

November 14, 2023

#### ASTRA MICROWAVE PRODUCTS LIMITED

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CIN: L29309TG1991PLC013203

To
The General Manager
Department of Corporate Relations **BSE Limited**Sir Phiroze Jeejeebhoy Towers,
Dalal Street, Fort,
Mumbai -400 001

To
The Vice President,
Listing Department
The National Stock Exchange of
India Limited
Exchange Plaza
Bandra Kurla Complex, Bandra (East)
Mumbai 400 051

**Scrip code: 532493** 

Scrip code: ASTRAMICRO

Dear sir,

Sub: – Intimation pursuant to Regulation 30 of the SEBI (LODR) Regulations, 2015 – Investor Presentation.

Please find enclose herewith Investor Presentation for Q2 & FY 24 for your information and records.

We request you to take the above on record and the same be treated as compliance under the applicable regulations of the SEBI (LODR) Regulations, 2015.

Thanking you,

Yours faithfully, For Astra Microwave Products Ltd

T.Anjaneyulu G.M - Company Secretary

An ISO 9001, ISO 14001, ISO 45001 and ISO 27001 Certified Company

Works:

Unit 1: Plot No. 12, ANRICH Industrial Estate, Bollaram, Medak Dist., Telangana - 502325

Unit 2: Plot No. 56A, ANRICH Industrial Estate, Bollaram, Medak Dist., Telangana - 502325

Unit 3: Sy. No. 1/1, Imarath Kancha, Raviryala (V), Maheshwaram (Mdl) R.R.Dist., Telangana - 501510

Unit 4: Sy. No. 1/1, Plot No. 18 to 21, Imarath Kancha, Hardware Park, Raviryala (V), Maheswaram (M), R.R.Dist, Telangana - 501510 Unit 7: Sy. No.114/1, Plot No. S-2/9 & 10, E-City, Raviryala & Srinagar (V), Maheswaram (M), R.R.District, Telangana - 501359

R&D Centre: Plot No. 51(P), Bangalore Aerospace Park, Singanahalli Village, Budigere Post, Bangalore North Taluk, Karnataka - 562149







**Investor Presentation – November 2023** 

### Safe harbour



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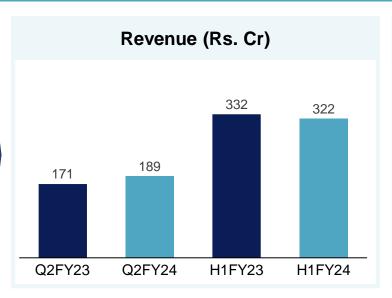
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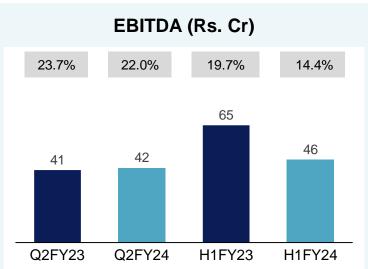
This presentation contains certain forward-looking statements concerning the Company's future business prospects and business profitability, which are subject to a number of risks and uncertainties and the actual results could materially differ from those in such forward-looking statements. The risks and uncertainties relating to these statements include, but are not limited to, risks and uncertainties regarding fluctuations in earnings, our ability to manage growth, competition (both domestic and international), economic growth in India and abroad, ability to attract and retain highly skilled professionals, time and cost over runs on contracts, our ability to manage our international operations, government policies and actions regulations, interest and other fiscal costs generally prevailing in the economy. The Company does not undertake to make any announcement in case any of these forward-looking statements become materially incorrect in future or update any forward-looking statements made from time to time by or on behalf of the Company.

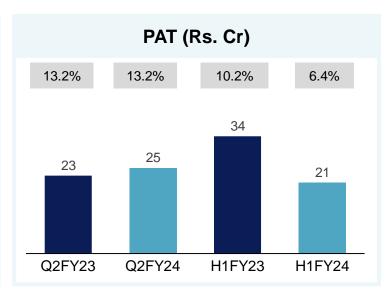
### **Performance Highlights**



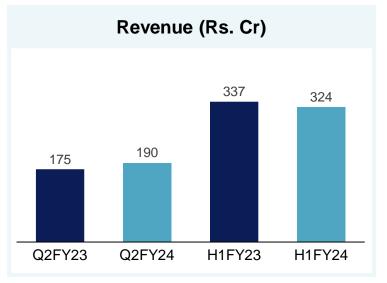


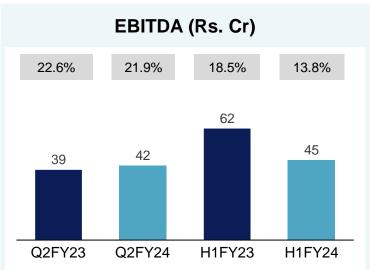


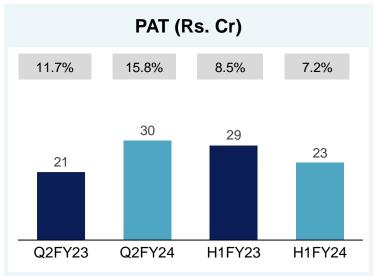












### **Robust Order Book**

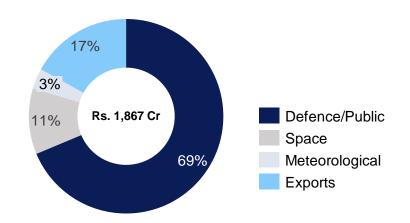


## Diversified <u>Orderbook</u>

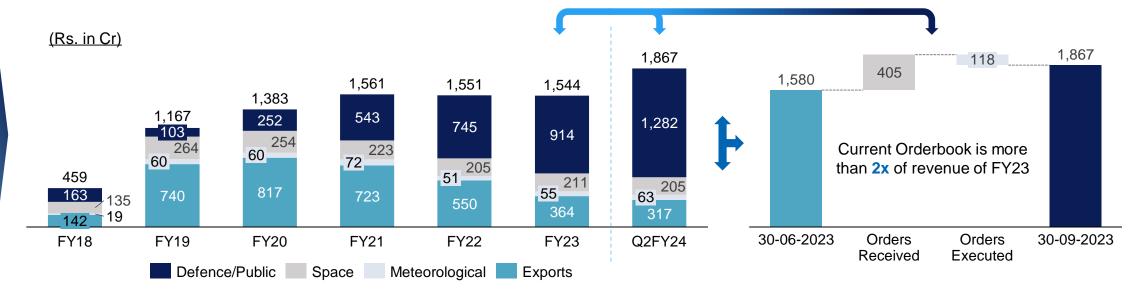
#### Total orders received during the quarter

Sno	Segment Name	Amount (Rs. Cr)
1	Defence	350.98
2	Exports	26.68
3	Space	19.40
4	Meteorological	8.01
	TOTAL	405.08

#### **Segment Wise Order book**



## Historical Orderbook

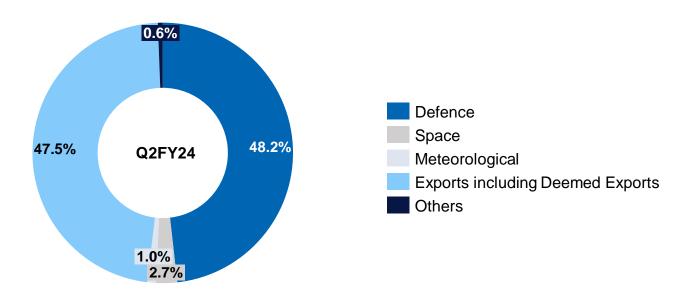


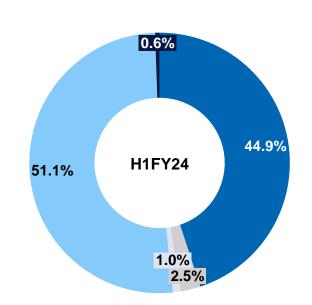
Radar Electronics | Electronic Warfare | Missiles | Telemetry | Space | Meteorology | Hydrology | Telecom

### Segmental Revenue Break-up



Revenue Break-up in %	Q2FY24	Q1FY24	Q4FY23	Q3FY23	Q2FY23
Defence	48.2%	37.0%	39.8%	65.3%	66.5%
Space	2.7%	2.0%	2.1%	0.3%	0.8%
Exports including Deemed Exports	47.5%	59.8%	54.6%	31.5%	27.9%
Meteorological	1.0%	0.8%	3.0%	2.4%	4.3%
Others	0.6%	0.4%	0.5%	0.5%	0.5%





### **Standalone Profit & Loss**



PARTICULARS (Rs. In Cr)	Q2FY24	Q2FY23	YOY	Q1FY24	QoQ	H1FY24	H1FY23	YOY
Revenue from Operations	189.0	170.9	10.6%	132.9	42.2%	321.9	332.1	-3.1%
Raw Material Consumption	111.0	101.8		96.3		207.3	206.4	
<b>Gross Profit</b>	78.0	69.1	12.9%	36.6	113.3%	114.6	125.7	-8.8%
<b>Gross Profit Margin</b>	41.3%	40.4%		27.5%		35.6%	37.9%	
Employees Expenses	23.2	18.3		19.3		42.5	37.5	
Other Expenses	13.2	10.3		12.7		25.9	22.8	
EBITDA	41.6	40.5	2.8%	4.6	799.1%	46.3	65.4	-29.3%
EBITDA Margin	22.0%	23.7%		3.5%		14.4%	19.7%	
Other Income	3.6	2.0		2.2		5.7	3.1	
Depreciation	6.2	5.7		5.6		11.8	11.2	
EBIT	39.0	36.8	6.0%	1.2	3045.2%	40.2	57.3	-29.8%
EBIT Margin	20.6%	21.5%		0.9%		12.5%	17.3%	
Finance Cost	5.7	6.6		6.9		12.6	12.0	
Profit before Tax	33.3	30.2	10.3%	-5.7	NA	27.6	45.3	-39.1%
Profit before Tax Margin	17.6%	17.7%		-4.3%		8.6%	13.6%	
Tax	8.4	7.6		-1.4		7.0	11.3	
PAT	24.9	22.6	10.0%	-4.3	NA	20.6	34.0	-39.5%
PAT Margin %	13.2%	13.2%		-3.2%		6.4%	10.2%	
EPS (in Rs.)	2.62	2.61		-0.47		2.20	3.93	

### **Standalone Balance Sheet**



ASSETS (Rs. In Cr)	Sep-23	Mar-23
Non-Current Assets	240	228
Property, plant and equipment	164	165
Capital WIP	7	2
Investment in Associates	2	2
Investments in joint ventures	20	20
Investments in subsidiaries	15	15
Financial Assets		
ii. Other Financial Assets	4	6
Deferred tax assets	10	8
Non Current Tax Assets	12	5
Other non-current assets	6	5
Current assets	937	818
Inventories	446	396
Financial assets		
i. Trade receivables	282	282
ii. Cash and cash equivalents	101	49
iii. Bank balances other than (iii) above	60	55
Other current assets	48	36
Total assets	1,177	1,047

EQUITY AND LIABILITIES (Rs. In Cr)	Sep-23	Mar-23
Equity and Liabilities	877	653
Equity share capital	19	17
Equity attributable to owners of the Company	858	636
Non-current liabilities	60	77
Financial liabilities		
Borrowings	-	3
Provisions	6	6
Contract liabilities	54	68
Current liabilities	240	316
Financial liabilities		
i. Borrowings	55	166
ii. Trade payables	49	44
iii. Other financial liabilities	11	18
Current tax liabilities (net)	2	4
Provisions	4	4
Contract liabilities	115	79
Other current liabilities	4	3
Total equity and liabilities	1,177	1,047

### **Standalone Cashflow Statement**



Cash Flow Statement (Rs. in Cr)	Sep-23	Sep-22
Profit Before Taxes	28	45
Changes in working capital	-29	-101
Cash generated from operations	-1	-56
Direct taxes paid (net of refund)	-17	-8
Net Cash from Operating Activities	-18	-64
Net Cash from Investing Activities	-13	-9
Net Cash from Financing Activities	84	60
Net Increase in cash and cash equivalents	53	-13.0
Add: Cash & Cash equivalents at the beginning of the period	48	21
Cash & Cash equivalents at the end of the period	101	8

# **Company Overview**



### **Astra Microwave: An Overview**



### Astra is engaged in the business of designing, developing and manufacturing microwave and radio frequency systems, sub-systems and components

- Astra Microwave incorporated in 1991 is one of the few private sector companies in India that:
  - · Manufactures critical microwave and radio frequency components, sub-systems and systems in India
  - Has in-house capabilities of designing, developing and manufacturing critical microwave and radio frequency-based equipment
- 30+ years of experience in microwave radio frequency (RF) applications
- Astra has moved up the value chain from sub-systems to high value-added systems

#### **Sectors**

- Defence
- Aerospace
- Space
- Metrology
- o Telecom
- Civil communications

#### **Projects with**

- Various Indian Govt. Labs
- Indian Defense PSUs
- o ISRO
- o Many foreign OEM's

#### **Facilities**

- 5 facilities in Hyderabad
- Continuous investment in World Class Infrastructure for Assembly
- Functional and Environment testing

#### **Key Financials**

- o Revenue Rs. 807.3 Cr.
- Gross Margins 35.7%
- o EBITDA Rs. 149.6 Cr.
- o PAT Rs. 76.7 Cr.

FY23

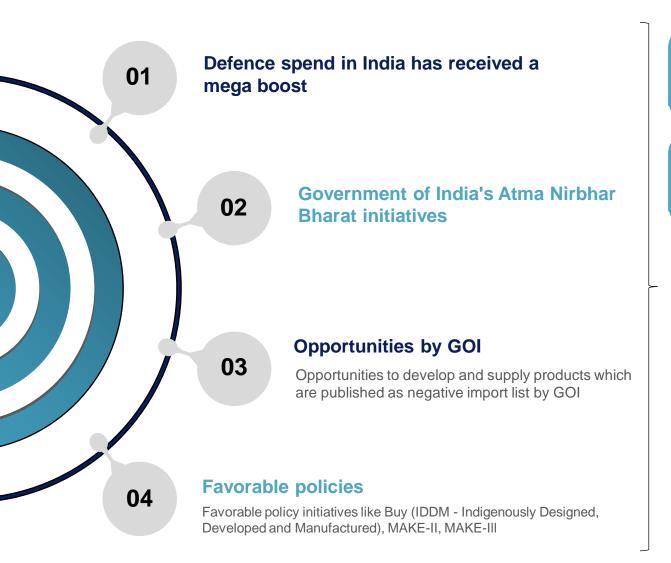
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#### Key projects participated over time

- ✓ LRUs supplied to 3D-CAR and Ashlesha Radars
- ✓ Developed & supplied Radar & EW Systems Test & Evaluation Facility (50 MHz – 40 GHz) to DLRL to carry out T&E of EW systems in Radiation mode.
- ✓ Supplied TR Modules & Control Units for LRDE's Long Range Radar (LRR)
- ✓ Developed & supplied a Land-based 7.3m Ground Telemetry Station which is designed to acquire and track airborne targets using five different carriers simultaneously
- ✓ Proto Development & Production of Digital Transmit Receive Units (DTRUs) and Digital Receive Units
- (DRUs) for Digital Active Phased Array (DAPA)
  Technology Demonstrator Project
- Shakti Project Submodules & Nayan Project
  Submodules
- Developed Active Array Antenna Unit (AAAU) For Uttam AESA Radar for LCA Mk1A fighter aircraft
- Delivered S-Band FHDR and X-Band FHDR which are CW Radars deployed in close proximity of gun/ launcher at Firing Test Range(s) and operated from blockhouse to measure muzzle velocity and range of the projectile after exit from the muzzle.

### **Strong Sectoral Tailwinds**





Healthy Order Book Order Book worth Rs. 1,867 Cr (Sept-23)

Sound visibility of revenues: Order book as on Sept-23 is 2x of revenue of FY23

AMPL has a proven track record of making high value-added SYSTEMS, RF and microwave super components and sub-systems which are becoming more relevant due to various government initiatives like IDDM, MAKE-II.

AMPL has been able to create a diversified and healthy order book on the back of its strong capabilities.

AMPL is very well placed to capture a bigger pie of the growing Indian defence sector with deep domain expertise, seasoned promoters, high focus on R&D and robust strategy in place.

### **Board of Directors**



#### **Managing Director**



#### Mr. S. Gurunatha Reddy

- Graduate in Science and Mathematics and Fellow Chartered Accountant.
- Worked in private sector industry and gained over 33 years of experience in accounting, finance, taxation, secretarial etc

#### **Executive Director Strategy & Business Development**



#### Mr. Atim Kabra

- Founder and Managing Director of Frontline Strategy Funds Pte. Ltd., a Singapore registered
   & licenced VCFM
- Over 25 years of well rounded "equities exposure" including Portfolio Management, Equity Sales and Equity Research with global institutions like ABN AMRO Bank, ANZ Grindlays Bank

#### **Chairman & Independent Director**



#### Dr. Avinash Chander

- Graduate in Science and Mathematics and Fellow Chartered Accountant.
- Worked in private sector industry and gained over 33 years of experience in accounting, finance, taxation, secretarial etc.

#### **Non-Executive Director**



#### Mr. Suresh Somani

- Businessman, investor and philanthropist with a substantial experience of over 40 years in equity markets.
- He is the director of M/s. Ratnabali Investment Private Limited

#### **Joint Managing Director**



#### Dr. Maram Venkateshwar Reddy

- · Graduate in Engineering (Electronics) and a Postgraduate in Business Administration.
- 28 years of experience in handling Marketing and Business operations in the domain of Defense, Space and Telecom segment in India and Overseas Market

#### Non-Executive Director Head of R&D



#### Mr. P. A. Chitrakar

- Associated with the Defence Electronics Laboratory, Hyderabad, as a scientist for over 20
  years before co-founding Astra Microwave
- An MSc (Physics) from Mysore University and an MTech (Advanced Electronics) from JNTU,
   Hvderabad.

#### **Independent Director**



#### Mrs. Kiran Dhingra

- 38 years of experience in governance and have held senior positions in decision making capacities in practically all sectors-the developmental, agricultural, social, industrial, infrastructural, transportation, economic and regulatory
- Joined Government in 1975, after standing first in the
- · combined merit list for IFS / IAS and opting to serve in the IAS

#### **Independent Director**



#### Mr. S. Varadarajan

- · Retired Director of the Electronics & Radar Development Establishment (LRDE), Bengaluru
- B.E (Hons) in ECE from Madras University in 1972
- M.E with Distinction in ECE from Indian Institute of Science in 1974

Radar Electronics | Electronic Warfare | Missiles | Telemetry | Space | Meteorology | Hydrology | Telecom

### **Key Team Members**

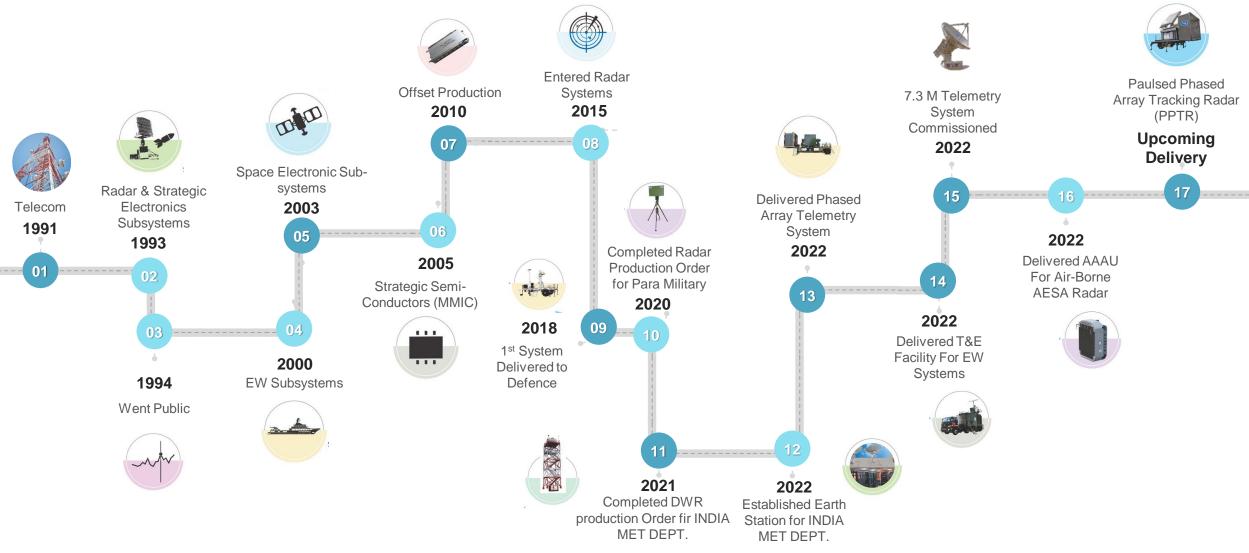




### Journey so far



#### 30+ Years of Astra Microwave Products Ltd.



Radar Electronics I

**Electronic Warfare** 

Missiles

Telemetry

Space

Meteorology

Hydrology

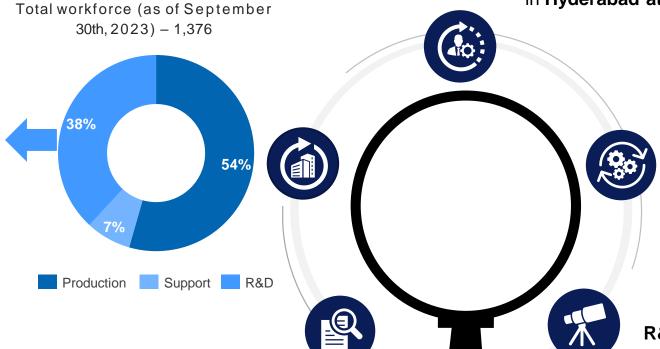
Telecom

### Strong research and development capabilities



526 R&D
professionals, out
of which over 96
have a masters
degree, 2 hold
doctorate degrees
and over 100 have
decade-plus
experience

Dedicated research and development facility in **Bengaluru with modern equipment** and in **Hyderabad at Unit-III** 



Capable of designing and developing Gallium Nitride ("GaN") TRMs

 Currently working with defence agencies for incorporating such TRMs in modernizing existing radars of Su-30 Mk 1, LCA Mk 2 and AMCA fighter aircrafts

R&D Expenditure (Rs in Crores):

FY23	34.19
FY22	35.96
FY21	22.50
FY20	22.25

Astra is one of the few private sector players in India that has the capability to develop and supply MMIC products

### State of the Art Infrastructure



Astra has advanced in-house facilities for lower turnaround time for product realization appreciated by domestic and foreign customers.

#### Hyderabad, Telangana

Karnataka

#### Unit I



Land : 1.13 Acres Building : 18,000 Sq. Ft

Status : Own Year : 1999

**Facility Offering** 

Automatic weather Station AWS and other Hyderology & Meteorology

#### Unit II



Land : 2.0 Acres Building : 20,000 Sq. Ft

Status : Own Year : 1995

**Facility Offering** 

Near Field Test Range Out-Door Test Range Multi-Layer Antenna Fabrication

#### Unit III



Land : 9.9 Acres
Building : 77,000 Sq. Ft
Status : Own

Year :2003

**Facility Offering** 

Clean Room Laser Welding Vibration Table

#### **Unit IV**



Land : 19.0 Acres Building : 1,80,000 Sq. Ft

Status :Own Year :2009

**Facility Offering** 

EMI/EMC Halt/Hass Chamber ESS Chamber

#### Unit V



Land : 0.59 Acres Building : 23,000 Sq. Ft

Status : Own Year : 2019

**Facility Offering** 

MIC Facility CNC Drilling Copper Plating Gold Plating Etching developing

#### Bengaluru Unit



Land : 5.0 Acres
Building : 1,00,000 Sq. Ft

Status : Own Year : 2012

**Facility Offering** 

Near Field Test Range

### Equipped with

Clean room compatible oven for curing epory

Temperature controlled hot plate with nitrogen purging facility for eutectic attachment

High-precision bonding machines

ESD measurement equipment

DC probing station for on-chip measurement of DC parameters

Radar Electronics | Electronic Warfare | Missiles | Telemetry | Space | Meteorology | Hydrology | Telecom

### **Assembly Infrastructure**



01

Fully automated Assembly facility consisting of 3 Automatic SMT assembly lines with high end testing capabilities that include AOI, 3D X Ray, and functional test using Flying probe tester.

02

450,000 sq.ft. of research, design, development and manufacturing across 6 units

03

Class 10000 clean rooms

04

Laser Welding, Seam Sealing

05

Bare Die assembly using Gold wire bonding and parallel gap welding

06

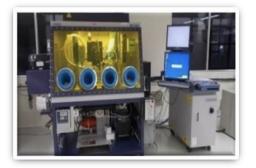
Multilayer Microstrip Antenna Assembly Facility



Clean Rooms - Class 10,000



**SMT Lines** 



Laser Welding



**Automated Optical Inspection** 

### **Functional Testing**



01

Near Field Test Range (NFTR)

02

**Digital Signaling** 

03

Function and pulse generators

04

Open air antenna test range

05

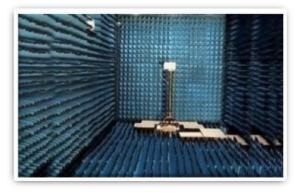
Spectrum Analyzers, Vector Network Analyzer, Signal generator, RF power meter

06

Distortion Analyzer

07

ATE-ATS facility



**FFTR** 



ATE ATS - Facility



Open Air Antenna - Test Range



Oscilloscope

### **Functional Testing**



01

EMI/EMC Test Facility as per MIL STD 461C/D/E/F (NABL)

02

HASS/HALT Chambers

03

Environment Chambers (-65degC to +175degC; 98% RH)

04

Vibration/ Shock Testing tables, Bump Test M/c's

05

Weiss Chamber

06

Power Quality Tests as per MIL STD 704 D/E







Vibration



**Environmental Chamber** 



HASS Chamber

### **Product Range**



Astra has designed, developed and produced critical sub systems and systems for its customers for building various airborne, naval and ground based platforms

Radar, Missile Electronics, Electronic Warfare, Satellites, MMIC and Communication

#### **Defence**

- Radars
- · Electronic Warfare
- Missile Electronics
- Telemetry
- · Counter-Drones

#### **Space**

- Flight Model Application
- Ground based Application
- INSAT MSS Terminals

#### **Hydro/Meteorology**

- Water Level Measurement (Bubbler/ Radar Sensor)
- Automatic Weather Stations (AWS)
- Agromet Met Stations (AMS)
- Automatic
   Rain Gauge
   (ARG) X Band
   Doppler
   Weather Radar

#### Other areas of work

- Antennas
- MMIC
- Contract
   Manufacturing
- Homeland Security

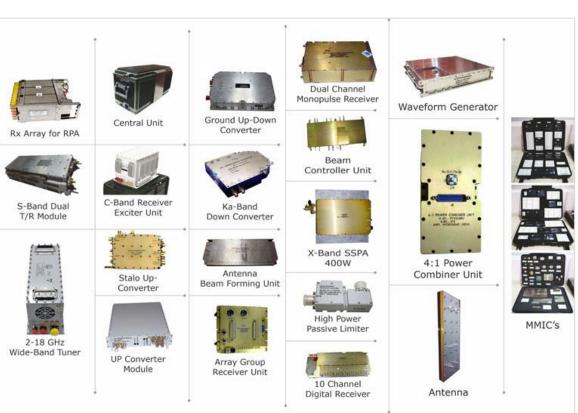
### Radar Electronics: Up to Ka band



#### **Homeland security**

- Counter UAV Radar Drishti
- Perimeter Intrusion Detection Radar
- C-UAS System







Design and development of all kind of radar subsystems including power amplifiers, receivers, exciters, filters, synthesizers, converters, etc.

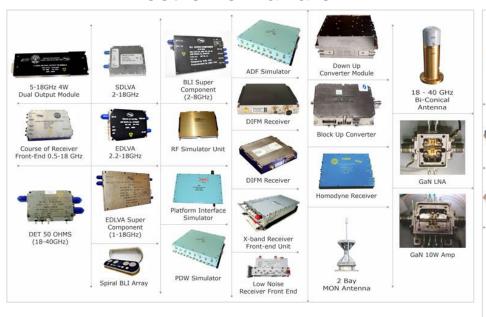
In-house development of Signal Processing & Radar Data Processor

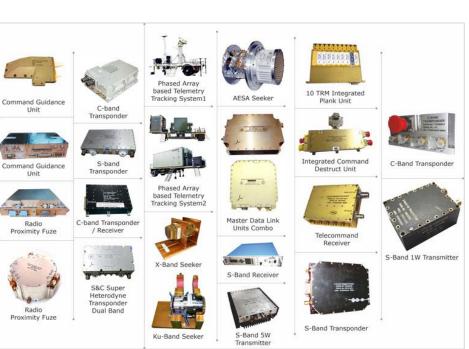
The Ka-band electromagnetic frequency spectrum ranges from 26.5GHz to 40GHz.

### **Electronic Warfare: Up to Ka band**



#### **Electronic Warfare**





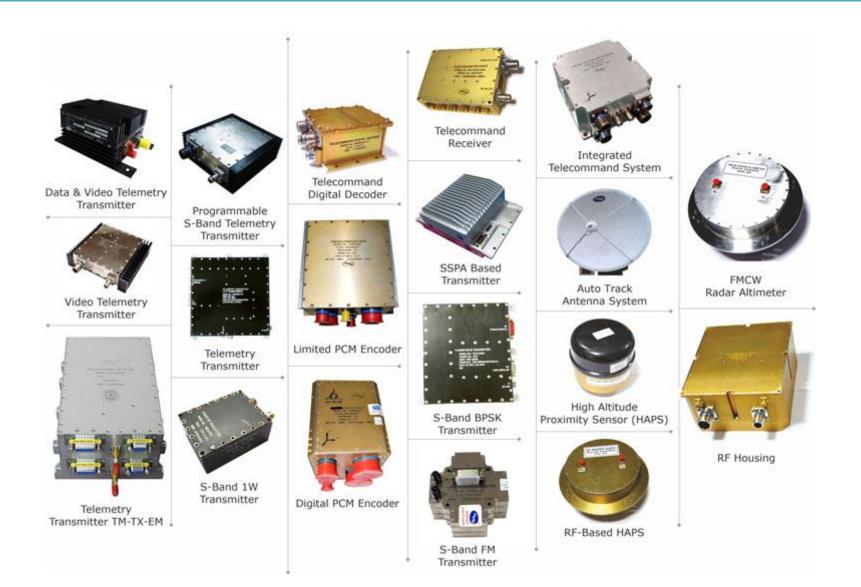




Also associated with Jammer's program of LCA and other fighter platforms in India.

### **Telemetry**





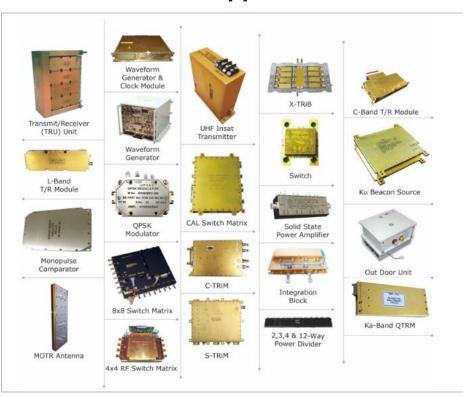


Supplying various subsystems for Telemetry applications such as S- Band FM Transmitter Airborne RF Trans receiver, Ground Up Down Converters, C & S band switch antenna systems, Telemetry Tracking Systems etc.

Supplying telemetry subsystems to LCA and Intermediate Jet Trainer (IJT) aircraft.



#### **Ground Application**





Flight model





The company's strong relationship with large corporations builds its brand equity and helps it in establishing itself as a prime contractor for large and longer-term programs in the marketplace. AMPL works on high-value complex projects awarded by companies.

- Receipt of order from the customers (such as government research organizations - Domestic & Foreign, private entities etc.)
- Customers provide the electrical and mechanical specifications of the modules or sub-systems as per their system requirements

Receipt of order via tender route

- Work with the customer team to specify the target specifications of the required module or sub system presenting the various options and latest technologies involved to finalize the target specifications.
  - R&D

 Realizing the product using the engineering expertise in- house and deliver a fully qualified product (airborne, naval or ground application) to its customers.

> Realization of the Product

 Once the system is qualified by the customer production orders are released.

Approval from authority

 Works with systems integrators like DPSUs (Defence Public Sector Undertakings) and others for commercialization of the products

Receipt of order from OEMs

25

High value addition leads to better margins

Astra Microwave has produced more than USD 150 million worth of high-end modules under BTP route.

- Works with many foreign OEMS for producing their products in India under this mode for meeting their offset requirements.
- Key customers include Elta Systems Ltd, ELBIT, Rafael, Thales.

**Receipt of order from global OEMs** 

- Once the prototype is approved by the OEM, production commences.
  - Approval from Authority

 Production based on designs shared by OEMs.

**Production** 

Marginal value addition -Acts as a capacity filler

Radar Electronics | Electronic Warfare | Missiles | Telemetry | Space | Meteorology | Hydrology | Telecom

### **Strategy for Growth**





#### New product development To accelerate growth

- Develop products in close association with government research organizations for defence and space.
- · Gol has introduced policy measures promoting Indigenous shipbuilding.
- Grow business by producing new and innovative products.
- · Enter commercial end user markets for radars.



#### **Focus on Research & Development**

- Invest in modern technology and equipment's to address changing industry trends and customer requirements.
- Leverage strong R&D base to broad base domestic offerings.
- Developing digital expertise by spending more on R&D.



#### **Joint Ventures and Strategic alliances**

- Through JV or strategic alliances, offer improved technology and products.
- Target the offset requirement in large defence procurement programmes of Gol.
- Exploring the areas in the anti drone, EW, satellites, SDRs and electro-optics through JVs.
- In discussion with our JV partners to expand the origin 21.30 like in the SDR product portfolio to develop EO (electro-optics) product line.



#### Reap benefits of sectoral tailwinds

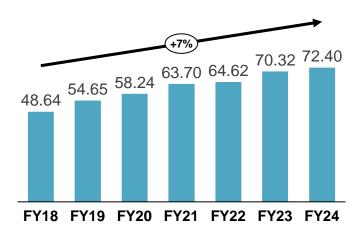
- By doing extensive investments to strengthen our position as a systems vendor.
- Bidding for the whole system the complete radar system for both DRDO and for future MoD requirements.
- Atmanirbhar Bharat initiative is To encouraging the industry develop the system either through in-house development or through foreign technology tie-up.

### Growing defence products opportunity



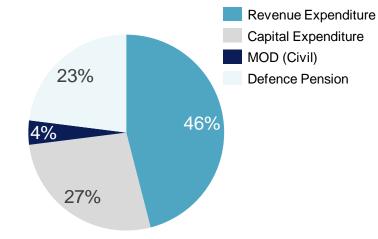
India's extensive modernisation plans, an increased focus on homeland security to increase government allocation for defence expenditure along with Make in India focus are expected to drive healthy growth in the sector

#### Growing Defence Budget (in Bn \$)



India is the 3rd largest military spender

#### **Defence Budget Components - FY23**



Source: Ministry of Defence - Budget

#### **Business Potential till 2028**

Rs. 4,000 Cr. Defense & Aerospace

Rs. 500 Cr. Space

Rs. 1.500 Cr. **Turnkey Projects,** Metrology & System

Rs. 1,000 Cr. **Export** 

Rs. 7,000 Cr. **Total** 

The Indian government has taken various initiatives to promote on indigenization in this space:

#### Atma Nirbhar Bharat

#### Imports Embargo

The Indian government has set the defence production target at USD 25 bn by 2025 (including US\$5 bn from exports by 2025)

ISRO has planned multiple deep space and experimental missions to strengthen India's position in global space industry through new technology development

Indigenous shipbuilding with a remarkable increase in capability and programme fulfillment

Defence Acquisition Procedure, 2020

#### Category

Buy and Make

Buy (Global -

Foreign Vendor

Manufacture in India)

#### Indigenous Content (IC) Buy (Indian-IDDM) Indigenous design and ≥ 50%

Buy (Indian) In case of indigenous design ≥ 50%

otherwise ≥ 60%

Buy and Make (Indian) ≥ 50% of the 'Make' portion Category not present

50% or more

Foreign Vendor - Nil/ Indian Vendor ≥ 30%

### **Total Addressable Market**



Major opportunities for AMPL of around Rs 24,000-25,000 Crs across all sectors till FY28.



Meteorology/

### **Opportunities**



Wide Array of Opportunities dueto

Government Initiatives

Various government initiatives are encouraging the industry to develop the system either through in-house development or through foreign technology tie-up.

Astra in alliance with System Knowledge of its partners aims to deliver the product that meets Government thrust on Atma Nirbhar Bharat.

Getting opportunity from the Services to build for the intersystems.

Indian industries are getting opportunities to develop and supply products which are published as negative import list by GOI.

Astra will utilise its skill on design and production of high-end defense equipment in India and would also cater to the after-sale support.

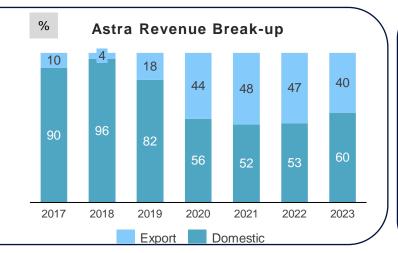
Indigenous integrated and strategic defence and aerospace electronics solutions provider which is well positioned to benefit from the Atma Nirbhar Bharat inititative.

We aim to achieve 70% Domestic 30% Export Revenue distribution over next 2-3 years. Domestic business on an average carries 40 to 45% of gross margin as against 8 to 10% gross margin in exports.

#### Defence Offset

The defence offset policy mandates a foreign vendor to source at least 30% of the value of an order (when the order is worth Rs.2,000 crore or more) from Indian manufacturers.

Astra has been active in tapping this opportunity and its export business is driven by these offset prov1s1ons.



#### Ready for Electronic Warfare

- Antennas
- EDLVA and BLI Super Components
- EW Simulators
- DIFM Receivers
- Front End Receivers
- Up/Down convertors
- Homodyne Receivers

### Strategic Electronic Telemetry Sub-systems

- Command guidance units
- Radio Proximity Fuze
- L, S, C & X-Band Transponders
- Phased Array based Telemetry Tracking System
- Sub-system for gimbal based and AESA Seeker
- Ground and Airborne data link systems
- Data and video Telemetry transmitters, Transponders,
- Encoders & decoders
   Telemetry Receivers

Radar Electronics | Electronic Warfare | Missiles | Telemetry | Space | Meteorology | Hydrology | Telecom

#### Overview

 BEPL is a fully owned subsidiary of Astra Microwave Established with State-of-the-Art manufacturing & test facilities to meet Global Standards. This combined with experienced manpower & stabilized processes ensure that the needs of various Industry Segments can be met easily A dependable player with excellent technological capabilities and a long-term commitment to the defense, Bhavyabhanu Electronics Pvt. Ltd. aerospace, medical and industrial electronics industry Products are known for ruggedness and reliability and conform to the latest quality standards. BEPL can handle both high-mix, low/medium volume products as well as high volume production for our customers A fabless MMIC Design House, based in Singapore. Aelius Semiconductors develops GaAs and GaN MMIC products based on a robust and reliable design philosophy. These designs are fabricated at leading foundries across the world The products are tested and packaged as per customer's requirement utilizing state-of-the-art facilities Aelius's unique and wide range of MMIC products are focused primarily on the Defense and Space industries, with competitive time lines and prices. We offer the flexibility to custom-package our products to customer's chosen configuration of die, package, or module Astra Microwave Products Ltd and M/s RAFAEL ADVANCED DEFENSE SYSTEMS LTD., Israel (RAFAEL) came together to form a Joint Venture Company called Astra Rafael Comsys Private Ltd. (ARC) in Aug-19 Astra Rafael Focuses on indigenous technology and Atma Nirbhar Bharat programs Comsvs Pvt. Ltd. Engages in carrying out production, integration, customization, marketing, sale, life cycle support and additional activities as required in the fields of Tactical Radio Communication systems, Electronic Warfare Systems and Signal Intelligence Systems

### **Esteemed Clientele**











































Light

Combat

Aircraft

















**AAAU** for Uttam **AESA** 

Radar







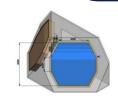












**AAAU for LRMFR** 























Medium **Power Radar DTRMs** 

Telecom







Long Range Radar TRMs, BSNs, PS

### Major Opportunities: Radar Programs



#### **Bharat Electronics**

Program: Arudhra (MPR)

Opportunity: Rs 400Cr

Timeline: FY24



#### **Indian Air Force**

Program: HPR Sub-Systems

Opportunity: Rs

1.100 Cr Timeline: FY27



Product:

Product:

#### **Bharat Electronics**

Program: Mountain Radar

Opportunity: Rs

130 Cr



#### HAL

Program: Uttam AESA Radar (LCA

Mk 1A)

Opportunity: Rs

450Cr

Timeline: FV25-27

#### HAL

Program: Uttam AESA Radar (LCA

Mk2)

Opportunity: Rs

300Cr

Timeline: FY28-30

#### HAL

Product: Program: Uttam

MkI)

Opportunity: Rs 1,000 Cr

AESA Radar (Su-30

Timeline: FV26-30



Program: Uttam

**AESA Radar** (AMCA)

Opportunity: Rs

500Cr

Timeline: FV26-30



Program: Uttam **AESA Radar** 

(TEDBF)

Opportunity: Rs

300Cr

Timeline: FY27



Product:

(LRR)

1.000 Cr

Timeline: FY24

#### **DRDO**

Program: Long

Range Radar

Opportunity: Rs

#### **DRDO**

Product:

Product:

Program: LRSAM Product:

Radar

Opportunity: Rs

500Cr

Timeline: FY24



Product:

Radar Electronics I Electronic Warfare Missiles Telemetry Space Meteorology Hydrology Telecom

### Major Opportunities: Radar Programs



#### **DRDO**

Product: Program:

AEW&C-11

Opportunity: Rs

160 Cr

Timeline: FY24

#### **Bharat Electronics**

Program:

QRSAM

Opportunity: Rs 2,000 Cr

Timeline:

FY24-26

#### **ISRO**

Program: Space

Opportunity: Rs

1,400 Cr

Timeline:



Product:

FY24-27

#### **Bharat Electronics**

Program: FCR Opportunity: Rs

1,317 Cr

Timeline: FV26





Program: UHF Radar (2 Systems

Opportunity: Rs

450Cr

Timeline: FV29



Product:

#### **DRDO**

Program: S-band

Radar

Opportunity: Rs

1200 Cr

Timeline: FY29



Program: AD

Radars

Opportunity: Rs

700Cr

Timeline: FY27



Product:



**DRDO** 

Drone Radar

140Cr

Timeline: FY24-30



Opportunity: Rs



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Product:

### **Major Opportunities: Missiles**



#### DRDL/BDL

Program: ASTRA Product:

Opportunity: Rs

400Cr Timeline: FY24-26



#### **BDL**

Program:

**AKASH** 

Opportunity: Rs

435Cr Timeline:

FY24-26



Product:

#### **BDL**

Program: QR

SAM

Opportunity: Rs 64Cr

Timeline:

FY24-26

#### **ANSP**

Program: SLCM

Opportunity: Rs

132 Cr

Timeline: FY27



Product:

#### **DRDL**

Program: NGARM

Product: Opportunity: Rs

186 Cr

Timeline: FY27



#### DRDL/BDL

Program: Pralay/

Brahmos/ **SMART** 

Opportunity: Rs

50Cr

Timeline: FY24

#### **ITR**

Program: Test Range Systems -

PATM, Decoy etc. Opportunity:

Rs 100 Cr

Timeline: FY24-26



Product:

#### **DRDO**

Program:

Telemetry

Modules

Opportunity: Rs

94Cr

Timeline: FY24-26

#### **SPIC**

Program:

Converters

Opportunity: Rs

34Cr

Timeline: FY27

Product:

Transponders



Program:

Opportunity: Rs

64Cr

Timeline: FY27



Product:

Radar Electronics I Electronic Warfare Missiles Telemetry Space Meteorology Hydrology Telecom

Product:

Product:

### **Major Opportunities**



**EW** 

#### HAL

Program: ASPJ Pod for LCA Mk 1A Opportunity: Rs 50 Cr

Timeline: FY25-27

#### **Bharat Electronics**

Program: EW Products Opportunity: Rs 230 Cr Timeline: FY25-27

#### **Bharat Electronics**

Program: DR118-DST, MASS, BIT for Su-30 Mk I Opportunity: Rs 250 Cr Timeline: FY24-26

**Space** 

#### MoD, ISRO, Satellite Users

Program: SAR, Commn.
Payload Satellites

Opportunity: Rs 925 Cr Timeline: FY24-30



Product:

Radar Electronics | Electronic Warfare | Missiles | Telemetry | Space | Meteorology | Hydrology | Telecom

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### **Major Opportunities**



### **Systems**

#### **Indian Armed Forces**

Program: C-UAS Product: Opportunity: Rs 2,000 Cr

Timeline: FY24



#### Indian Air Force

Program: Wind Product: Profiler Radar &

DWR

Opportunity: Rs

200Cr

Timeline: FY24-27

#### **Indian Army**

Program: Low level light

Weight Radar Opportunity: Rs

100 Cr

Timeline: FY25

#### Indian Air Force

Product:

Product:

Program: Bird

monitoring Radar

Opportunity: Rs

Timeline: FY25



Product:

### **Special Projects**

#### **Commercial Market**

Program: IRNSS module and VTU

Opportunity: Rs 300Cr

Timeline: FY25-30



Product:

Telcos, Banks, MoD, ISRO, Airports, Power grids etc

Product:

Program: NAVIC

Timing Receiver

Opportunity: Rs

500Cr

Timeline: FY25-30

#### **State Govts for** Survey of India

Program: CORS

Receiver

Opportunity: Rs

500Cr

Timeline: FV25-30

#### MoD, MHA, State **Police**

Program:

Robotics

Opportunity: Rs

75 Cr

Timeline: FY25-30



Program: 70 GHz ITS Product:

Radar Timing Receiver

Opportunity: Rs 100 Cr

Timeline: FV25-30





Product:

### **Quality certifications**



### **Industry Leading Certifications**













### Awards & Accolades





LAToT Ceremony for Coastal Surveillance Radar



Excellence in Innovation, Design Technology, R&D 2021



Counter-Drone System LAToT Handing over Ceremony



Award for Excellence in Aerospace Indigenisation-2021



ELCINA EFY Award for Business Excellence



#### **Our Contribution towards the Society**

Eradicating hunger, poverty and malnutrition

**Promoting education** 

Promoting gender equality

Ensuring environmental sustainability

Protection of national heritage

Benefit of armed forces veterans

Training to promote rural sports

Contribution to the PM's National Relief Fund

Funds provided to technology incubators

Rural development projects



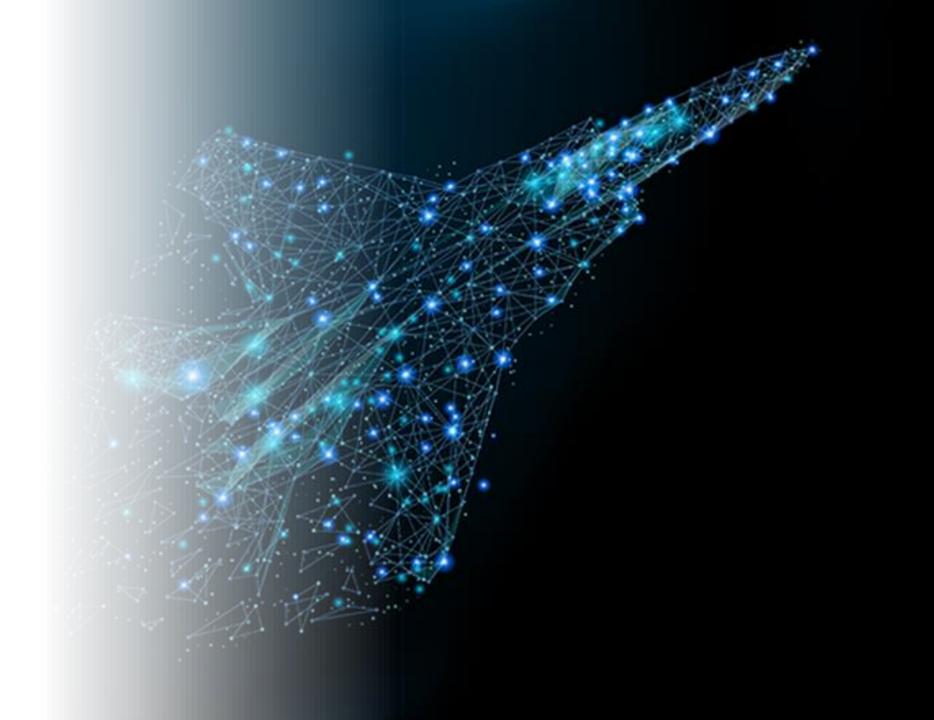








# **Historical Financials**



### **Standalone Profit & Loss**



PARTICULARS (Rs. In Cr)	FY23	FY22	FY21	FY20	FY19
Revenue from Operations	807.3	735.0	589.2	461.6	286.2
Total Raw Material	518.7	524	418	267	159
Gross Profit	288.6	211.2	170.7	194.7	126.9
Gross Profit Margin	35.7%	28.7%	29.0%	42.2%	44.3%
Employee Expenses	86.8	73	64	66	61
Other Expenses	52.3	51	42	45	36
EBITDA	149.6	86.9	64.2	83.8	29.8
EBITDA Margin	18.5%	11.8%	10.9%	18.2%	10.4%
Other Income	5.7	7	12	12	24
Depreciation	23.3	22	23	25	29
EBIT	132.0	72.6	52.8	70.5	25.7
EBIT Margin	16.3%	9.9%	9.0%	15.3%	9.0%
Finance Cost	29.0	20	21	8	9
Profit before Tax	102.9	52.7	31.4	62.7	16.7
Profit before tax margin	12.7%	7.2%	5.3%	13.6%	5.9%
Tax	26.3	12	7	15	4
PAT	76.7	40.3	23.9	47.3	12.5
PAT Margin %	9.5%	5.5%	4.1%	10.3%	4.4%
EPS (Rs.)	8.85	4.65	2.76	5.47	1.45

### **Standalone Balance Sheet**



ASSETS (Rs. In Cr)	Mar-23	Mar-22	Mar-21	Mar-20	Mar-19
Non-Current Assets	228	215	202	213	222
Property, plant and equipment	165	158	150	158	176
Capital WIP	2	0	0	12	2
Investment in Associates	2	2	2	-	-
Investments in joint ventures	20	20	20	16	16
Investments in subsidiaries	15	15	13	8	8
Financial Assets					
i.Other Financial Assets	6	9	10	11	12
Deferred tax assets	8	6	2	-	-
Non Current Tax Assets	5	3	-	5	5
Other non-current assets	5	3	3	2	2
Current assets	818	743	714	644	391
Inventories	396	402	291	226	130
Financial assets					
i. Investments		-	14	13	20
ii. Trade receivables	282	202	254	247	190
iii. Cash and cash equivalents	49	21	14	7	7
iv. Bank balances other than (iii) above	55	49	24	43	18
Other financial assets	-	4	13	-	-
Current tax assets (net)	-	1	1	-	-
Other current assets	36	62	103	107	26
Total assets	1,047	958	915	857	613

EQUITY AND LIABILITIES (Rs. In Cr)	Mar-23	Mar-22	Mar-21	Mar-20	Mar-19
Equity and Liabilities	653	590	561	547	503
Equity share capital	17	17	17	17	17
Equity attributable to owners of the Company	636	572	543	530	486
Non-current liabilities	77	47	4	3	9
Financial liabilities					
i. Borrowings	3	3	-	-	5
Deferred tax liabilities (net)		-	-	-	5
Provisions	6	4	4	3	-
Contract liabilities	68	40	-	-	-
Current liabilities	316	321	351	307	101
Financial liabilities					
i. Borrowings	166	56	100	47	0
ii. Trade payables	44	53	35	38	22
iii. Other financial liabilities	18	15	11	16	20
Current tax liabilities (net)	4	-	1	2	-
Provisions	4	3	2	2	3
Contract liabilities	79	192	201	201	51
Other current liabilities	3	2	2	1	5
Total equity and liabilities	1,047	958	915	857	613

Telecom

### **Thank You**

For more information please contact:

#### Company:



Astra Microwave Products Ltd.

**Astra Microwave Products Limited** 

CIN No: L293091G1991PLC013203

Mr. T. Anjaneyulu, GM – Company Secretary

Email id: <a href="mailto:secretarial@astramwp.com">secretarial@astramwp.com</a>

#### **Investor Relations Advisors:**

SGA Strategic Growth Advisors

Strategic Growth Advisors Pvt Ltd.

CIN No: U74140MH2010PTC204285

Shikha Puri / Dharmik Kansara

Email id: <a href="mailto:shikha.puri@sgapl.net/">sgapl.net/</a> <a href="mailto:dharmik.k@sgapl.net/">dharmik.k@sgapl.net/</a>

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