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# ONDAS HOLDINGS INC.

## Mission-critical data and services

Proprietary, Platform Technologies
Integrated, Data Ecosystem
Blue Chip Customers and Partners
Large, Critical End Markets

Listed

Nasdaq: ONDS

**Employees** 

115

**Invested Capital** 

> \$300 Million



Sunnyvale, CA Baltimore, MD Petah Tikva, Israel



Provider of next-generation private industrial wireless networking technologies for critical industrial markets



Next-gen data platform upgrade cycle starting with Class I Railroads





Leading security, data and information services solution for military and commercial drone markets







Global leader in hypergrowth commercial drone market





# Leadership Team



ONDAS HOLDINGS INC

Eric Brock
CHAIRMAN & CEO

Eric is an entrepreneur with over 25 years of management and investing experience.



ONDAS HOLDINGS INC.

Neil Laird

Neil is an experienced financial executive with over 25 years in the technology sector.





Oshri Lugassy

Co-CEO

Oshri is a defense and technology leader with decades of experience in autonomous systems, global business development, and military command.





**Markus Nottelmann** 

CEO

Markus has extensive experience introducing new technologies into railroad markets, holding leadership roles in finance and operations across multiple companies.



# Fully Autonomous Aerial Platforms

Multi-system portfolio

"A PORTFOLIO OF BEST-IN-CLASS DEFENSE AND SECURITY PLATFORMS DEPLOYED TO PROTECT AND SECURE SENSITIVE LOCATIONS, POPULATIONS AND CRITICAL INFRASTRUCTURE."

- ERIC BROCK, CEO



#### **OPTIMUS SYSTEM**

Provides automated aerial security and intelligence for military, first responders and other critical government and industrial markets.



#### **IRON DRONE RAIDER**

An autonomous counter-drone platform deployed to target and capture enemy drones for military and homeland security markets



# **Strategic Overview**

## Momentum and Strategic Progress

## **Ondas Autonomous Systems**

- Expanding Defense market penetration with Optimus & Iron Drone
  - Captured two PORs with major military in Middle East
  - Global expansion launched in Q1 2025
- Positioned Iron Drone to define low kinetic CUAS category
- Appointed Oshri Lugassy as OAS co-CEO and Ron Stern to Board
- Advanced operational plan to support growth

## **Ondas Networks**

 Advanced dot16 roadmap and ecosystem with Railroads for 900 MHz and beyond (e.g., Amtrak 220 MHz and NGHE 450 MHz)

## **Ondas Holdings**

- Fortified capital position with over \$67 million in cash at end of Q2 2025
- Expect to generate \$25 million in revenue in 2025
- Backlog estimated at \$22.8 million (adj. for Q2 2025 expected revenue of \$6.0 million)





# **Target Critical Security Markets**

Ondas' leverages its dual use technology and a go-to-market operating platform to provide aerial security and intelligence to protect and secure critical assets, locations and populations

## **Defense & HLS**







**Public Safety** 







## **Industrial & Critical Infrastructure**



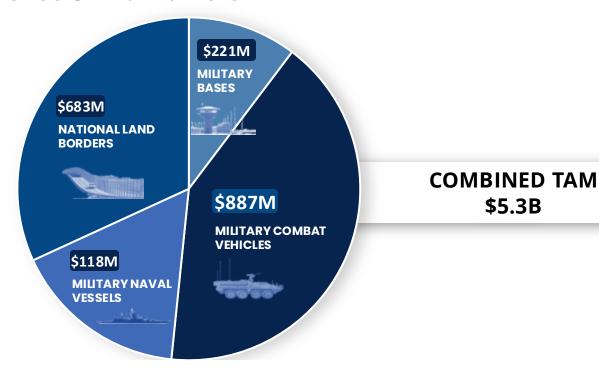






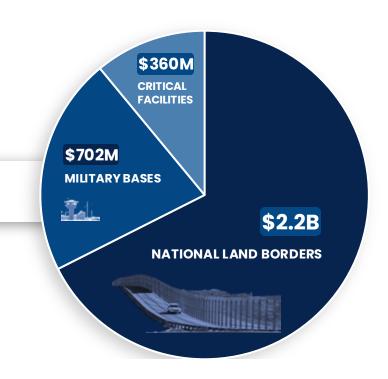
# Iron Drone Raider TAM

Specific Potential Iron Drone Raider In Defense & HLS Markets



# **Optimus System TAM**

Specific Potential Optimus System In Defense & HLS Markets



## Global Defense / HLS Market Size: \$2.1B

- Military Bases Protection: 2.5 Systems Per Base | 491 Relevant Bases (20%)
- Military Combat Vehicles: 1 system per 20 vehicles | 118,000 vehicles (10%)
- Military Naval Vessels: 1 System per vessel | 22,799 Naval vessels (30%)
- National Land Border: 1 System per 5 km | 22,000 km (5%)
- All data according to company estimation

## Global Defense / HLS Market Size: \$3.2B

- Border Protection: 1 System per 7 km | 17,200 km of relevant border (30%)
- Military Bases Protection: 1 System per Base | 780 Relevant Bases (40%)
- Critical HLS Facilities: 1 System per Facility | 400 Facilities (Global Strategic Sites)
- All data according to company estimation

\$5.3B



# **Global Defense Markets**

Building new prime military vendor around autonomous systems with initial military customer

OAS is deploying Iron Drone Raider and the Optimus System for active homeland security and force protection operations

 Two programs of record with major military customer; new customers being added in 2025

Secured ~\$30 million in purchase orders since 2H 2024 on behalf of this customer

Programs expanded with \$14.3 million order in June 2025

- Partnering with major defense vendors for systems integration, mutual reselling relationships in major global theaters
- Accelerated global growth opportunities via customersponsored Government-to-Government (G2G) channels for global military and homeland security markets

# Large, Obtainable Markets Opened in Last 12 Months

ALLIED NATIONS MARKET POTENTIAL <sup>(1)</sup>	SAM <sup>(2)</sup>	SOM <sup>(3)</sup>
Iron Drone Revenue	\$2.1B	\$600M
Optimus Revenue	\$3.2B	\$800M
Total	\$5.3B	\$1.4B

INITIAL MILITARY MARKET POTENTIAL <sup>(1)</sup>	ТАМ	SOM <sup>(4)</sup>
Iron Drone Revenue	\$350M	\$70M
Optimus Revenue	\$500M	\$50M
Total	\$850M	\$120M

<sup>(1)</sup> Management estimates

<sup>(2)</sup> SAM represents relevant obtainable portion from the total addressable market

<sup>(3)</sup> SOM represents initial obtainable market over next few years based upon active customer engagement

<sup>(4)</sup> SOM represents initial obtainable market through 2026 based upon active customer engagements; does not include infrastructure sustainment and other services

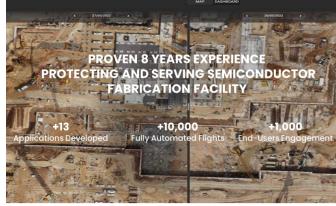


# Aerial Security & Intelligence

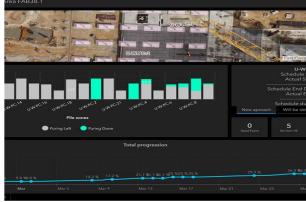
# Public Safety / Military / HLS

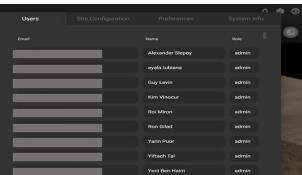
## **Construction Security and Management**















# **Counter - Drone Solutions**

Raider offers unique capabilities & price point

"Hard kill" intercept solutions see surging demand for multi-layered CUAS systems









## Weapons/ Weapon Grade

- Sometimes effective
- Extreme collateral effect
- Expensive
- Restrictions on selling

## **RF Jammers**

- Low/medium effectiveness
- ▼ High collateral effect
- Affordable

#### ONDAS Holdings Inc

# The Iron Drone

# Raider System

The Raider System is an advanced counter-drone solution, designed to defend assets against hostile drones in complex environments with minimal collateral damage.















#### **Drone Pod**

Reusable | reloadable multidrone storage and launcher

### **Raider Interceptor**

Powerful AI Racer Drone: fly, detect, and follow target drone autonomously while broadcasting video in real-time

#### **Drone Detection Radar**

External radar detection system provides estimated position of the intruder drone

#### **Command & Control**

Control software and operator interface with close-range video of the target before authorizing interception

#### **Capture Net**

Launched by the Raider interceptor

#### **Recovery Parachute**

Automated parachute lands captured drone safely

# **AUTONOMOUS COUNTER-DRONE SYSTEM**

AI-BASED HOMING FOR DAY/NIGHT INTERCEPTION | HIGH-SPEED FLIGHT

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#### **HOMING HEAD**

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Thermal vision, final homing using an Al algorithm



#### WARHEAD

Ballistic net deployment (reusable)



#### TAKE OFF STATION

Protection from external environmental conditions, storage for multiple drones, rapid launch capability



#### **OPERATION OPTIONS**

Remote operation from a command center, 24/7 availability, video transmission to the ground, interception confirmation



#### **INSTALLATION OPTIONS**

Fixed installation or mounted on vehicles or vessels



## INTERCEPTOR DRONE PERFORMANCE

Horizontal flight speed: 50 m/s Climb rate: 36 m/s Interception range: up to 3 km



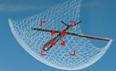
## COMMUNICATION AND INTERFACES

Dedicated user interface, communication with reactive frequency hopping



#### **RESILIENT NAVIGATION**

Navigation capability in GNSS denied environments











## FLIGHT TOWARDS THE TARGET

Navigation and guidance using radar



## INTERCEPTION

Shooting a kinetic net



# IRON DRONE IS POSITIONED TO WIN CATEGORY

We believe Raider is the most efficient and capable system compared to other alternatives in the market





SYSTEM	IRON DRONE RAIDER			
FLIGHT SPEED	45 m/s			
FLIGHT RANGE	4 km 2.5 miles			
MOTORS REDUNDANCY	8 coax (4X2)			
SYSTEM WEIGHT	Drone: 4 kg dock: 25 kg			
PAYLOADS CAPABILITY	Net (Optional Parachute)			
HOMING GUIDANCE	E/O (Thermal) + Micro radar			
DRONES STORAGE/LAUNCH	Up to 3			
GPS DENIED NAVIGATION	Yes			
MOBILE/FIXED CONFIGURATION	Both			
TARGET SIZE	Small/Medium/Large			
TARGET TYPE	Multirotor/Fix wing			
REUSABLE	Yes			
PARALLEL TARGETING PER SYSTEM	Yes			
MANUFACTURER	Founded in 2014 Fully Autonomous Drones			

















## **ADVANTAGES**

Speed
Agility
Multiple UAVs
Reusable
Net Capture

GPS-denied Comms-denied

Low Collateral Damage
Low Cost



# **Optimus System**

Urban drone infrastructure



## **UNMATCHED SAFETY & RELIABILITY**

Fully Autonomous Drone-in-a-Box

## **Deployed as Infrastructure**

- City-wide
- Campuses
- Borders
- Airport & water ports
- Critical locations & infrastructure

## **Aerial Data Services**

- Live video
- Inspection



# The Ultimate Drone Solution

For 24/7 continuous aerial operations

## **VARIED MISSIONS 24/7**

Automated battery & payload swapping for Non-Stop varied aerial missions

## MISSION CRITICAL RELIABILITY

Government & Enterprise Tier-1 level reliability for harsh environmental conditions and "No-Internet" configurations

### **AUTOMATED SECURED DATA**

Secured rapid data processing and on-demand real-time broadcasting



# **FAA TYPE CERTIFIED**

Mission requested and flight plan starts to prepare

Drone launches from the base station autonomously

Drone flies preplanned missions, transmitting data to the base station

The drone returns to the base station and lands automatically for data offload and battery swap

End user receives processed digital models supporting critical operations

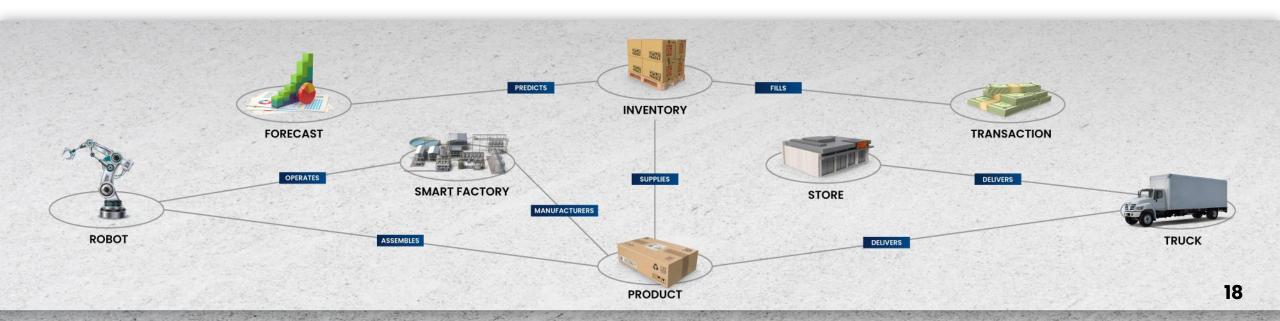
The base station uses a robotic arm to swap batteries and payloads

# Palantir Partnership

# Palantir Foundry to help scale OAS operating platform in support of revenue ramp

- What: Ondas has partnered with Palantir Technologies to integrate the Palantir Foundry platform into its operations, enhancing its autonomous drone platforms.
- **Why:** The partnership aims to unify data and streamline operations, enabling scalable adoption of Ondas' Optimus System and Iron Drone Raider globally.
- **Benefits:** Foundry's Al-driven insights will optimize supply chain, production workflows, and customer engagement, delivering superior value to commercial and military clients.







# Strategic Roadmap

Enhancing security and monitoring of critical facilities projects, public safety and military assets

- Significant inbound interest in Iron Drone CUAS platform
  - Demand surging globally for multi-layered CUAS security
  - Iron Drone uniquely built for purpose / combat ready as low-kinetic
     CUAS platform
- Expect to capture additional defense and HLS customers in 2025
  - Launched global demonstration programs for Optimus & Iron Drone
  - Expanding customer engagement to large Defense & HLS markets in Europe and other regions
- Target additional partnerships in 2025 to support marketing, technical integration and localization efforts in Europe and United States
- Developing plans for US supply chain and manufacturing





# **ONDAS Networks Overview**

Next-Gen, MC-IoT Industrial software-defined wireless broadband platform



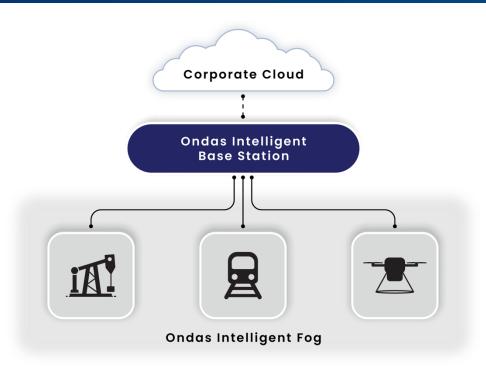












## **FullMAX™ Connectivity**

- Developed critical IP for IEEE 802.16 standards
- Enhanced capacity / flexibility
- Maximize low-band spectrum
- 9 patents (7 US) & 16 patents pending

## Large, Global Markets

- Critical infrastructure & public safety
- Massive private network upgrade cycle
- TAM in billions
- Capital-light financial model

## **Industrial Data Ecosystem**

- Deploying intelligent systems across field area operations
- Edge compute applications
- Automation systems
- Sensor technologies



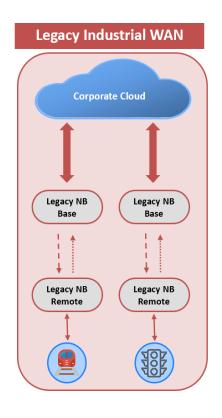
# A New Industrial Software Defined Network

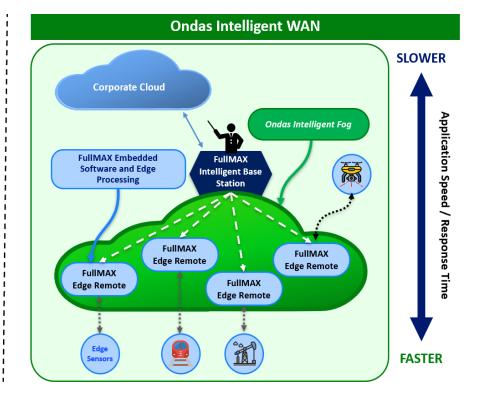
FullMAX<sup>™</sup> software defined connectivity enables deployment of intelligent data applications



# SOFTWARE DEFINED NETWORK KEY FEATURES

- End-to-end platform
- Maximize spectrum utilization
- Increased data capacity, API /Cloud
- Dynamic allocation of precious bandwidth
- Valuable solution for Dense Urban Areas
- Prioritize mission-critical applications
- Enable low latency







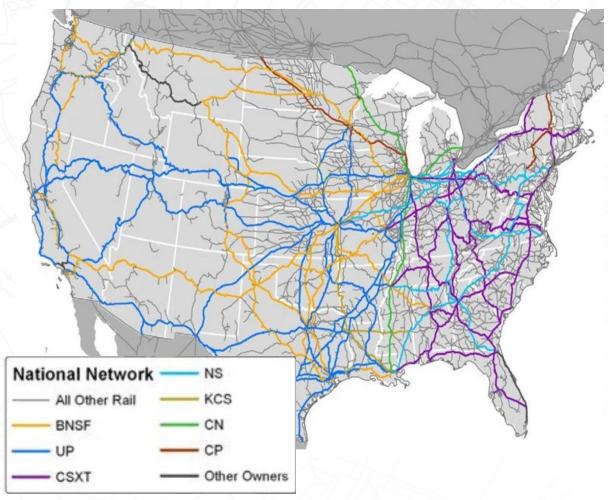
# Class | Freight Rail-Huge Footprint

# Key Class I Rail Statistics

- Common networks across all 7 Class 1 Rails
- 140,000 Miles of Track
- 40,000 Waysides // 65,000 Rail Crossings
- 25,000+ locomotives // 1.6 million rail cars
- Total addressable market for private wireless Rail networks in North America in excess of \$1.3 Billion<sup>(1)</sup>

~5% Productivity increase drives ~\$5.0 billion of Additional Revenue for Railroads<sup>(1)</sup>

## **FullMAX™ Connects Rail Infrastructure**



(1) Management estimates

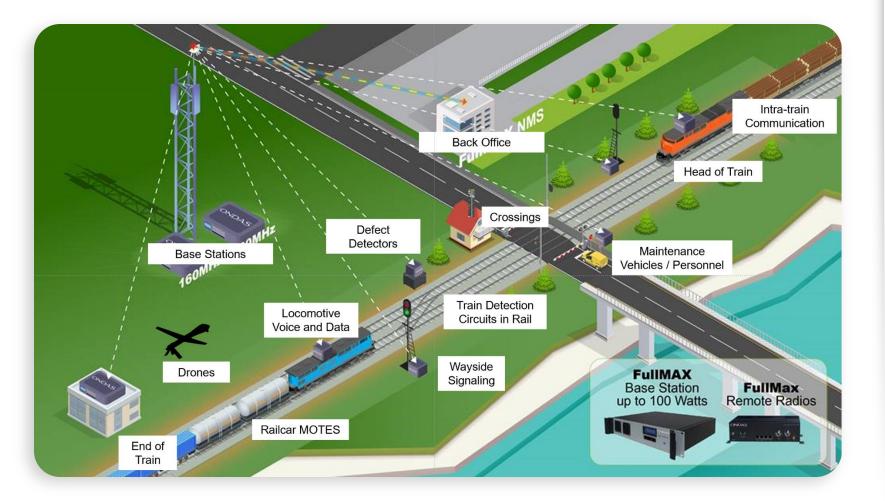
Source: https://www.siemens.com/us/en/company/press/press-releases/mobility/siemens-mobility-ondas-networks.html

Source: Highway-Rail Grade Crossing and Trespassing Research | FRA (dot.gov)



# Connectivity is Core to Digital Rail

Private wireless networks required for existing and new applications; IP network supports explosion of edge activity





## **PRIVATE NETWORKS**



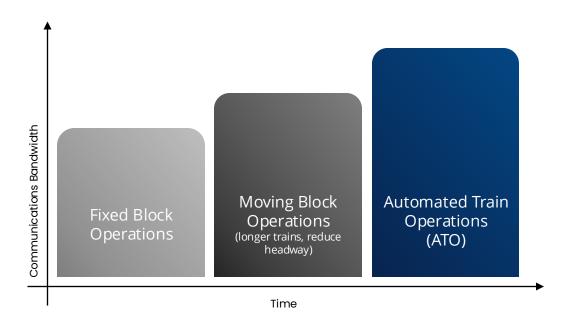
#### RAILROAD INFRASTRUCTURE

- Private, Owned & Operated
- Secure, Reliable, QoS
- Flexible; interoperable
- Backwards compatible
- Nationwide coverage
- Lower cost



# Autonomous Trains: Siemens Partnership

FullMAX<sup>™</sup> wireless platform enables evolution to autonomous trains





## Landmark dot16 Partnership

- Marketing agreement
  - Focused on Class I North America
  - Expanding to Europe & Asia
  - Adding Passenger & Transit markets
- FullMAX<sup>™</sup> product integration enhances value of network and dot16 ecosystem
  - ATCS 900 MHz
  - 220 MHz PTC Data Radio Amtrak & NEC
  - HOT 450 MHz North America & India
  - European locomotive program

MULTIPLE JOINT-DEVELOPMENT PROGRAMS EXECUTED AND ON THE ROADMAP



# Strategic Roadmap

## Engaging railroads on communications challenges

- Continuing to support deployment of customer networks
  - Migration of multiple networks to new 900 MHz A-Block
- Capture initial Class I rail sub-division for PTC / CTC integration
  - Plan to expand use case with multiple Class I rails
- Executing on 220 MHz PTC data radio on behalf of Amtrak
  - Milestones achieved; first prototypes delivered in August
  - Development program to complete in Q1 2025
  - Expect delivery of PTC data radios in Q2 202
  - Subsequent rollout to other operators in the Northeast Corridor
- Commercialize Next Generation Head-of-Train / End-of-Train (NGHE)
  - AAR selected dot16 as communications protocol for NGHE in April 2025
  - Engaged with HOT/EOT suppliers on integration of our technology
- Delivering communication solutions for big data challenges
  - Engaged with several Class Is on large data transmission challenges







# **Outlook for 2025**

## Positioned for a record year

## Drive Growth with Existing Programs and Customers



Execute and expand existing programs

## Further Expansion Through New Customer Programs



Secure new military customers; execute US pipeline

## Continue Investments to Scale Operations

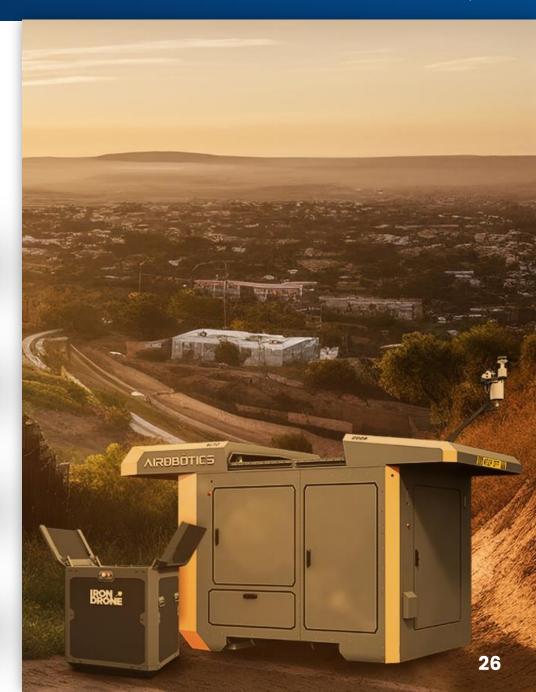


Palantir Foundry partnership to help scale supply chain & sustainment

## Further Build Strategic Value at Ondas Networks



Broaden customer and partner engagement





# **Outlook for 2025**

Positioned for a record year in 2025

Revenue Target

\$25 Million

New Military / HLS Customers

4

Deliver Current Backlog

\$16.8 Million

New Industry Partnerships

4

**Expanded Programs** 

**Expanded Customer Base** 

**Expanded Partner Ecosystem** 

**Growing Operational Scale** 

Note: Financial outlook represents consolidated targets of OAS and Ondas Networks





# **Financial Review**

Q1 2025

SELECT P&L DATA	Three Months Ended March 31,			
(Unaudited)	2025		2024	
Revenues, net	\$	4,248,182 \$	625,009	
Cost of goods sold		2,759,632	1,019,991	
Gross profit		1,488,550	(394,982)	
Total operating expenses		11,798,988	8,732,213	
Operating Loss	\$	(10,310,438) \$	(9,127,195)	
Net Loss	\$	(14,136,350) \$	(9,876,084)	
SUPPLEMENTAL INFO:				
Depreciation expense		180,709	123,071	
Amortization of intangible assets		1,061,869	1,052,211	
Stock-based compensation		1,572,645	269,553	
Other expense, net		3,825,912	748,889	
Total		6,641,135	2,193,724	
Cash Operating Expenses <sup>(1)</sup>	\$	8,983,765 \$	7,287,378	
Adjusted EBITDA <sup>(1)</sup>	\$	(7,495,215) \$	(7,682,360)	

## **KEY FINANCIAL INSIGHTS:**

- P&L reflects early stage of initial platform adoption for OAS and Ondas Networks
- 580% increase in revenues
- Gross margin improved, yet still sub-scale due to low sales volumes and revenue mix
- Cash operating expenses increased due to additional investment to scale OAS operations in support of increased revenue expectations
- Adjusted EBITDA loss slightly improved year-over-year

(1) See the "Non-GAAP Financial Measures" section in the Appendix.



# **Financial Review**

Q1 2025

SELECT CASH FLOW DATA	Three Months Ended March 31,		
(Unaudited)		2025	2024
Net cash used in operating activities	\$	(6,659,264) \$	(7,455,524)
Net cash provided by (used in) investing activities		(195,019)	(1,212,413)
Net cash provided by financing activities		2,264,936	8,236,646
Increase (Decrease) in cash		(4,589,347)	(431,291)
Cash and restricted cash, beginning of period		29,999,321	15,022,000
Cash and restricted cash, end of period	\$	25,409,974 \$	14,590,709

## **KEY FINANCIAL INSIGHTS:**

- Cash balance of \$25.4 million compared to \$14.6 million a year ago is the result of financing during the latter half on 2024
- Operating cash burn reduced with improved revenue and collections
- Cash provided by financing of \$2.3
  million reflects the exercise of warrants,
  proceeds from other financing, and
  government grants



# **Balance Sheet**

Q1 2025

SELECT BALANCE SHEET DATA	N	1ar. 31, 2025	Dec. 31, 2024
(Unaudited) ASSETS			
Cash and Restricted Cash	\$	25,409,974	\$ 29,999,321
Total Assets	\$	104,600,639	\$ 109,622,288
LIABILITIES AND STOCKHOLDERS' DEFICIT			
Holdings Convertible Debt	\$	25,449,671	\$ 44,617,229
Subsidiary Convertible Debt	\$	8,960,616	\$ 8,036,195
Other Debt	\$	1,800,000	\$ 1,573,215
Total Debt	\$	36,210,287	\$ 54,226,639
Total Liabilities	\$	57,951,020	\$ 73,677,776
Redeemable Noncontrolling Interests	\$	20,568,332	\$ 19,361,205
Total Stockholders' Equity	\$	26,081,287	\$ 16,583,307
Total Liabilities and Stockholders' Equity	\$	104,600,639	\$ 109,622,288

## **KEY FINANCIAL INSIGHTS:**

- Deleveraging is expected to reduce overhang from convertible notes financings
- Convertible Debt Holdings reduced by \$19.2 million to \$25.4 million at end of Q1 2025
- Outstanding balance has since been further reduced to \$20.6 million net of \$2.1 million unamortized discount and excluding \$1.1 million accrued interest



