

**ASTRA MICROWAVE PRODUCTS LIMITED**

Regd. Office : ASTRA Towers, Survey No. 12(P), Kothaguda Post,
Kondapur, Hitechcity, Hyderabad, Telangana, INDIA - 500084
Tel : +91 40 46618000, 46618001, Fax : +91 40 46618048
Email : info@astramp.com, website : www.astramp.com
CIN : L29309TG1991PLC013203

May 26, 2022

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 enclosed herewith Investor Presentation for Q4 & FY 22 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

T. Anjaneyulu
G.M - Company Secretary



Works :

Unit 1 : Plot No. 12, ANRICH Industrial Estate, Bollaram, Medak Dist., Telangana State - 502 325

Unit 2 : Plot No. 56A, ANRICH Industrial Estate, Bollaram, Medak Dist., Telangana State - 502 325

Unit 3 : Sy. No. 1/1, Imarath Kancha, Raviryala (Vil), Maheshwaram (Mdl) R.R. Dist., Telangana State - 500 005

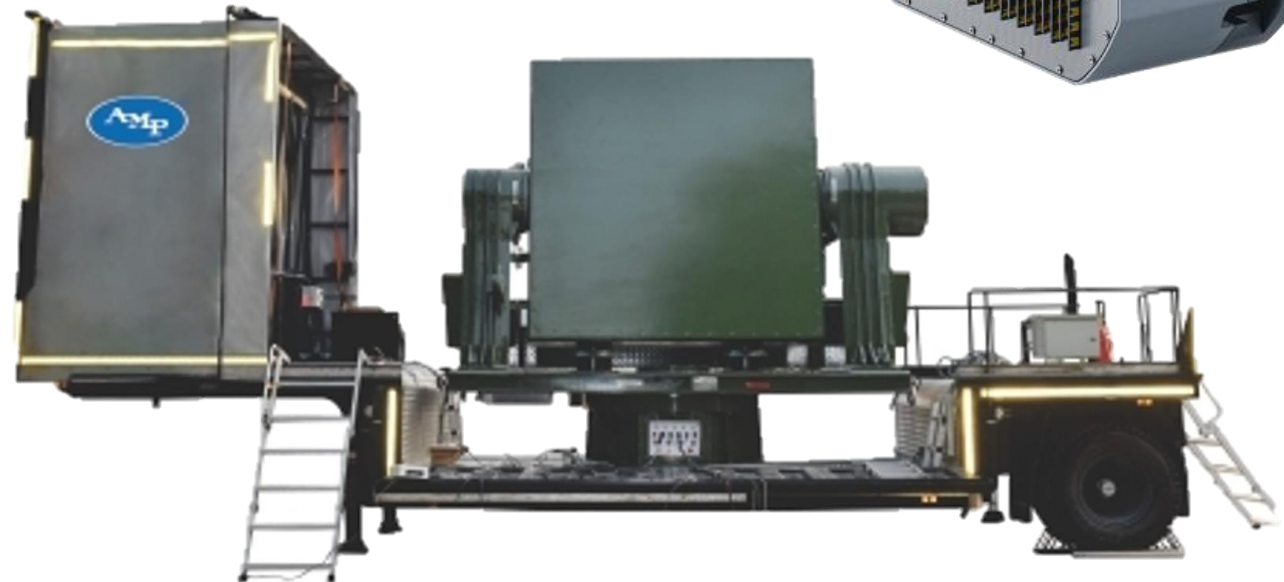
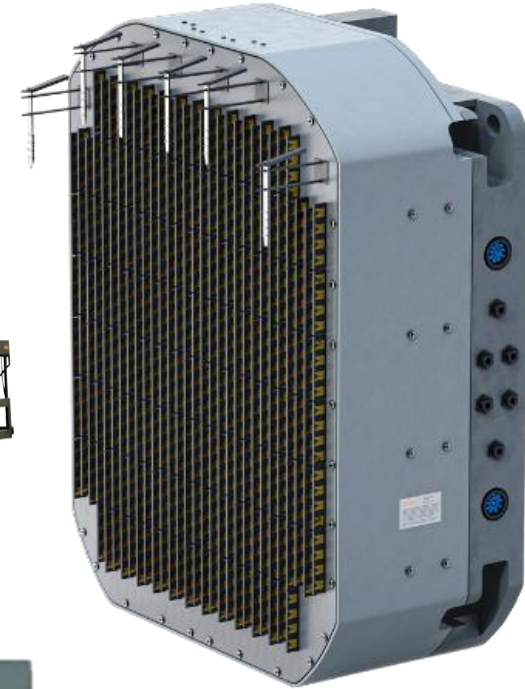
Unit 4 : Sy. No. 1/1, Plot No. 18 to 21, Imarath Kancha, Hardware Park, Raviryala (V), Maheshwaram (M) R.R. Dist., T.S. - 500 005

R&D Centre : Plot No. 51 P, Bengaluru Aerospace Park(KIADB), Survey Nos Parts of 36 to 40, Bengaluru North, K.S. - 562 149.



Astra Microwave Products Ltd.

Investor Presentation – Q4 FY22



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Quarterly Highlights

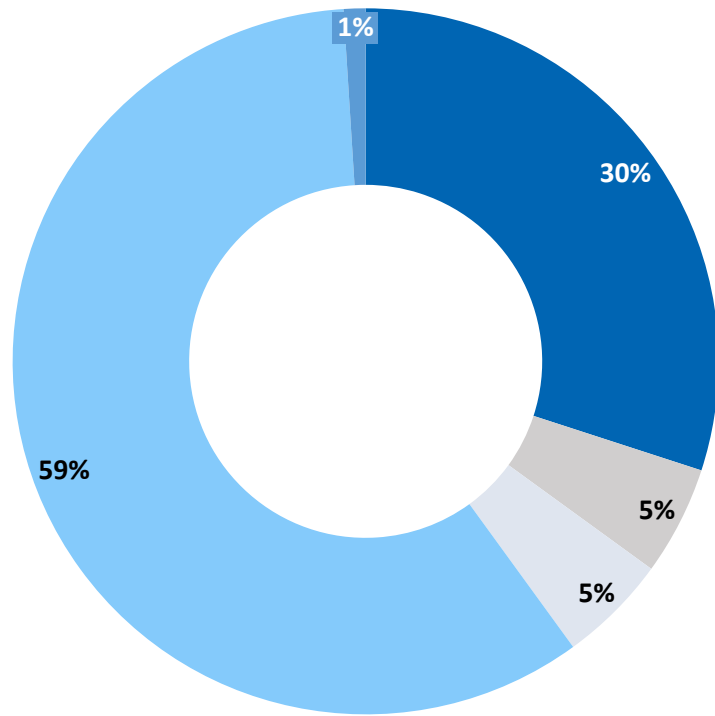


Segmental Revenue Break-up

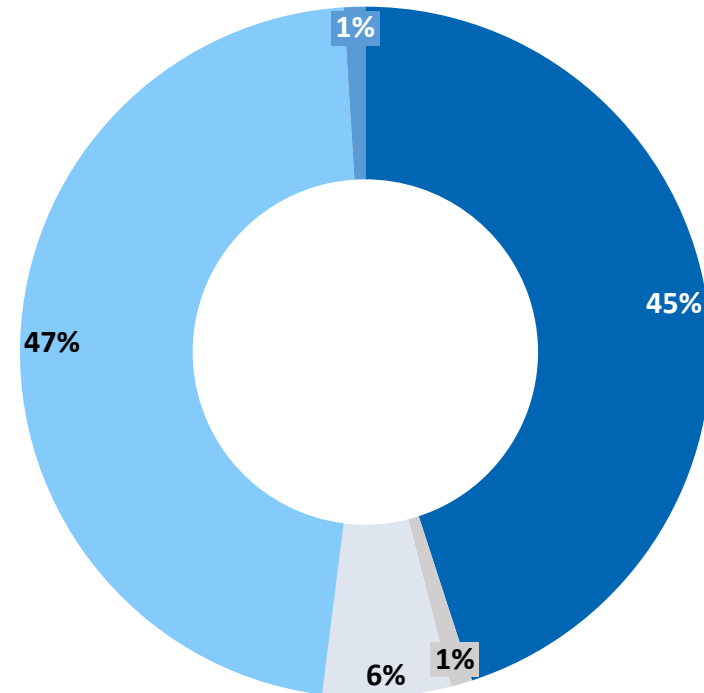


Astra Microwave Products Ltd.

FY21



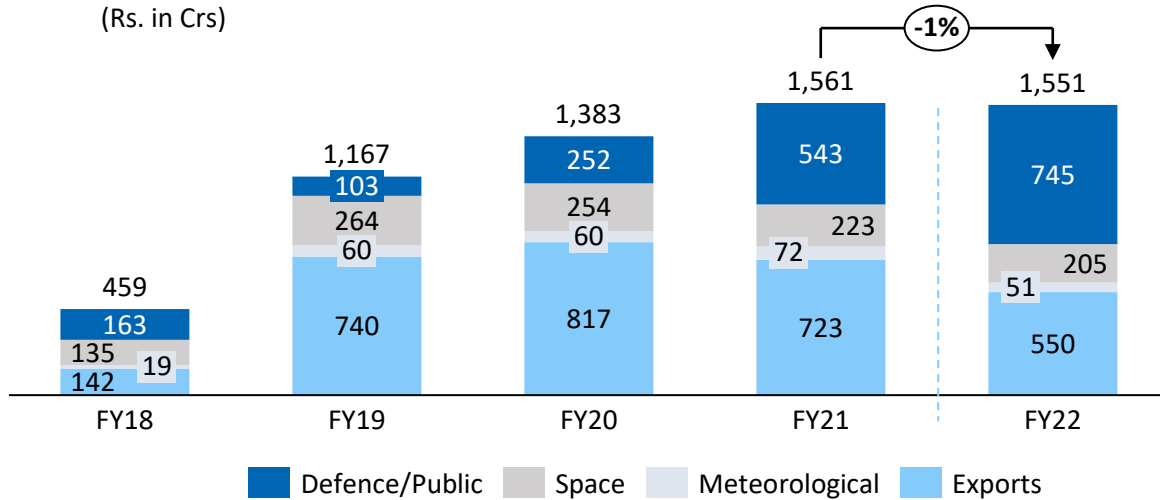
FY22



■ Defence ■ Space ■ Meteorological ■ Exports including Deemed Exports ■ Others

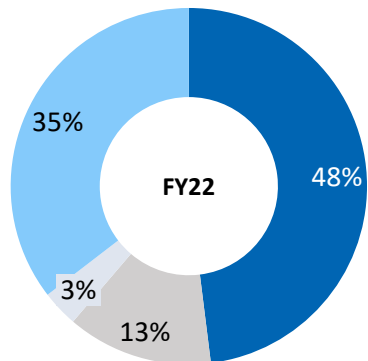
Historical Orderbook Build-Up

(Rs. in Crs)



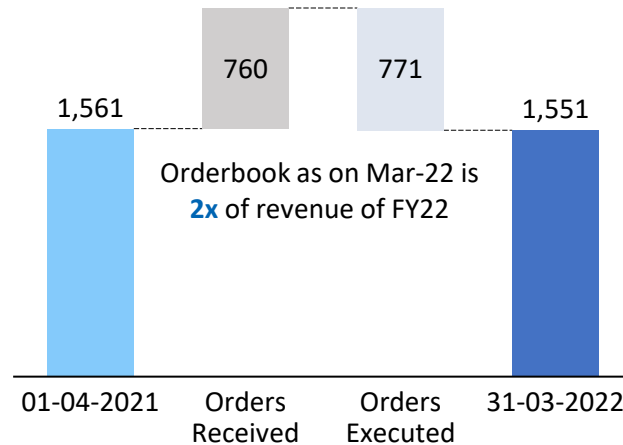
Diversified Orderbook

Defence/Public, Space, Meteorological, Exports



Orderbook Build-Up

(Rs. in Crs)



Orderbook Updates

Key orders received during the quarter

Description	Value (Rs. Cr)
Electronics for AEW&C	29.00
Manpack Radio Modules	20.59
SDR Modules	12.27
Electronics for LRSAM	3.78
NGARM Commn. Modules	3.60
X-Band Core Chip & LNA to BEL	2.50
Counter-Drone Radar Electronics	2.07
Akash-NG Missile Electronics to DRDO	1.80
Astra Missile Electronics to BDL	1.80

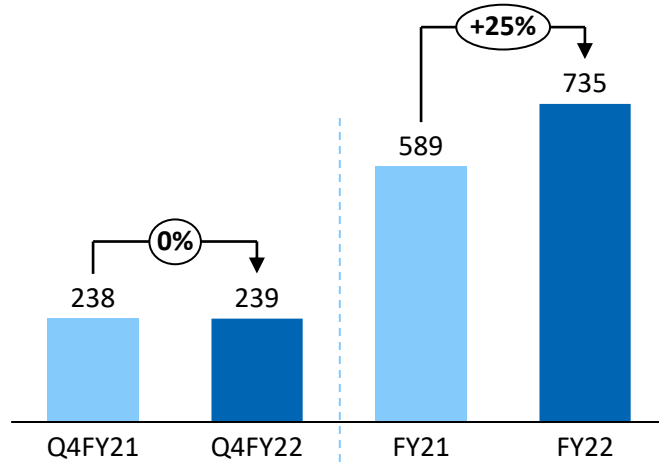
- Diversified orderbook across sectors giving us strong revenue visibility for the coming years
- Existing domestic and export orderbooks and the projects like Akash & opportunities in radar systems give us a revenue visibility on a sustainable basis
- Huge opportunity in the areas of anti-drone, EW, satellites, SDRs and electro-optics which will add up to the orderbook at revenues going forward

Performance Highlights

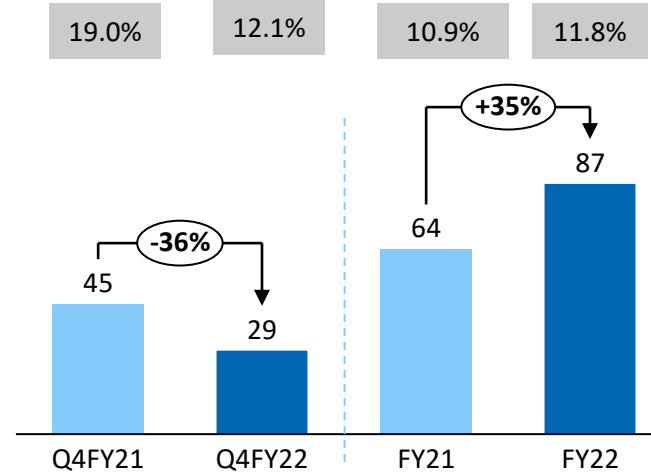


Astra Microwave Products Ltd.

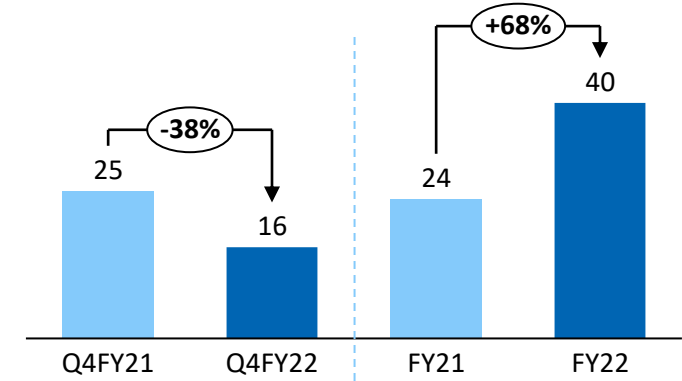
Revenue (Rs. in Crs)



EBIDTA (Rs. in Crs)

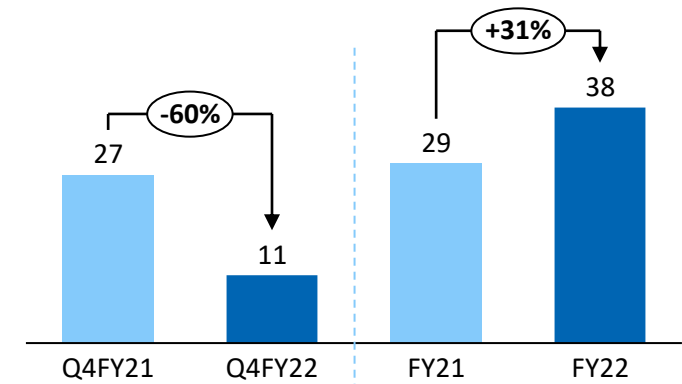
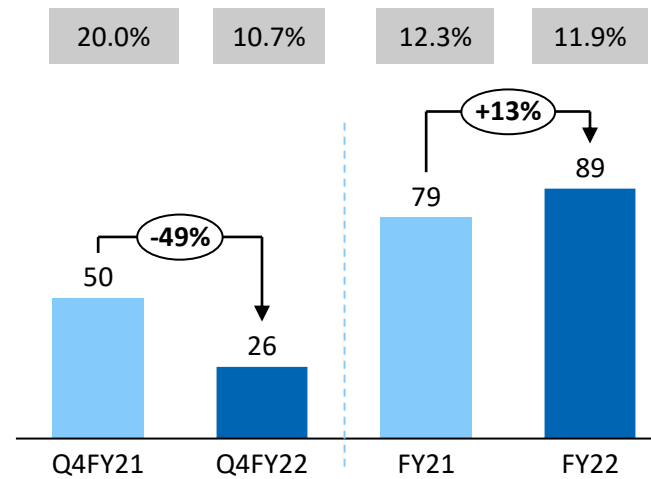
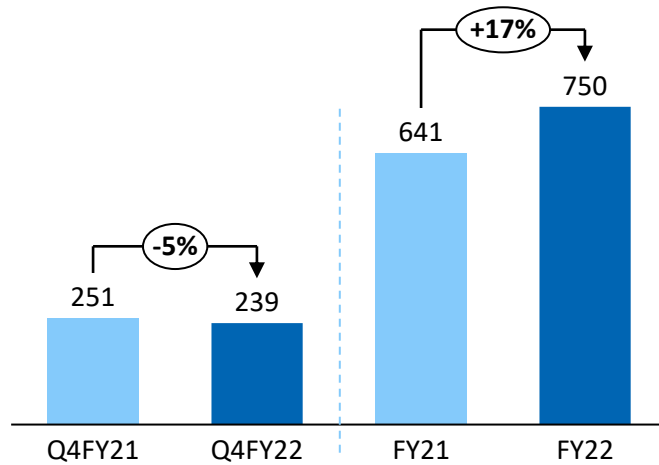


PAT (Rs. in Crs)



Standalone

Consolidated



Q4 & FY22 Standalone Profit & Loss Statement

PARTICULARS (Rs. In Cr)	Q4FY22	Q4FY21	YOY	FY22	FY21	YOY
Revenue from Operations	238.9	238.1	0.3%	735.0	589.2	24.7%
Raw Material Consumption	170.8	166.8		523.8	418.5	
Gross Profit	68.1	71.4	-4.6%	211.2	170.7	23.7%
Gross Profit Margin	28.5%	30.0%		28.7%	29.0%	
Employees Expenses	23.2	21.0		73.3	64.1	
Other Expenses	15.9	5.1		50.9	42.4	
EBITDA	29.0	45.2	-35.8%	86.9	64.2	35.4%
EBITDA Margin	12.1%	19.0%		11.8%	10.9%	
Other Income	2.1	6.8		7.3	11.7	
Depreciation	6.1	5.8		21.6	23.1	
EBIT	25.0	46.2	-45.9%	72.6	52.8	37.6%
EBIT Margin	10.5%	19.4%		9.9%	9.0%	
Finance Cost	4.2	13.3		19.9	21.4	
Profit before Tax	20.8	33.0	-37.0%	52.7	31.4	68.2%
Profit before Tax Margin	8.7%	13.8%		7.2%	5.3%	
Tax	5.2	7.7		12.5	7.4	
PAT	15.6	25.3	-38.5%	40.3	23.9	68.3%
PAT Margin %	6.5%	10.6%		5.5%	4.1%	
EPS (in Rs.)	1.80	2.92		4.65	2.76	

Company Overview



Astra: A Company With Deep Domain Expertise...



Astra Microwave Products Ltd.

With over 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**. The company's products find applications in **high end markets of Defense, Space, Telecom, Meteorology** and Civil communications.

Wealth of Experience

More than 30 years of domain expertise in microwave radio-frequency (RF) applications domain

Promoted by a team of distinguished scientists from DRDO

Strong R&D capabilities

Track record of new product development; now graduated to a SYSTEM integrator in Radars

Dedicated R&D facility at Bengaluru to manufacture radars

State-of-the-Art Facilities

5 facilities in Hyderabad

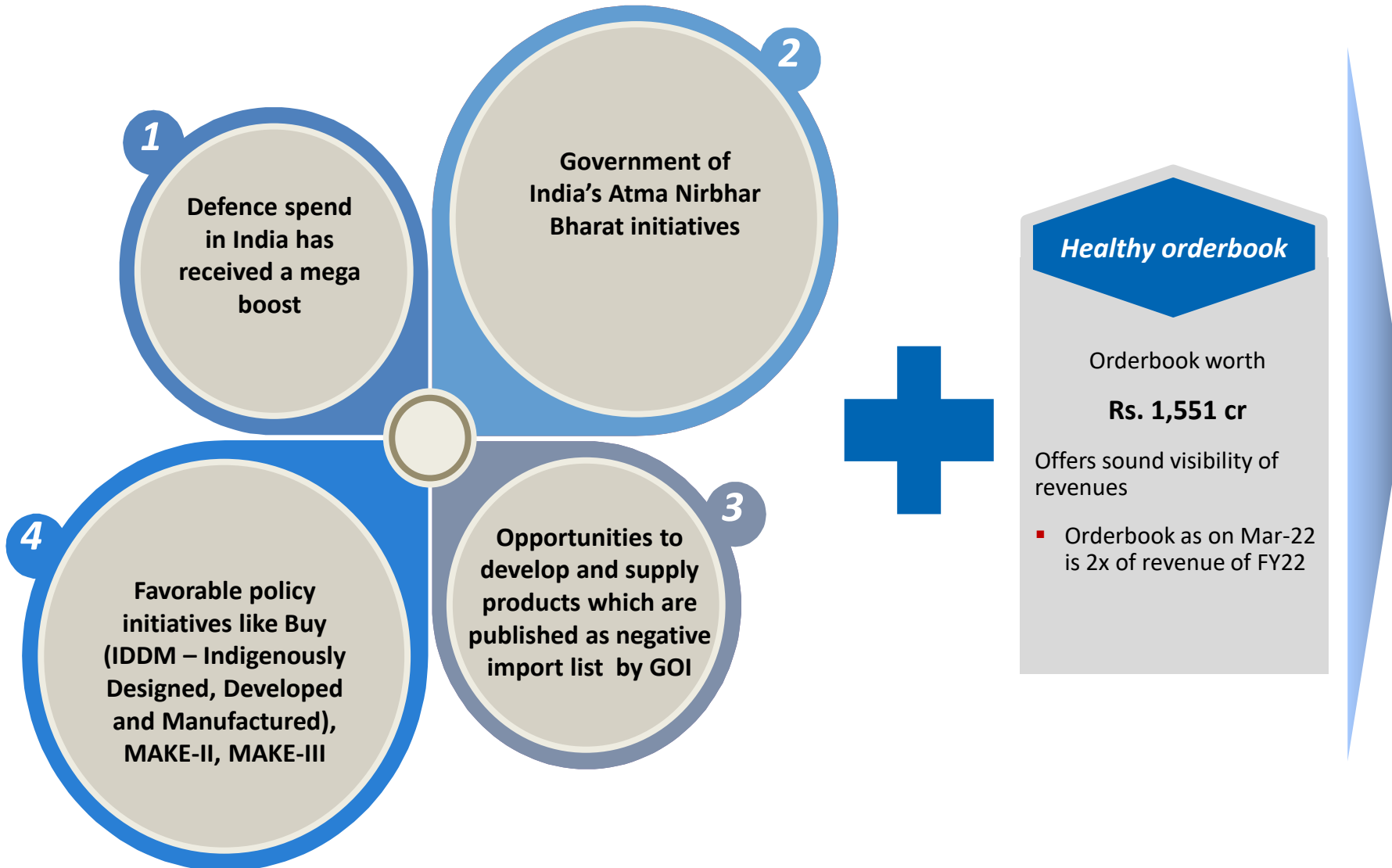
Continuous investment in World Class Infrastructure for Assembly, Functional and Environment testing. Astra's facilities are approved by several foreign companies for production

Longstanding relationship with customers

Recognized as a qualified vendor by defense research establishments

Clientele includes Indian Government Laboratories, Indian Defense Public Sector Undertakings, Indian Space Research Organization and many foreign OEM's

... Poised for Strong Growth Amidst Sectoral Tailwinds



- Astra 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
- Astra has been able to create a diversified and healthy orderbook on the back of its strong capabilities
- Astra 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

Longstanding Position in the Industry



Astra Microwave Products Ltd.

Over the past three decades, the company has revolutionized the realm of microwave technology with a range of innovative products

Sub-systems provider

Forward integration towards SYSTEM provider

Radar Electronics

Developed sub-systems of Radars for **DRDO**

Telemetry / Strategic Electronics

Started building products for Telemetry/Strategic Electronics for DRDO for **Military Applications**



1993

First R & D Deliveries to Defense

First deliveries of modules that found application in Telemetry/Missile Electronics for a **Surface to Air Missile** program of the DRDO.



1997

Space Electronics

Components and sub-systems for **Satellite Application**. Proud to have associated with all the major satellite launches in India since 2008.



2003

Ventured into SYSTEMS

Entered into Radar Systems, Parameter Surveillance, Telematic System



2015

Delivered SATCOM Systems, Wind Profiler Radars & Ground Surveillance Radars



2019

1991



Telecom

Supplied products to customers to set up their **telecom base** on the back of telecom revolution in India

1995



IPO – Listed on Stock Exchanges

Raised money through IPO to invest in **Infrastructure, People & Test Facilities**

2000



Electronic Warfare

Supplied many critical and wide band products for EW application, especially in the **Naval domain**

2005



MMIC

In-house design team in order to design and develop critical MMIC's for the ability to control production requirements of critical devices in house

2018



R&D Centre in Bengaluru

Established State-of-the-art Radar System R&D, Integration & Testing Facility. Started delivery of first System to Defence-PATM

2022



Delivered multiple Doppler Weather Radars
Received LAToT from DRDO for Anti-Drone System, Coastal Surveillance Radar, Parth & Prachand Mines

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

Defence

- Radars
- Electronic Warfare
- Strategic Electronics
- Telemetry
- Avionics

Space

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

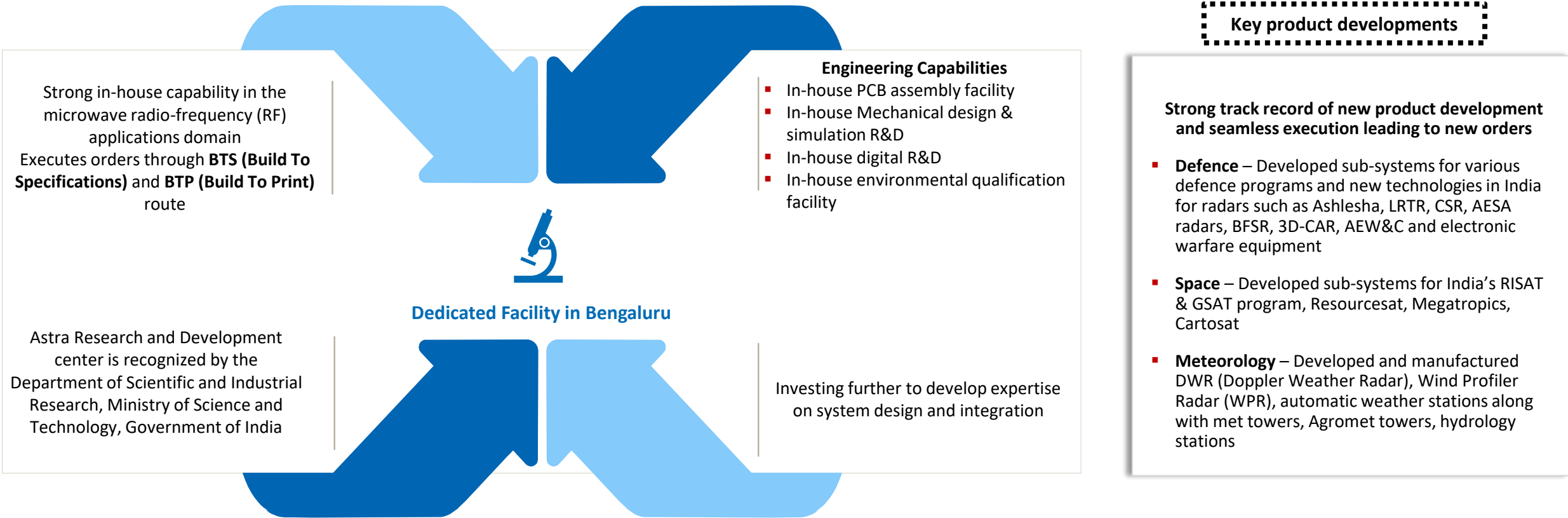
Hydro/ Meteorology

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

Others

- Antennas
- MMIC
- Homeland Security
- Contract Manufacturing

Through its focus on R&D, the company develops innovative designs useful for the manufacture of cost-effective products

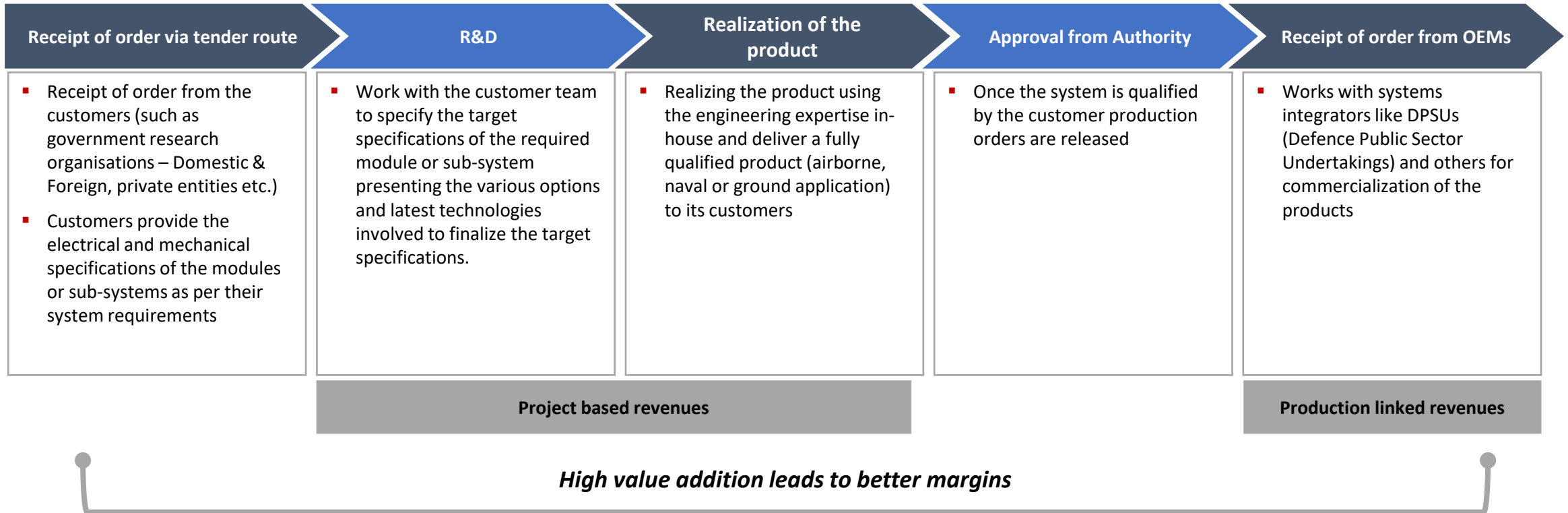


Average 2-3% of Total Revenue is spent on R&D Annually

A team of more than 400 R&D experts (including PhD, M Tech/B Tech, ITI – Diploma, PG/Graduates) works together on various initiatives

Serving Markets Through Build To Specifications (BTS) Orders and...

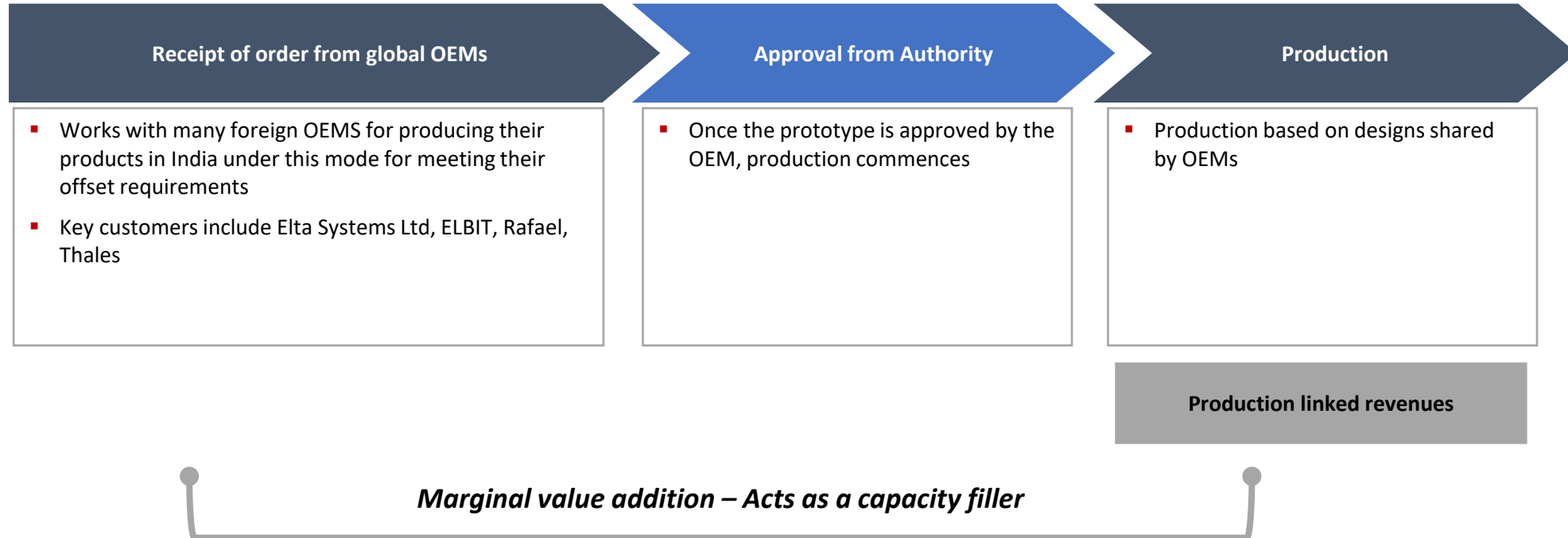
The company's strong relationship with large corporations builds its brand equity and helps it in establishing itself as a prime contractor for large and longer-term programs in the marketplace. AMPL works on high-value complex projects awarded by companies



... Build To Print (BTP) Orders



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



Guided by Eminent Board of Directors



Astra Microwave Products Ltd.



- Former Secretary, Defence R&D and Director General, DRDO
- Eminent scientist in the field of missiles and has been a pioneer in Strapdown Inertial navigation & Guidance
- Instrumental in development of several critical technologies in the field of radars, simulation, propulsion, control and System engineering

Dr. Avnish Chander
Chairman & Independent Director



- 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.

Mr. S. Gurunatha Reddy
Managing Director



- 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

Mr. M. V. Reddy
Joint Managing Director



- 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, Hyderabad.

Mr. PA Chitrakar
Non-Executive Director



- 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

Mr. Atim Kabra
Non-Executive Director



- 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.

Ms. Kiran Dhingra
Independent Director



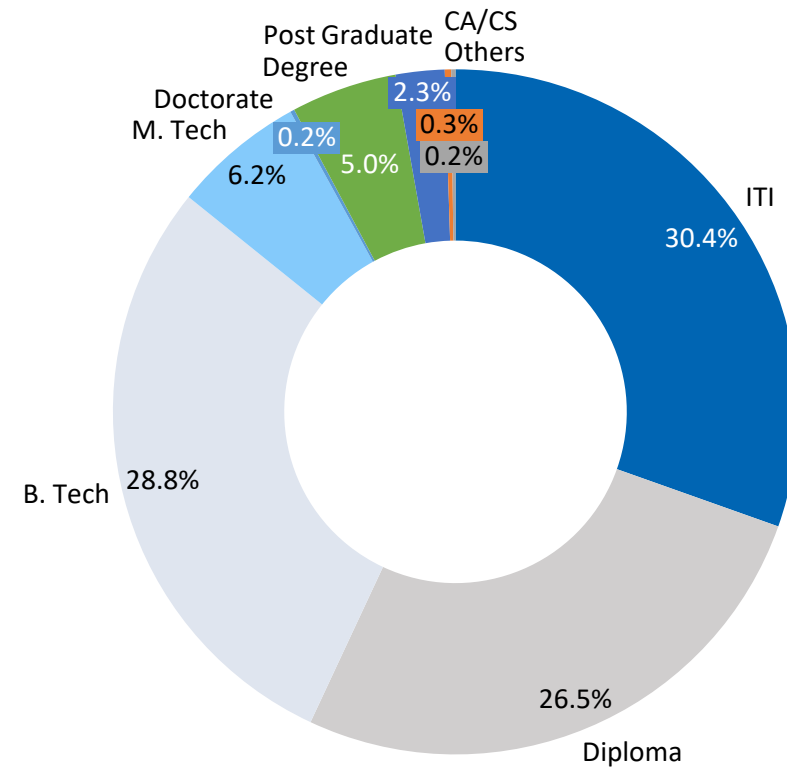
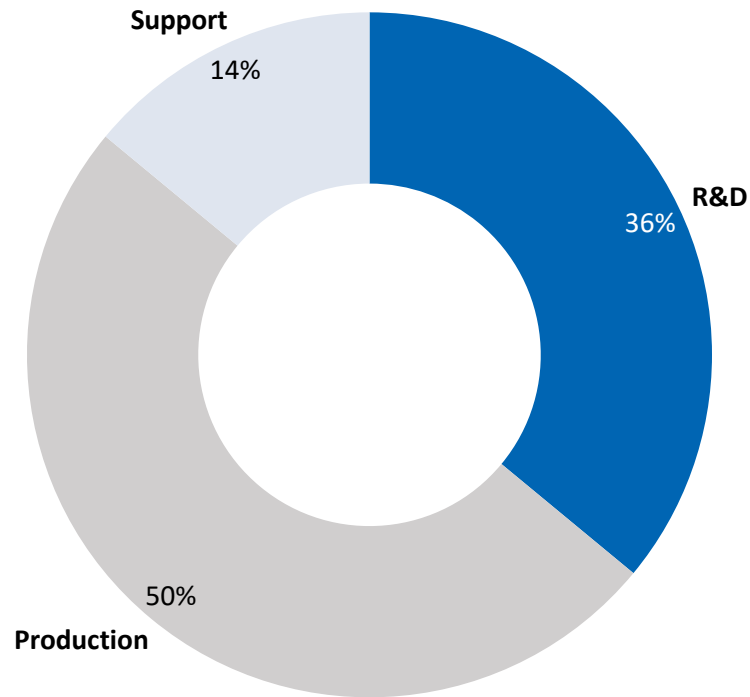
- Served as CMD of Bharat Electronics Limited country's largest enterprise in professional and defence electronics, where he was responsible for redefining the company vision for aggressive growth, achieving all time high sales turnover, profitability and a robust order-book.

Mr. S. K. Sharma
Independent Director

Our Intellectual Capital

Astra has a highly experienced workforce (including 401 technocrats of which two are Doctorates) which keeps the company on forefront of technology. Its employees are continuously trained through in-house workshops and external programs




Total workforce (as on March 31st, 2022) – 1,240



Our Subsidiaries & JV

Subsidiaries

JV

Overview	
 <p>Bhavyabhanu Electronics Pvt. Ltd.</p>	<ul style="list-style-type: none"> 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 man power & 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, 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.
	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> 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 Focuses on indigenous technology and Atma Nirbhar Bharat programs 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.

Way Forward

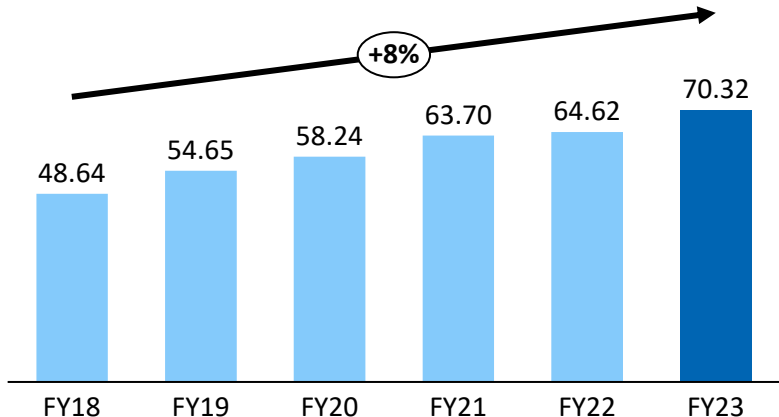


Indian Defence Industry... is Growing

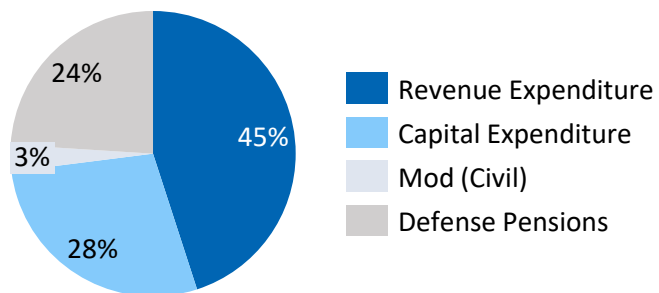
India's extensive modernisation plans, an increased focus on homeland security to increase government allocation for defence expenditure along with Make in India focus are expected to drive healthy growth in the sector

Large & growing market.....

India is the 3rd largest military spender
Growing Defence Budget (in Bn \$)



Defence Budget Components – FY22



....with strong sectoral tailwinds

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 fulfilment

Defence Acquisition Procedure, 2020

Category	Indigenous Content (IC)
Buy (Indian-IDDMM)	Indigenous design and $\geq 50\%$
Buy (Indian)	In case of indigenous design $\geq 50\%$, otherwise $\geq 60\%$
Buy and Make (Indian)	$\geq 50\%$ of the 'Make' portion
Buy and Make	Category not present
Buy (Global-Manufacture in India)	50% or more
Buy (Global)	Foreign Vendor – Nil/ Indian Vendor $\geq 30\%$

Business Potential till 2028....

Defence	
Radars & Counter-Drone Systems	Rs. 8,000 Cr.
Strategic Electronics & Telemetry	Rs. 1,450 Cr.
Electronic Warfare	Rs. 900 Cr.
Space	
On board Satellite	Rs. 1,750 Cr.
Ground based	Rs. 800 Cr.
Hydrology/Metrology	Rs. 600 Cr.
Export	Rs. 1,000 Cr.
TOTAL	Rs. 14,500 Cr.

Make	Make I (Government Funded)	<ul style="list-style-type: none"> Projects involving design and development of equipment, systems, major platforms or upgrades thereof by the industry. For Projects under Make-I sub-category, MoD will provide financial support upto 70% of prototype development cost or maximum ₹ 250 crores per Development
	Make II (Industry Funded)	<ul style="list-style-type: none"> This would include design and development and innovative solutions by Indian vendor, for which no Government funding will be provided. In Make-II, where solutions have been offered even by a single individual or a firm as a Suo-Moto proposal, the cases would be progressed as a Resultant Single Vendor. However, SHQ should seek for multivendor options in such cases, if feasible, before progressing the case as Single Vendor Case.
	Make III	<ul style="list-style-type: none"> Although would not be designed/developed indigenously but can be manufactured in India as import substitution for product support of weapon systems/equipment held in the inventory of the Services. Indian firms may manufacture these either in collaboration or with ToT from foreign OEMs. In this category, an Indian vendor can enter into a JV with OEM.
Innovation	Innovations for Defence Excellence (“iDEX”)	<ul style="list-style-type: none"> Projects of Start-ups, MSMEs etc. with low capital investments and high innovation would be pursued under the iDEX category.
	Technology Development Fund (TDF) Scheme	<ul style="list-style-type: none"> Projects supported through TDF of DRDO for leveraging the domestic capabilities available with Indian Industries especially MSMEs including Start-ups.
	Indigenous Development by Services through Internal Organisations	<ul style="list-style-type: none"> These would include projects where prototype development of equipment/system will be processed by the Services through their internal R&D organisations, such as Base workshop/Dockyards/ Base Repair Depots/ internal indigenisation Organisations/ Design Agency, etc.

Key Business Strategy

New product development to accelerate growth

- Develop products in close association with government research organizations for defence and space
- GoI 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 GoI
- **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.**
- Atma Nirbhar Bharat initiative is encouraging the industry to develop the system either through in-house development or through foreign technology tie-up

India's Astra

Ready for electronic warfare

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

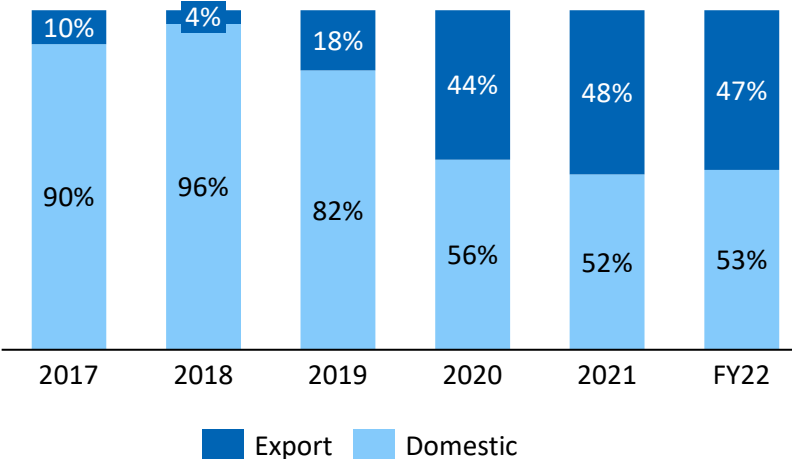
Strategic Electronic Telemetry Sub-systems

- 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

Wide Array of Opportunities due to 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 Microwave 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 initiative

Geographical distribution of Revenue



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 provisions

We aim to achieve 70% Domestic 30% Export Revenue distribution over next 2-3 years

Historical Financials



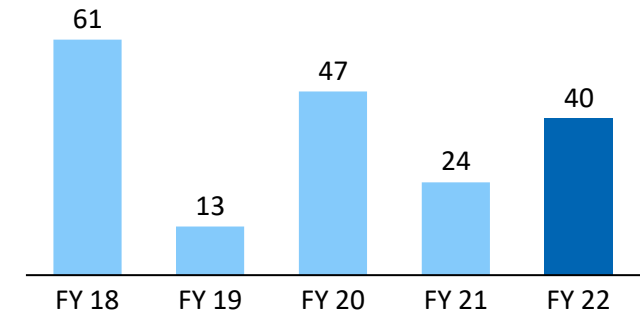
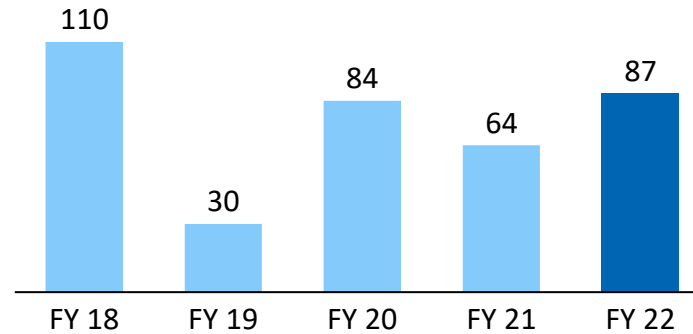
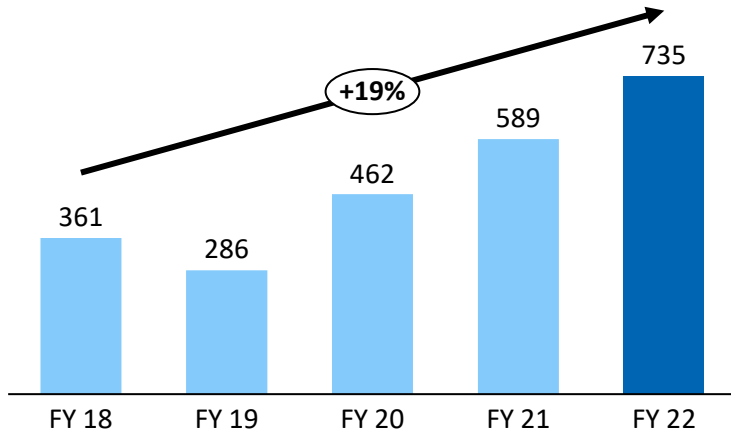
Historical Performance Highlights

Revenue (Rs. in Crs)

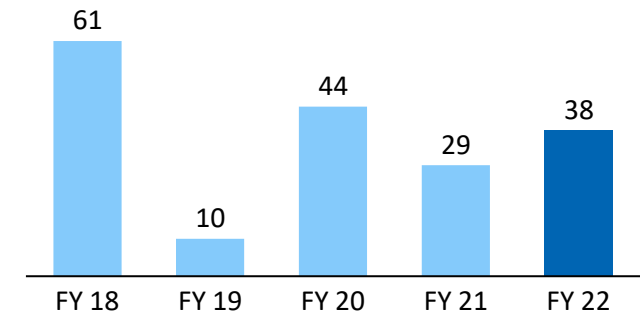
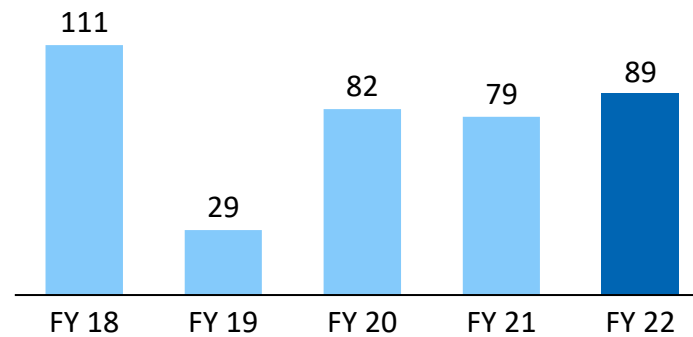
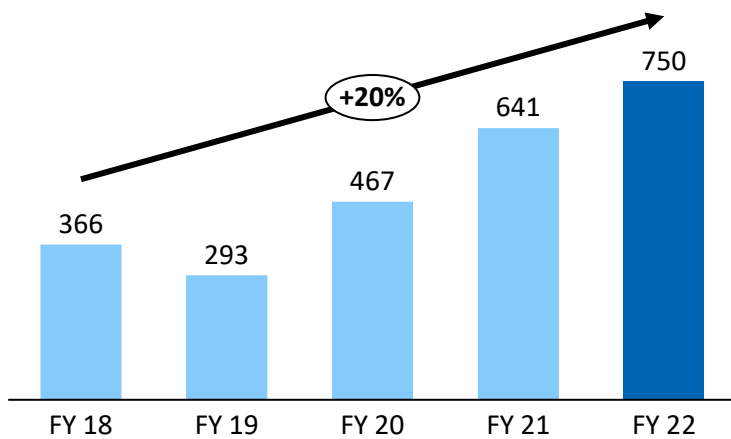
EBIDTA (Rs. in Crs)

PAT (Rs. in Crs)

Standalone



Consolidated



Historical Standalone Profit & Loss



Astra Microwave Products Ltd.

PARTICULARS (Rs. In Cr)	FY22	FY21	FY20	FY19	FY18
Revenue from Operations	735.0	589.2	461.6	286.2	360.5
Total Raw Material	524	418	267	159	152
Gross Profit	211.2	170.7	194.7	126.9	208.5
Gross Profit Margin	28.7%	29.0%	42.2%	44.3%	57.8%
Employee Expenses	73	64	66	61	66
Other Expenses	51	42	45	36	33
EBITDA	86.9	64.2	83.8	29.8	109.5
EBITDA Margin	11.8%	10.9%	18.2%	10.4%	30.4%
Other Income	7	12	12	24	8
Depreciation	22	23	25	29	27
EBIT	72.6	52.8	70.5	25.7	90.9
EBIT Margin	9.9%	9.0%	15.3%	9.0%	25.2%
Finance Cost	20	21	8	9	12
Profit before Tax	52.7	31.4	62.7	16.7	78.9
Profit before tax margin	7.2%	5.3%	13.6%	5.9%	21.9%
Tax	12	7	15	4	18
PAT	40.3	23.9	47.3	12.5	60.7
PAT Margin %	5.5%	4.1%	10.3%	4.4%	16.8%
EPS (Rs.)	4.65	2.76	5.47	1.45	7.01

Historical Standalone Balance Sheet

ASSETS (Rs. In Cr)	Mar-22	Mar-21	Mar-20	Mar-19	Mar-18	EQUITY AND LIABILITIES (Rs. In Cr)	Mar-22	Mar-21	Mar-20	Mar-19	Mar-18
Non-Current Assets	215	202	213	222	217	Equity and Liabilities	590	561	547	503	502
Property, plant and equipment	158	150	158	176	193	Equity share capital	17	17	17	17	17
Capital WIP	0	0	12	2	1	Equity attributable to owners of the Company	572	543	530	486	484
Investment in Associates	2	2	-	-	-	Non-current liabilities	47	4	3	9	20
Investments in joint ventures	20	20	16	16		Financial liabilities					
Investments in subsidiaries	15	13	8	8	6	i. Borrowings	3	-	-	5	14
Financial Assets						Deferred tax liabilities (net)	-	-	-	5	4
i. Other Financial Assets	9	10	11	12	17	Provisions	4	4	3	-	1
Deferred tax assets	6	2	0	-	-	Contract liabilities	40	-	-	-	-
Non Current Tax Assets	3	-	5	5	-	Current liabilities	321	351	307	101	152
Other non-current assets	3	3	2	2	1	Financial liabilities					
Current assets	743	714	644	391	457	i. Borrowings	56	100	47	0	20
Inventories	402	291	226	130	104	ii. Trade payables	53	35	38	22	14
Financial assets						iii. Other financial liabilities	15	11	16	20	66
i. Investments	-	14	13	20	126	Current tax liabilities (net)	-	1	2	-	2
ii. Trade receivables	202	254	247	190	188	Provisions	3	2	2	3	5
iii. Cash and cash equivalents	21	14	7	7	21	Contract liabilities	192	201	201	51	24
iv. Bank balances other than (iii) above	49	24	43	18	8	Other current liabilities	2	2	1	5	23
Other financial assets	4	13	0	-	-	Total equity and liabilities	958	915	857	613	674
Current tax assets (net)	1	1	-	-	-						
Other current assets	62	103	107	26	11						
Total assets	958	915	857	613	674						

Annexure



State of the Art Infrastructure...



Astra Microwave Products Ltd.

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

Hyderabad, Telangana					Karnataka
Unit I	Unit II	Unit III	Unit IV	Unit VII	Bengaluru Unit
					
Land : 1.13 Acres	Land : 2.0 Acres	Land : 9.9 Acres	Land : 19.0 Acres	Land : 0.59 Acres	Land : 5.0 Acres
Building : 18,000 Sq. Ft	Building: 20,000 Sq. Ft	Building: 77,000 Sq. Ft	Building: 1,80,000 Sq. Ft	Building: 23,000 Sq. Ft	Building: 1,00,000 Sq. Ft
Status : Own	Status : Own	Status : Own	Status : Own	Status : Own	Status : Own
Year : 1999	Year : 1995	Year : 2003	Year : 2009	Year: 2019	Year : 2012
Facility Offering	Facility Offering	Facility Offering	Facility Offering	Facility Offering	Facility Offering
Automatic weather Station	Near Field Test Range	Clean Room	EMI/EMC	MIC Facility	Near Field Test Range
AWS and other Hyderology & Meteorology	Out-Door Test Range	Laser Welding	Halt/Hass Chamber	CNC Drilling	
	Multi-Layer Antenna Fabrication	Vibration Table	ESS Chamber	Copper Plating	
				Gold Plating	
				Etching developing	

Equipped with

- Clean room compatible oven for curing epoxy
- 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

...for Assembly, Functional & Environment Testing



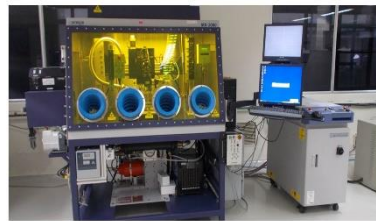
Astra Microwave Products Ltd.

Assembly Infrastructure

- 450,000 sq. ft. of research, design, development and manufacturing across 6 units
- 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.
- Class 10000 clean rooms
- Laser Welding
- SMT Lines



CLEAN ROOMS -CLASS 10,000



LASER WELDING



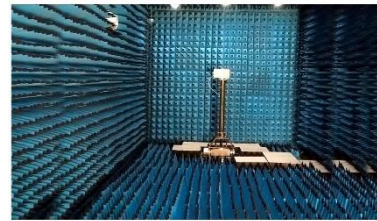
SMT Lines



Automated Optical Inspection(AOI)

Functional Testing

- Near Field Test Range (NFTR)
- Digital Signalling
- Function and pulse generators
- Open air antenna test range
- Spectrum Analyzers, Vector Network Analyzer, Signal generator, RF power meter
- Distortion Analyzer
- ATE-ATS facility



FFTR



ATE-ATS - FACILITY



Open Air Antenna -Test Range



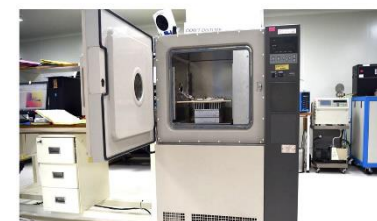
Oscilloscope

Environment Testing

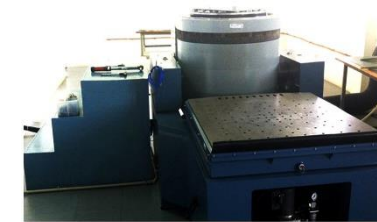
- EMI/EMC Test facility
- HASS/HALT Chambers
- Environment Chambers (-650C to +1750C; 98% RH)
- Vibration systems
- Weiss Chamber



EMI-EMC TEST



ENVIRONMENTAL CHAMBER



Vibration



Hass Chamber

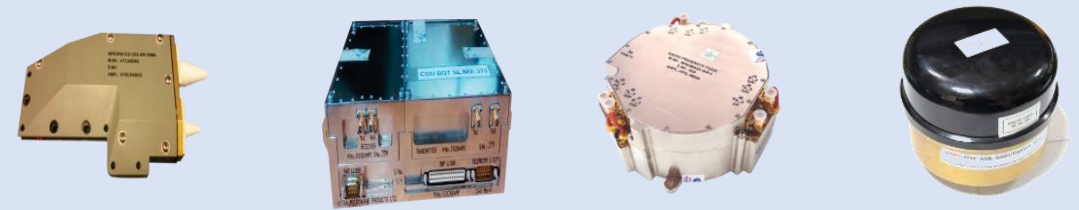
Radars



Electronic Warfare (EW) Products



Missile & Telemetry



Space



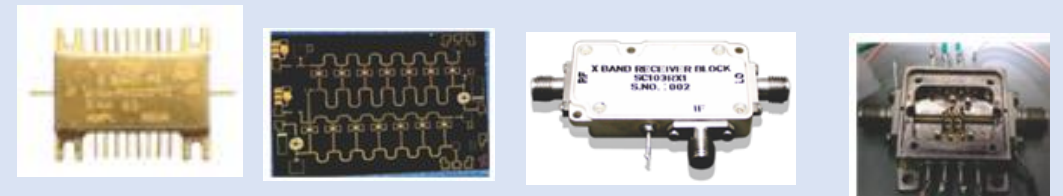
Meteorology & Hydrology



Antenna



MMIC



Strong Presence in SYSTEMS



Astra Microwave Products Ltd.

Multi-function Radar Systems



AMP-MFRS-101

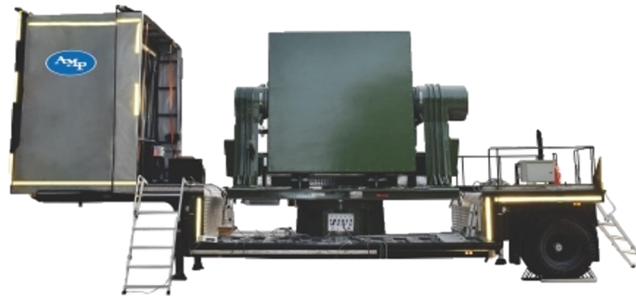


AMP-MFRS-102

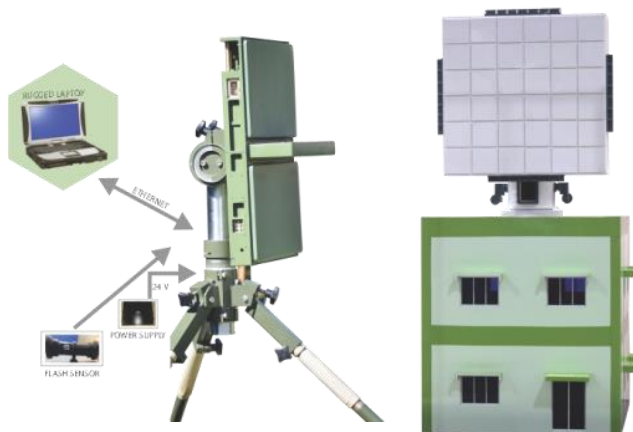


AMP-MFRS-103

Instrumentation Radar & Telemetry systems



AMP-VADR-201/202



AMP-PATTS-203

AMP-PMTR-204

Perimeter Intrusion Detection System



AMP-PIDR-301



AMP-PIDR-302

Meteorology Radar Systems



AMP-WPR-402 & 403



Air Traffic Management Radar System



AMP-PPAR-501

Industry Leading Certifications

Certificate of Registration

This is to certify that the Quality Management System of:

Astra Microwave Products Limited
 SP-1, Unit-4,100% EOU,Plot no.18 to 21, Survey No 1/1,Hardware Park, Imarah Kanch, Raviryala(V),Maheshwaram (M) Ranga Reddy Dist., Hyderabad, Telangana, 500005, INDIA applicable to:

Manufacture of RF/Microwave & Digital Sub Systems for aerospace and defence applications

has been assessed and registered by NQA against the provisions of:

AS9100D & BS EN ISO 9001:2015

in accordance with the requirements of EN 9104-001:2013. This registration is subject to the company maintaining a quality management system, to the above standard, which will be monitored by NQA.

Managing Director

Certificate No: 60007
 ISO Approval Date: 23 June 2011
 ASCS Approval Date: 23 June 2011
 Issue Date: 17 June 2020
 Expiry Date: 15 June 2023
 EAC Code: 19_21
 Site Structure: Single Site

This use of the UKAS Accreditation Mark indicates registration in respect of those activities covered by the accreditation certificate number 215 held by NQA. NQA is a trading name of NQA Certification Limited, Registration No. 10051718. Registered Office: Watnack House, Houghton Hall Park, Houghton Regis, Dunstable (Bedshire) LU5 5CA, United Kingdom. This certificate is the property of NQA and must be returned on request.

Page 1 of 1

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

Astra Microwave Products Limited

Main Site: Registered Office: Astra Towers, Survey No. 12/3F, Kothaguda Post, Opp. CI Green Building, Hitech City, Kondapur, Hyderabad - 500084, Telangana, India

See appendix for additional sites and additional site scopes

has been registered by Intertek as conforming to the requirements of:

ISO/IEC 27001:2013

The management system is applicable to:

The Information Security Management System in Design, Development, Production, Marketing and Supply of RF and Microwave Components, Sub Systems and Systems, Monolithic Microwave Integrated Circuits (MMIC), Antennas, Automotive Radar Systems, Repeaters, Filters, Manufacturing and supply of Microwave Printed Circuits Boards used in Defense, Space, Meteorology and Telecommunications. It also Covers EMI-EMC testing, SMT for PCB/MC Assembly.

This is in accordance with the Statement of Applicability version 1.3 dated 18/10/2021.

Certificate Number: 0004306
 Initial Certification Date: 18 November 2015
 Date of Certification Decision: 18 November 2015
 Issuing Date: 18 November 2015
 Valid Until: 18 November 2024

Cain Moldoveanu
 President, Business Assurance

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

Astra Microwave Products Limited

Main Site: Registered Office: Astra Towers, Survey No. 12/3F, Kothaguda Post, Opp. CI Green Building, Hitech City, Kondapur, Hyderabad - 500084, Telangana, India

See attached appendix for lists of other sites covered by certification

has been registered by Intertek as conforming to the requirements of:

ISO 9001:2015

The management system is applicable to:

Supply of Microwave Components, Equipment, Antennas and Monolithic Microwave Integrated Circuits (MMIC) for Defence, Space and Telecommunication Applications.

Certificate Number: ICH 0252 12
 Initial Certification Date: 23 November 2006
 Date of Certification Decision: 30 November 2021
 Issuing Date: 03 December 2021
 Valid Until: 13 December 2024

Cain Moldoveanu
 President, Business Assurance

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

Astra Microwave Products Limited

Main Site: Registered Office: Astra Towers, Survey No.12/3F, Kothaguda Post, Opp. CI Green Building, Hitech City, Kondapur, Hyderabad - 500084, Telangana, India

See appendix for additional sites and additional site scopes

has been registered by Intertek as conforming to the requirements of:

ISO 45001:2018

The management system is applicable to:

Design and Supply of Microwave Components, Equipment, Antennas and Monolithic Microwave Integrated Circuits (MMIC) for Defence, Space and Telecommunication Applications.

Certificate Number: 0004306
 Initial Certification Date: 19 October 2016
 Date of Certification Decision: 04 September 2019
 Issuing Date: 05 September 2019
 Valid Until: 18 October 2022

Cain Moldoveanu
 President, Business Assurance

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

Astra Microwave Products Limited

Main Site: Registered Office: Astra Towers, Survey No.12/3F, Kothaguda Post, Opp. CI Green Building, Hitech City, Kondapur, Hyderabad - 500084, Telangana, India

See appendix for additional sites and additional site scopes

has been registered by Intertek as conforming to the requirements of:

ISO 14001:2015

The management system is applicable to:

Design and Supply of Microwave Components, Equipment, Antennas and Monolithic Microwave Integrated Circuits (MMIC) for Defence, Space and Telecommunication Applications.

Certificate Number: 0004378
 Initial Certification Date: 19 October 2016
 Date of Certification Decision: 04 September 2019
 Issuing Date: 05 September 2019
 Valid Until: 18 October 2022

Cain Moldoveanu
 President, Business Assurance

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

EMC TEST SERVICES, ASTRA MICROWAVE PRODUCTS LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

PLOT NO 18-21, IMARATH KANCHA, HARDWARE PARK, RAVIRYALA VILLAGE, MAHESHWARAM MANDAL, HYDERABAD, RANGA REDDY, TELANGANA, INDIA

in the field of

TESTING

Certificate Number: TC-6264
 Issue Date: 11/09/2019
 Valid Until: 10/09/2021*

*The validity is extended for one year up to 10.09.2022

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
 (To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : Astra Microwave Products Limited

Signed for and on behalf of NABL

N. Venkateswaran
 Chief Executive Officer

Awards & Accolades



Astra Microwave Products Ltd.



Testimony of
Consistent Performance



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



Thank You

For more information please contact:



Astra Microwave Products Ltd.

Astra Microwave Products Limited

CIN No: L293091G1991PLC013203

Mr. T. Anjaneyulu, GM – Company Secretary

Email id: secretarial@astramwp.com

SGA Strategic Growth Advisors

Strategic Growth Advisors Pvt Ltd.

CIN No: U74140MH2010PTC204285

Shikha Puri / Aakash Mehta

Email id: shikha.puri@sgapl.net / aakash.mehta@sgapl.net

Tel No: +91 9819282743 / +91 98191 78243

