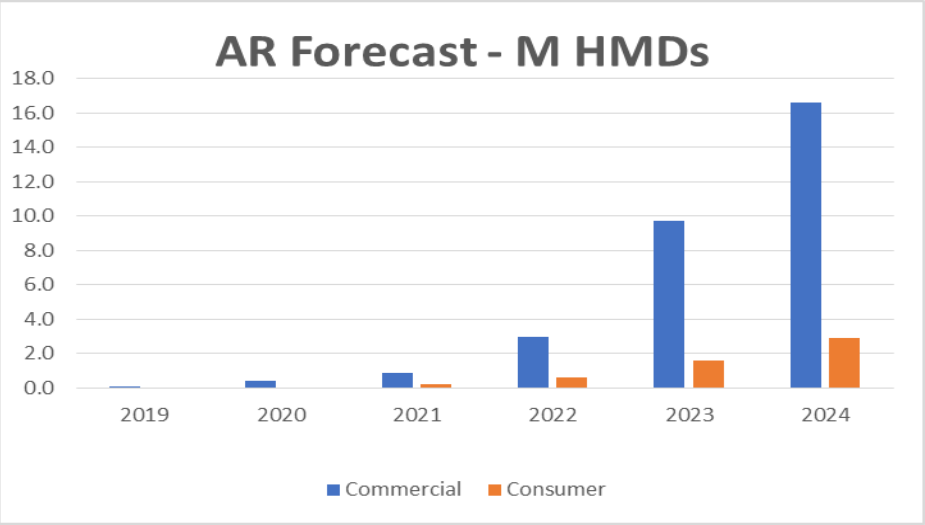
Source: DSCC 2021

OLED Microdisplays Expected to Dominate

Well Positioned to Capitalize on Large Commercial and Consumer Opportunities

Profile

- ✓ Augmented reality for
 - Equipment repair
 - Factory automation
 - Service technicians
- ✓ Virtual reality for
 - Vehicle design
 - Training and simulation
 - Consumer gaming and entertainment
- ✓ eMagin is the only company with technology that satisfies the key requirements:
 - High brightness
 - High speed
 - High pixels per inch
 - High resolution



Source: IDC 2020

Our Manufacturing Footprint: We are “Made in the USA”

Hopewell Junction, NY (Headquarters)

- Houses own equipment for OLED microdisplay fabrication, assembly operations, R&D and product development functions
- eMagin is the only US-based manufacturer of OLED microdisplays
- Approximately \$39 million in DoD awards for procurement and installation of capital equipment to enhance manufacturing and enhance dPd technology

Class 10 Clean Room Operations

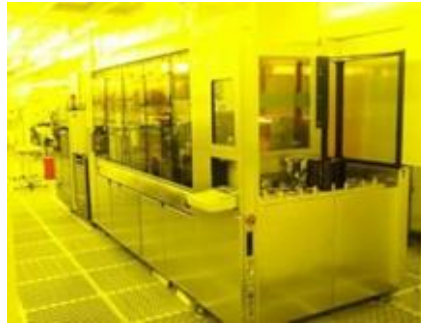


Photo-Lithography



Metal Deposition



OLED Deposition Cluster



In-Line Inspection



GlassLid



Advanced Packaging Capabilities

Experienced Management Team of Recognized Industry Experts

<p>Andrew Sculley <i>CEO</i></p>	<ul style="list-style-type: none"> • More than 20 years experience in OLED technology and manufacturing • Led Kodak OLED Systems • MS Physics Cornell, MBA Carnegie-Mellon
<p>Dr. Amal Ghosh <i>COO</i></p>	<ul style="list-style-type: none"> • Pioneering inventor of disruptive OLED microdisplay technology at eMagin and Kodak • PhD Physics MIT • Past President of the prestigious Society for Information Display (SID)
<p>Mark Koch <i>CFO</i></p>	<ul style="list-style-type: none"> • Previously eMagin's VP of Finance and Corporate Controller • +25 years of financial experience • Certified Public Accountant; BS Manhattan College
<p>Oliver Prache <i>SVP Product Development</i></p>	<ul style="list-style-type: none"> • OLED product commercialization pioneer at Pixtech (France) and OIS Optical Imaging Systems • Diplôme d'Ingénieur from E.N.S.E.R.G. Grenoble France
<p>Joseph Saltarelli <i>SVP Operations</i></p>	<ul style="list-style-type: none"> • More than 25 years of semiconductor, thin films, and packaging manufacturing • Senior Director of Manufacturing Operations, GLOBALFOUNDRIES • BS Ceramic Engineering and Materials Science Rutgers, MBA in Technology Management

A Pioneering Technology Leader with a Broad IP Portfolio

1

A technology leader with proprietary and patented direct patterning technology (dPd™) for ultrahigh brightness in color, and the sole U.S. manufacturer of OLED microdisplays

2

Uniquely positioned to capitalize on growing addressable markets in military, industrial and consumer applications for high-brightness AR/VR solutions

3

U.S. government funding of approximately \$39 million for manufacturing supports equipment procurement and improvements in growth, innovation and productivity

4

Deep applications expertise and broad IP portfolio that is aligned with diverse customer base and long-term industry trends

5

Well-established military and aviation market presence benefiting from modernization trends; leverageable platform for high growth opportunities in consumer and commercial end markets

6

Highly experienced management team with industry-leading technical expertise enabling a substantial runway for value creation

Appendices

Consolidated Statement of Operations

(in thousands, except share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Revenues:				
Product	\$ 5,742	\$ 6,260	\$ 11,847	\$ 11,894
Contract	537	1,440	1,205	2,537
Total revenues, net	6,279	7,700	13,052	14,431
Cost of revenues:				
Product	5,466	4,978	10,173	9,768
Contract	242	746	600	1,253
Total cost of revenues	5,708	5,724	10,773	11,021
Gross profit	571	1,976	2,279	3,410
Operating expenses:				
Research and development	1,788	1,599	3,630	2,579
Selling, general and administrative	1,690	1,712	3,514	3,510
Total operating expenses	3,478	3,311	7,144	6,089
Loss from operations	(2,907)	(1,335)	(4,865)	(2,679)
Other (expense) income:				
Change in fair value of common stock warrant liability	2,642	(1,481)	(4,566)	(1,501)
Interest expense, net	(205)	(18)	(415)	(35)
Gain on forgiveness of debt	—	—	1,963	—
Other income, net	192	3	227	15
Total other (expense)	2,629	(1,496)	(2,791)	(1,521)
Loss before provision for income taxes	(278)	(2,831)	(7,656)	(4,200)
Income taxes	—	—	—	—
Net loss	\$ (278)	\$ (2,831)	\$ (7,656)	\$ (4,200)
Loss per share, basic and diluted	\$ —	\$ (0.05)	\$ (0.11)	\$ (0.08)
Weighted average number of shares outstanding:				
Basic and Diluted	72,193	56,755	71,238	54,197

Consolidated Balance Sheet

(in thousands, except share data)

	June 30, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 10,568	\$ 8,315
Restricted cash	1,491	2,111
Accounts receivable, net	3,117	5,314
Account receivable-due from government awards	77	1,013
Unbilled accounts receivable	783	253
Inventories	8,133	8,379
Prepaid expenses and other current assets	795	943
Total current assets	24,964	26,328
Property, plant and equipment, net	25,517	21,132
Operating lease right - of - use assets	21	50
Intangibles and other assets	121	126
Total assets	\$ 50,623	\$ 47,636
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,425	\$ 1,206
Accrued compensation	2,346	1,628
Paycheck Protection Program loan - current	—	982
Revolving credit facility, net	405	1,875
Common stock warrant liability	9,188	4,622
Other accrued expenses	559	1,693
Deferred revenue	86	425
Operating lease liability - current	21	51
Finance lease liability - current	1,129	1,027
Other current liabilities	825	757
Total current liabilities	15,984	14,266
Other liability - long term	42	56
Paycheck Protection Program loan - long term	—	982
Deferred Income - government awards - long term	7,935	4,309
Finance lease liability - long term	11,631	11,783
Total liabilities	35,592	31,396
Shareholders' equity:		
Preferred stock, \$.001 par value: authorized 10,000,000 shares:		
Series B Convertible Preferred stock, (liquidation preference of \$5,659) stated value \$1,000 per share, \$.001 par value: 10,000 shares designated and 5,659 issued and outstanding as of June 30, 2021 and December 31, 2020.	—	—
Common stock, \$.001 par value: authorized 200,000,000 shares, issued 72,665,730 shares, outstanding 72,503,664 shares as of June 30, 2021 and issued 68,890,819 shares, outstanding 68,728,753 shares as of December 31, 2020.	72	69
Additional paid-in capital	275,173	268,729
Accumulated deficit	(259,714)	(252,058)
Treasury stock, 162,066 shares as of June 30, 2021 and December 31, 2020.	(500)	(500)
Total shareholders' equity	15,031	16,240
Total liabilities and shareholders' equity	\$ 50,623	\$ 47,636

Adjusted EBITDA

\$ in thousands

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net loss	\$ (278)	\$ (2,831)	\$ (7,656)	\$ (4,200)
Non-cash compensation	37	44	50	87
Change in fair value of common stock warrant liability	(2,642)	1,481	4,566	1,501
Depreciation and intangibles amortization expense	694	479	1,427	959
Interest expense	205	18	415	35
Adjusted EBITDA	<u>\$ (1,984)</u>	<u>\$ (809)</u>	<u>\$ (1,198)</u>	<u>\$ (1,618)</u>