

**ASTRA MICROWAVE PRODUCTS LIMITED**

Regd. Office : ASTRA Towers, Survey No. 12(P), Kothaguda Post,
Kondapur, Hitechcity, Hyderabad, Telangana, INDIA - 500084
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Email : info@astramp.com, website : www.astramp.com
CIN : L29309TG1991PLC013203

August 12, 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: Astra Microwave Products Limited - Press Release and Investor
Presentation - Reg.**

With reference to the above stated subject, please find enclosed herewith the
Press Release and Investor Presentation on Q1FY23 Standalone Results.

This is for your information and record.

Thanking you,

Yours faithfully,
For Astra Microwave Products Ltd

T. Anjaneyulu
G.M - Company Secretary

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Sub: Astra Microwave Products Limited - Press Release and Investor
Presentation - Reg.

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Press Release and Investor Presentation on Q1FY23 Standalone Results.

This is for your information and record.

Thanking you,

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 (Vi), 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.



Intertek



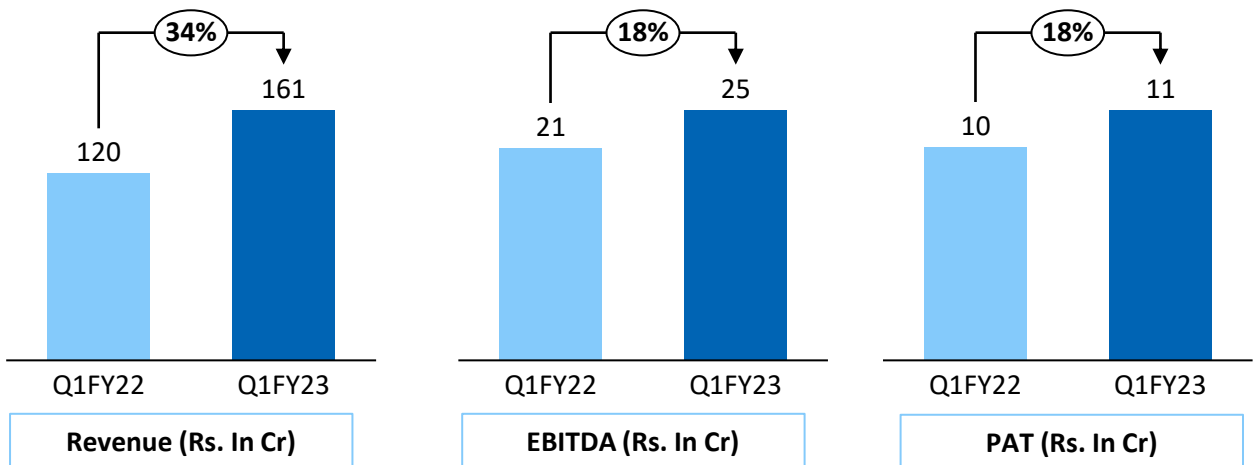
ASTRA MICROWAVE PRODUCTS LIMITED Q1FY23 Standalone Results

Friday, 12th August 2022, Hyderabad – Astra Microwave Products Limited, engaged in the business of design, development and manufacture of RF and Microwave Components, sub-systems and systems used in defense, space, meteorology and telecommunication announced its un-audited Financial Results for the quarter ended June 30th, 2022.

**Booked orders worth Rs. 253 Crores during Q1FY23;
Orderbook as on Jun-22 is 2x of revenue of FY22**

Standalone Q1 FY23 Result Highlights

- With successful completion of various order, the Revenue stood at Rs. 161.2 crores for Q1FY23 as against Rs. 120.2 crores for Q1FY22; growth of 34% YoY.
- Gross margins saw a reduction from 39% in Q1FY22 to 35% in in Q1FY23 due to increase in material costs.
- EBITDA stood at Rs. 25 crores for Q1FY23 as against Rs. 21 crores for Q1FY22; growth of 18% YoY. EBITDA margin for Q1FY23 stood at 15.4%.
- The company reported Profit after Tax of Rs. 11.4 crores in Q1FY23 as against Rs. 9.7 crores in Q1FY22; growth of 18% YoY.



Orderbook Update

- Order book of Rs. 1,663 Crores as on June 30, 2022, which is executable in the next 12 to 30 months period.
- Orders booked during the quarter till 30th June 2022 are worth Rs. 253 Crores.





Investor Release

Commenting on the performance Mr. S G Reddy, Managing Director, Astra Microwave Products Limited said, *“We take pride in being one of the few private companies in India which has the capability of designing, developing airborne radars for fighter jet platforms. We expect to be the beneficiary for Uttam airborne radar for LCA Mk1A which is currently being tested.*

Our deep domain expertise and capabilities in the areas of AWACS, Radars, Electronic Warfare (EW), Missiles, Telemetry, Satellites, SATCOM and Guided Weapon Segment, puts us in an enviable position to partake a major stake in the upcoming Defense Programs like Light Combat Aircraft, AATRU FOR ASPJ, AAU for Uttam AESA Radar, AAU for AEW&CS and many more.

In Q1FY23 on a standalone basis, the company reported Rs. 161 crores of revenues, registering a 34% YoY growth; EBITDA during the quarter was Rs 25 crores with margin of 15.4%. During the quarter, we received orders worth Rs. 253 Cr and executed orders worth Rs 141 crores. Our order book as on 30th June 2022 stood at Rs. 1,663 crores more than two times of our FY22 revenues.

With our persistent efforts our business mix is also evolving, space & meteorological which combined contributed 7% of our total revenues in FY22, constitute 16% of the orderbook as on Jun-22. In the last 5 years, Astra’s revenue has grown at a CAGR of 20% and we are confident that in the years to come we will continue this stride as the macro environment for defense sector is very positive.”

About Astra Microwave Products Limited

Astra Microwave Products Limited (Astra) was incorporated in 1991 by a team of distinguished scientists with experience in RF/Microwave/Digital electronics and management of projects with high technology content. The company has grown substantially since inception with continuous investments in infrastructure, captive test facilities and other resources. The company has various certificates such as AS9100D & BS EN ISO 9001:2015, ISO27001:2013, ISO9001:2015, ISO14001:2015, ISO45001:2018, ISO/IEC17025:2017. The company’s product portfolio spans across Defense, Space, Meteorology, Homeland Security and Systems Verticals.

Astra has 3 Automatic assembly lines for PCBA assembly, 5 class 10K cleanrooms, functional test infrastructure that extends from 30MHz up to 40GHz, in-house Environment test facilities including EMI/EMC facility and a first for any Indian Private Industry - Near Field Antenna test and measurement range.

Starting with a diverse range of microwave products like filters, transmitters, receivers, antennas etc., the company has produced actual space-borne hardware that has flown on Indian satellites.





Investor Release

Safe Harbor Statement

Statements in this document relating to future status, events, or circumstances, including but not limited to statements about plans and objectives, the progress and results of research and development, potential project characteristics, project potential and target dates for project related issues are forward-looking statements based on estimates and the anticipated effects of future events on current and developing circumstances. Such statements are subject to numerous risks and uncertainties and are not necessarily predictive of future results. Actual results may differ materially from those anticipated in the forward-looking statements. The company assumes no obligation to update forward-looking statements to reflect actual results changed assumptions or other factors.

For further details please contact:

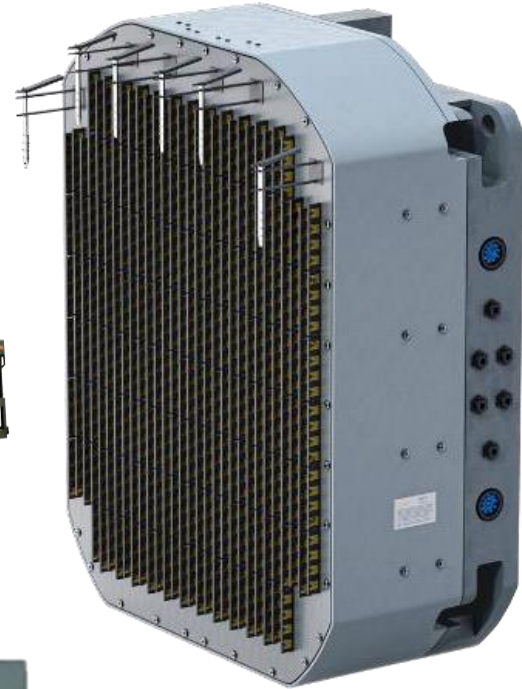
Company	Investor Relations Advisor
 Astra Microwave Products Ltd. Astra Microwave Products Limited CIN No: L293091G1991PLC013203 Mr. T. Anjaneyulu, GM – Company Secretary Email id: secretarial@astramp.com	 Strategic Growth Advisors Pvt Ltd. CIN No: U74140MH2010PTC204285 Shikha Puri / Aakash Mehta Email id: shikha.puri@sgapl.net / aakash.mehta@sgapl.net Tel No: +91 98192 82743 / +91 98191 78243





Astra Microwave Products Ltd.

Investor Presentation – Q1 FY23



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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.

Quarterly Highlights

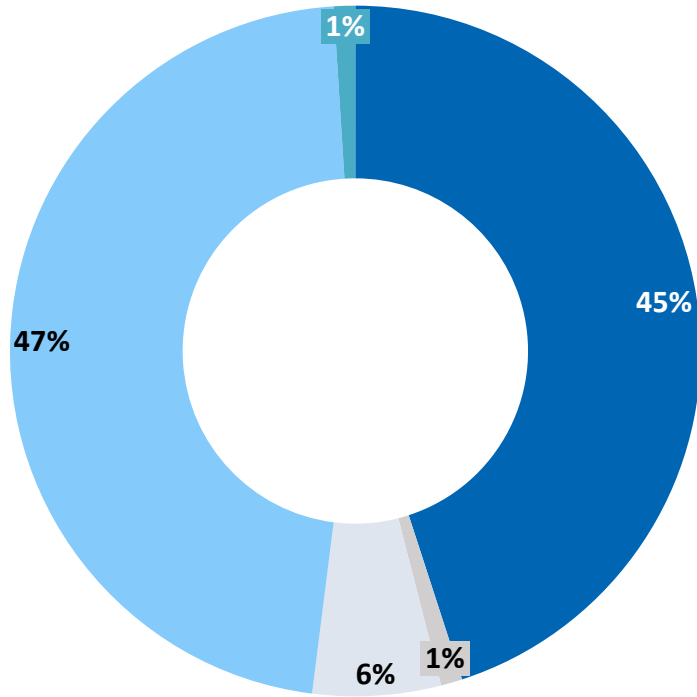


Segmental Revenue Break-up

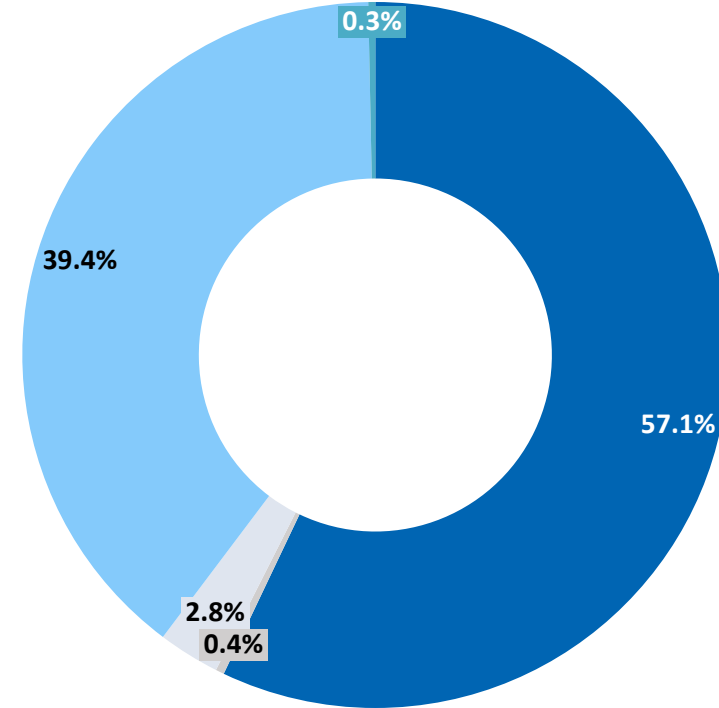


Astra Microwave Products Ltd.

FY22



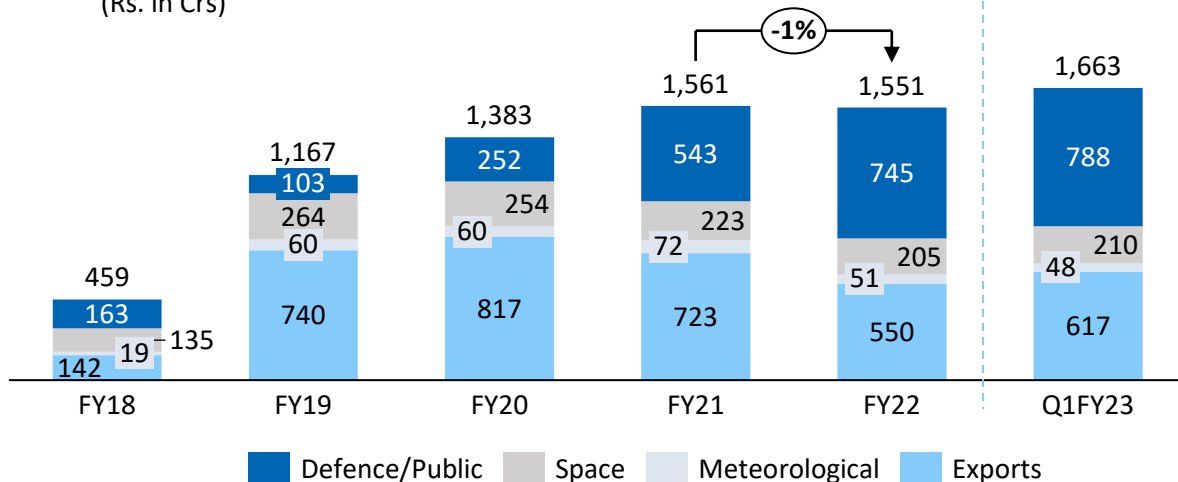
Q1FY23



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

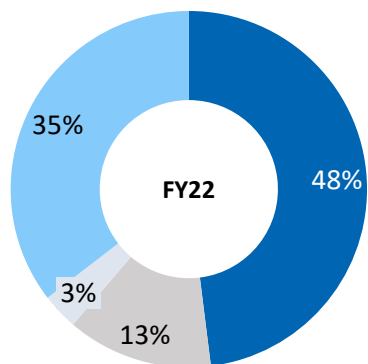
Historical Orderbook Build-Up

(Rs. in Crs)



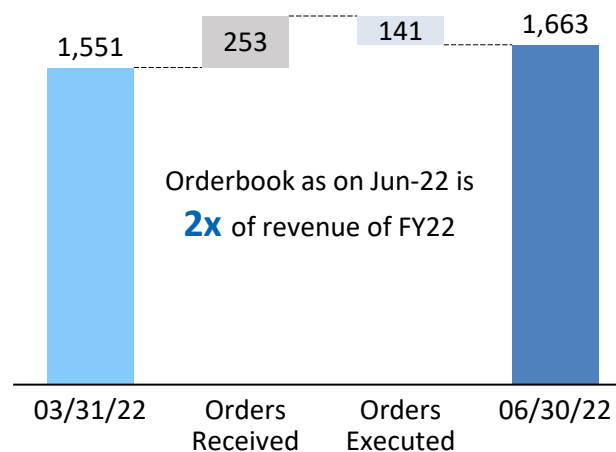
Diversified Orderbook

Defence/Public, Space, Meteorological, Exports



Orderbook Build-Up

(Rs. in Crs)



Orderbook Updates

Total orders received during the quarter

Sno	Segment Name	Amount (Cr)
1	Defence	127.4
2	Exports	111.6
3	Space	5.3
4	Meteorological	8.7
TOTAL		253.0

- 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

Major stake in upcoming Defense Programs



Astra Microwave Products Ltd.

Light Combat Aircraft



AATRU FOR ASPJ

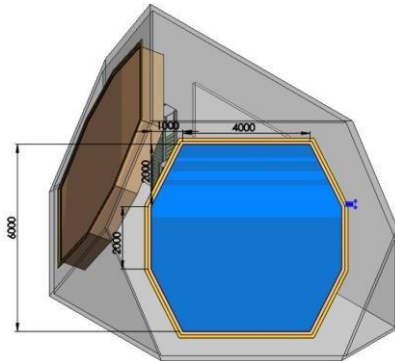


AAAU for Uttam
AESA Radar

AAAU for AEW&CS



AAAU for LRMFR



Long Range Radar TRMs, BSNs, PS



Medium Power Radar DTRMs

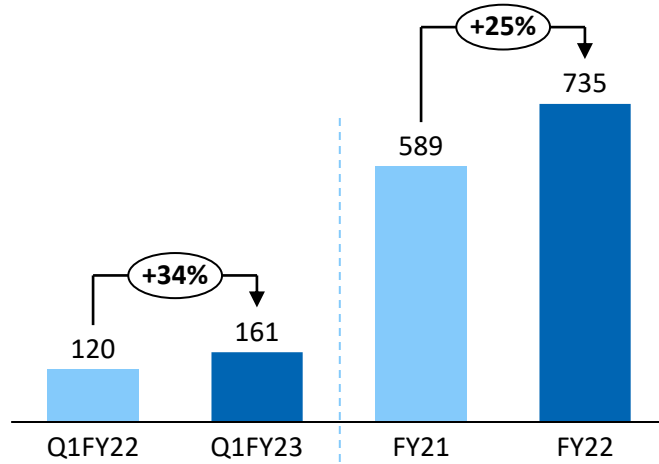


Performance Highlights

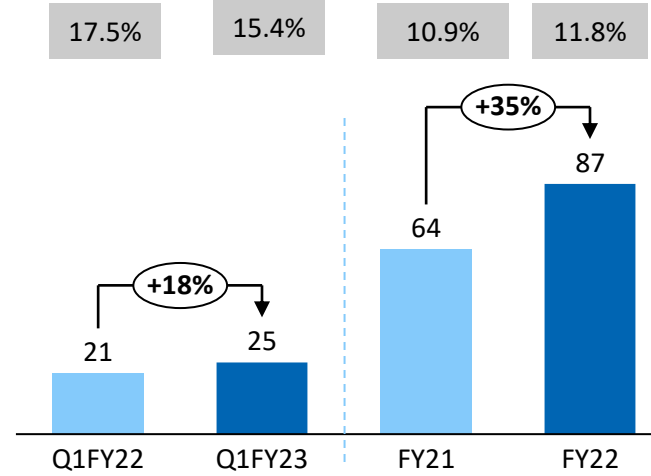


Astra Microwave Products Ltd.

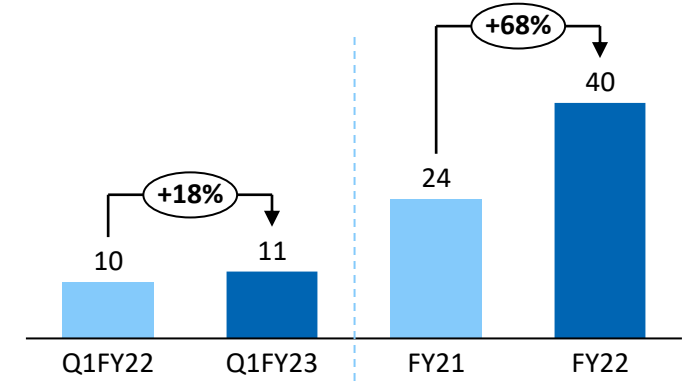
Revenue (Rs. in Crs)



EBIDTA (Rs. in Crs)

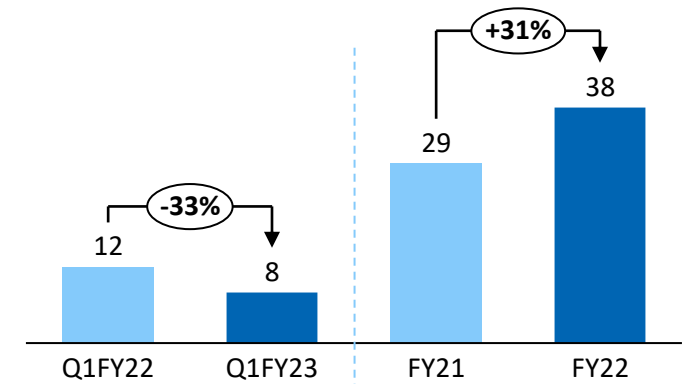
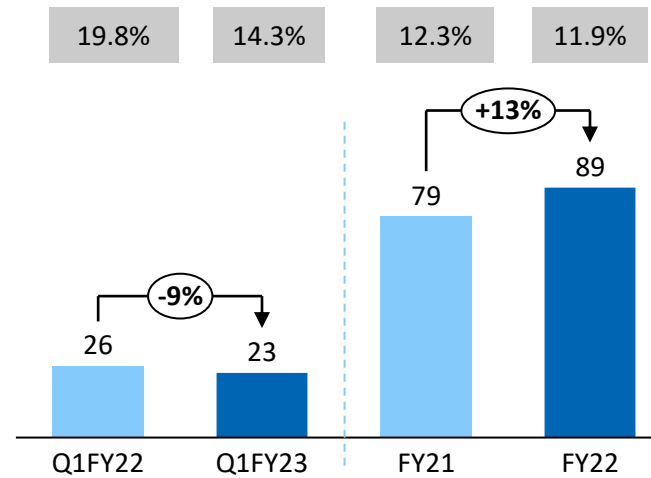
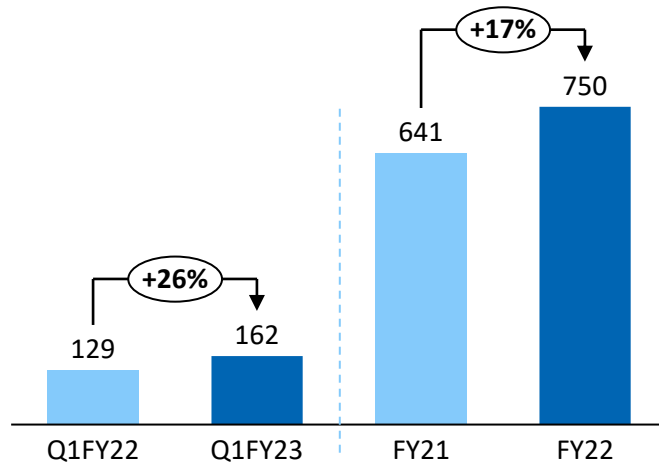


PAT (Rs. in Crs)



Standalone

Consolidated



Q1 FY23 Standalone Profit & Loss Statement



Astra Microwave Products Ltd.

PARTICULARS (Rs. In Cr)	Q1FY23	Q1FY22	YOY	FY22	FY21	YOY
Revenue from Operations	161.2	120.2	34.1%	735.0	589.2	24.7%
Raw Material Consumption	104.5	73.3		523.8	418.5	
Gross Profit	56.6	46.9	20.7%	211.2	170.7	23.7%
Gross Profit Margin	35.1%	39.0%		28.7%	29.0%	
Employees Expenses	19.2	16.2		73.3	64.1	
Other Expenses	12.5	9.7		50.9	42.4	
EBITDA	24.9	21.1	18.2%	86.9	64.2	35.4%
EBITDA Margin	15.4%	17.5%		11.8%	10.9%	
Other Income	1.1	1.1		7.3	11.7	
Depreciation	5.4	4.7		21.6	23.1	
EBIT	20.5	17.4	18.0%	72.6	52.8	37.6%
EBIT Margin	12.7%	14.5%		9.9%	9.0%	
Finance Cost	5.4	5.3		19.9	21.4	
Profit before Tax	15.1	12.1	24.8%	52.7	31.4	68.2%
Profit before Tax Margin	9.4%	10.1%		7.2%	5.3%	
Tax	3.7	2.5		12.5	7.4	
PAT	11.4	9.7	18.3%	40.3	23.9	68.3%
PAT Margin %	7.1%	8.0%		5.5%	4.1%	
EPS (in Rs.)	1.32	1.12		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

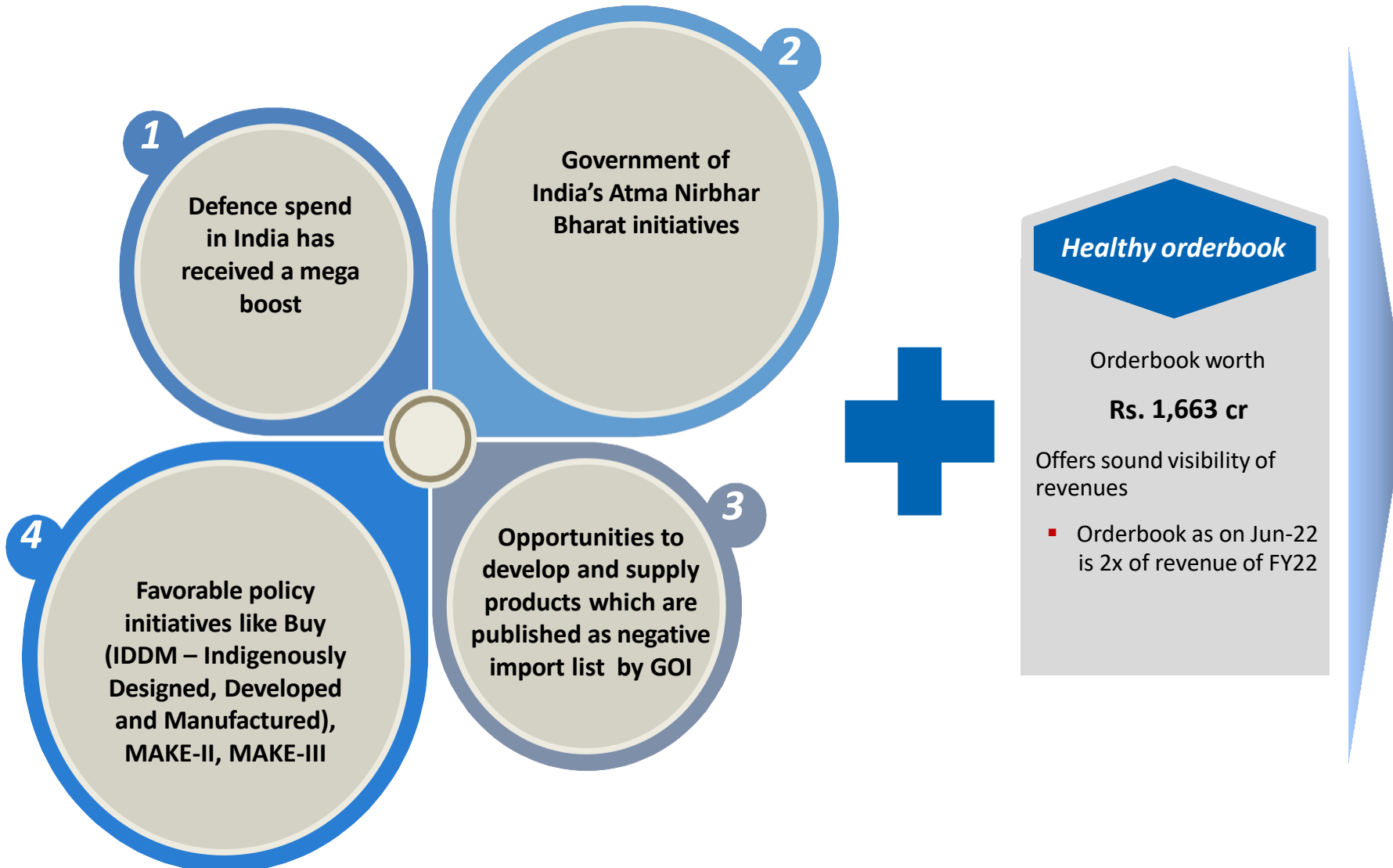
Longstanding relationship with customers

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 Microwave Products Ltd.

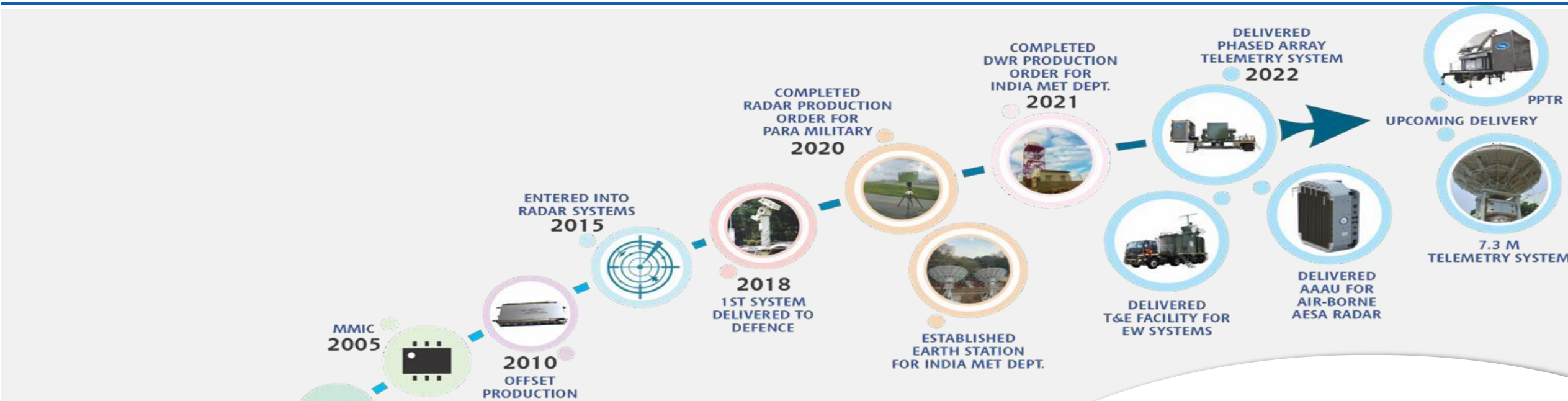


- Astra has a proven track record of making high value-added SYSTEMS, RF and microwave super components and sub-systems which are becoming more relevant due to various government initiatives like IDDM, MAKE-II
- Astra has been able to create a diversified and healthy orderbook on the back of its strong 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.



30
Years of AMPL

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

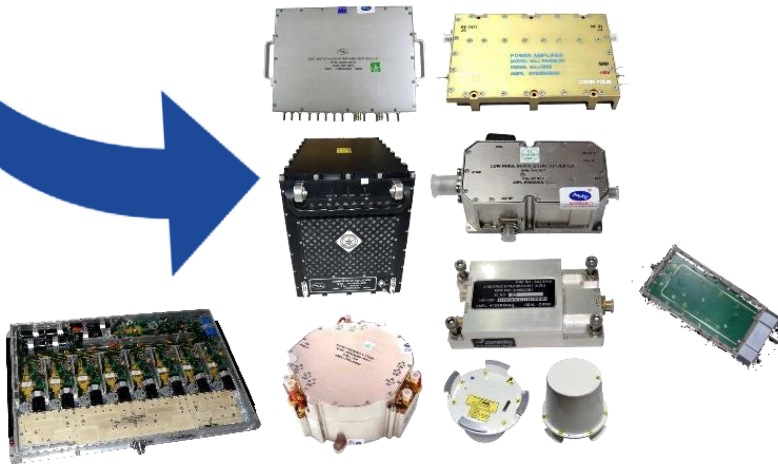
Others

- Antennas
- MMIC
- Homeland Security
- Contract Manufacturing



Components & MMICs

- Design
- Prototyping
- Testing & Qualification
- Production



Subsystems

BTS:

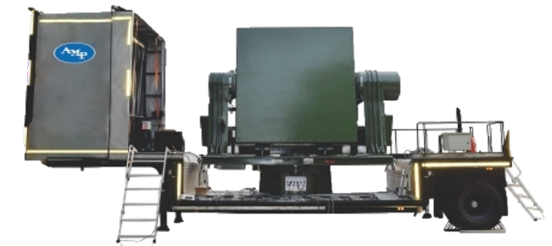
- Design
- Prototyping
- Testing & Qualification
- Production

BTP:

- Bulk Production
- Testing & Qualification

Systems

- Design
- Manufacturing
- Integration
- Testing & Qualification
- Installation & Commissioning



Systems

Supplied >25 Radars

Sub-systems

Components

MMIC

Planar Antenna Testing (NFTR)

Esteemed Clientele



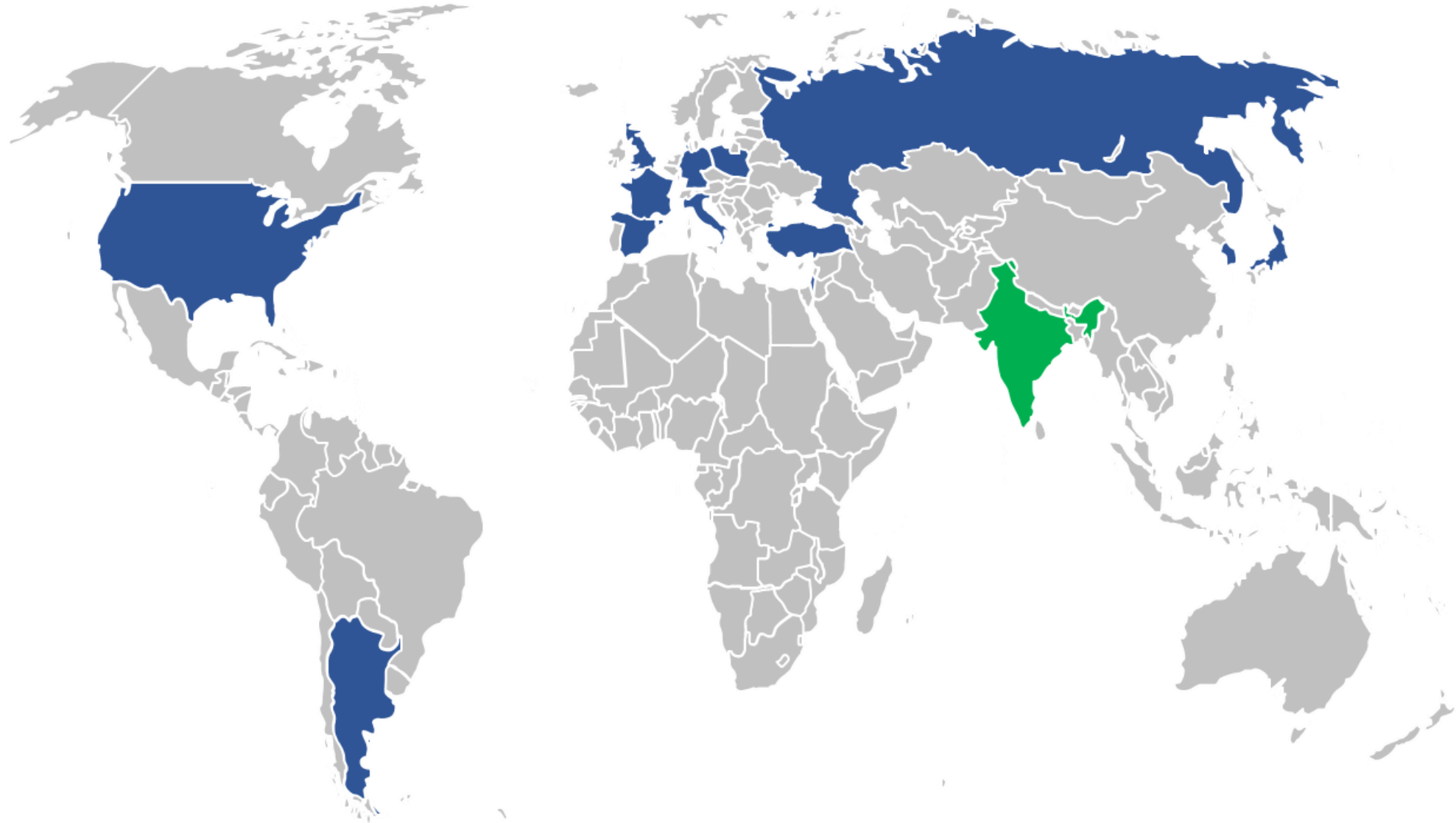
Astra Microwave Products Ltd.



Geographic Distribution of Global Clientele



Astra Microwave Products Ltd.



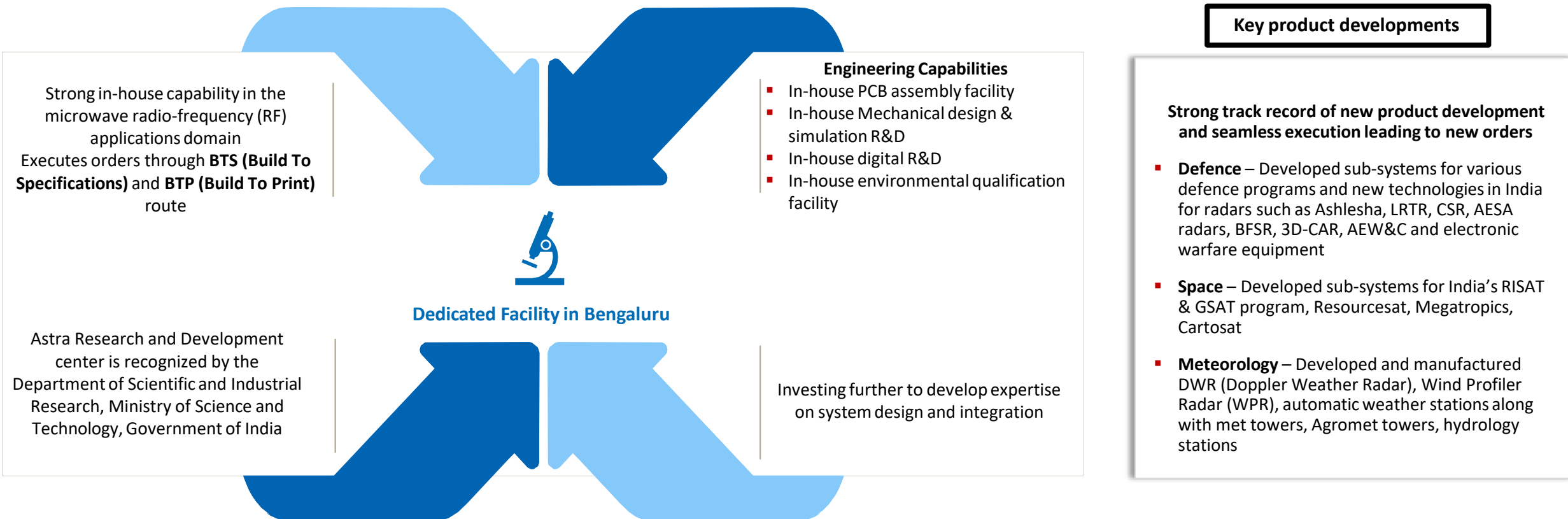
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Strong R&D Capabilities...



Astra Microwave Products Ltd.

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

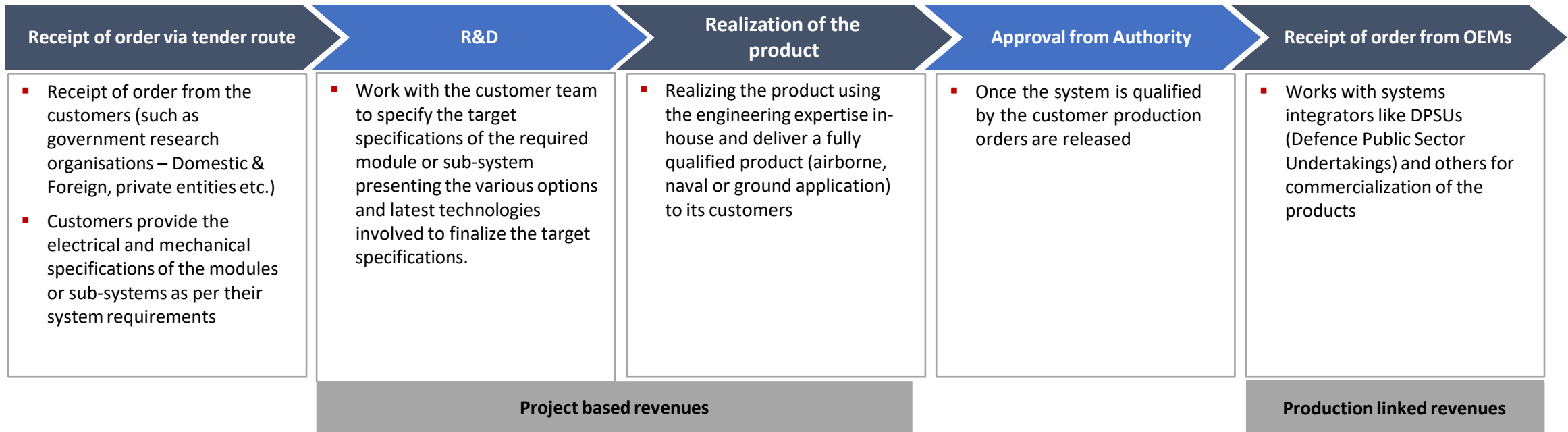
A team of more than 400 R&D experts (including PhD, M Tech/B Tech, ITI – Diploma, PG/Graduates) works together on various initiatives

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



Astra Microwave Products Ltd.

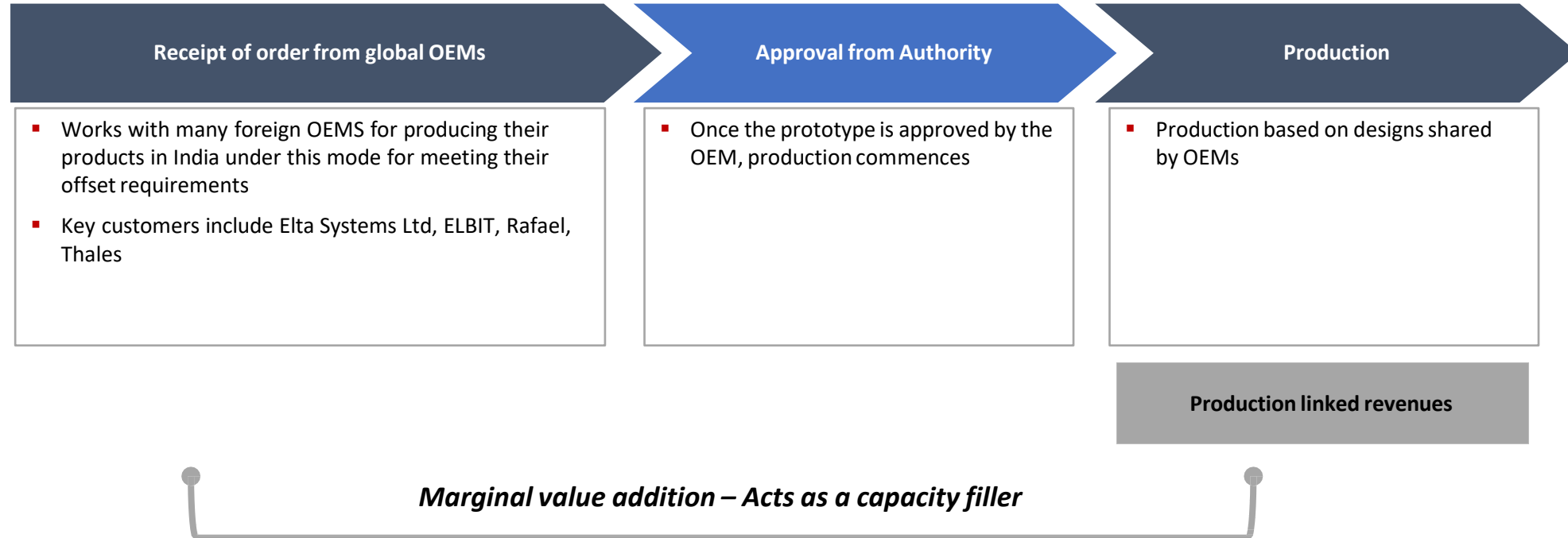
The company's strong relationship with large corporations builds its brand equity and helps it in establishing itself as a prime contractor for large and longer-term programs in the marketplace. AMPL works on high-value complex projects awarded by companies



High value addition leads to better margins

... Build To Print (BTP) Orders

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



Product Overview



Expertise & Capabilities of Astra (1/2)



Overview	
AWACS	<ul style="list-style-type: none"> It has been a supplier of TRMs to India's AEW & CS programs. It has the capability of design and development of TRMs. Majority of TRM developed by Astra Microwave have been built using MMIC designed and developed by Astra Microwave It has been a DCPD for various AEW & CS programs for TRM's and other microwave sub-systems.
Radar	<ul style="list-style-type: none"> Capability of providing TRMs for both Passive Phase Array and Active Phase Array radar. Design of TRM is done by Astra Microwave it is only the fabrication which is outsourced. Capability of designing and developing Gallium Arsenide (GaAs) and Gallium Nitride (GaN) TRMs across all microwave frequency bands- VHF, UHF, L, S, C, X, Ku and Ka band with various power levels. Designing and developing of all kind of radar sub-systems- power amplifiers, receivers & exciters, Filters, synthesizers, converters etc. Signal Processing and Radar Data Processing in concurrent IP with other companies. One of the private sector companies in India, which has the capability of designing, developing airborne radars for fighter jet platforms. It is the expected beneficiary for Uttam airborne radar for LCA Mk1A which is currently being tested. MOD has plans to modernize existing PESA radars of other fighter jet platforms of India such as Sukhoi- 30, Mirage, Jaguar etc. GaN based TRM is expected to be used in the airborne radars of AMCA. It is developing radar systems like Ship Borne Radars, Coastal Surveillance Radars, Anti Drone Radars, Ground Penetration Radars, Telemetry Radars, Instrumentation radars, etc. We enjoy Joint IP rights with DRDO for MMIC products for Radars and other communication systems We have been supplying Wind Profile Radars, Doppler Radars, Automatic Weather Stations to IMD and is one of few companies in India who has the capability of designing and developing these radars
Electronic Warfare (EW)	<ul style="list-style-type: none"> It has been supplying various kind of EW sub-systems and components to DPSUs, such as Direction-finding Receivers, Passive Homing Head for RF Seekers used in NGARM, Jammers, Filters, Amplifiers, Receivers etc. It has been EW sub-systems and components to programs of Indian Airforce, Indian Navy and Indian Army. Astra Microwave has been associated with Jammer's program of LCA and other fighter platforms in India

Expertise & Capabilities of Astra (2/2)



Astra Microwave Products Ltd.

Overview	
Missiles	<ul style="list-style-type: none">▪ Leading company in India to design, develop and supply Radio Proximity Fuze, Airborne Diplexer, Transponder, transmitter, Command Guidance Unit etc.▪ It has been associated with the program to develop AESA Seekers for Akash NG missiles.▪ It has developed Solid-State High-Power Amplifiers in Microwave frequency bands to replace▪ Multi Beam Klystrons used in Missile Seekers.▪ New generation Course Correction Electronic Fuze has been added to address ammunition market.
Telemetry	<ul style="list-style-type: none">▪ Astra Microwave has been supplying various sub-systems 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.▪ It has been supplying telemetry sub-systems to LCA and Intermediate Jet Trainer (IJT) aircraft.
Satellites	<ul style="list-style-type: none">▪ Astra Microwave has been supplying various key microwave sub-systems for ground and space based or payload applications.▪ It has supplied critical TR modules for Synthetic Aperture Radars (SAR) used in RISAT Satellites.▪ Astra Microwave can provide required microwave electronics for launch vehicle sub-systems for private sector players.▪ Astra Microwave has been a part of NAVIC module which has immense scope of application going ahead.
SATCOM	<ul style="list-style-type: none">▪ Astra Microwave has been supplying MSS terminals for communication during disasters.
Guided Weapon Segment	<ul style="list-style-type: none">▪ AMPL has taken up the development of TeraHertz Proximity Sensor with DRDO which is an advanced version of proximity sensor for guided weapons.

Diverse Offerings – Space Subsystems

UHF Band: Payload (LNA, Down Convert, IF Sub Channel Units) for GSAT7

S Band: Data QPSK Data Transmitters for ResourceSat-2 mission, BPSK Data Transmitters for Megha-Tropique mission.

TRiM, TTC

C Band: Receivers, C Band SSPA5W (IRNSS), TRMs, Integration Block, Cal Switch Matrix, Panel Antenna, (RISAT)

TRiM, Integration Block, Cal Switch Matrix

X Band: Data QPSK Data Transmitters for SARAL, Cartosat & EMISAT missions.

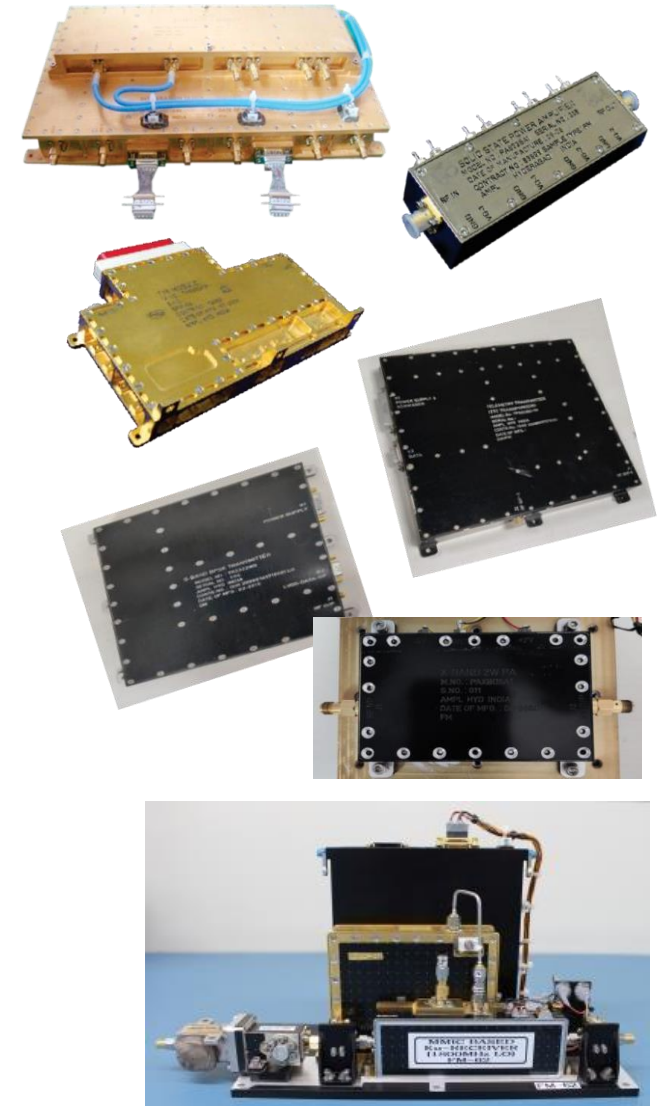
2Watt SSPAs, TRiB, SSPA, Data Transmitter, 2Watt Amplifier

Ku Band: Receivers, Beacon Sources, LNAs (GSAT19 & GSAT11)

Driver Amplifier, Quad SSPA, RF Trays, Converters, ALC Channel Amp

Ka Band: Data Transmitter

For EMISAT: Wide Band Quad Super Heterodyne Receivers (0.5-18GHz)



Diverse Offerings – Electronic Warfare Subsystems



2-18 GHz EDLVA

2-8 GHz BLI SUPER COMPONENT

0.5-2 GHz EDLVA

8-18 GHz BLI SUPER COMPONENT

ELLORA for Naval Ships



0.5-18 GHz QUAD SUPERHET RECEIVER

TELECOMMAND RECEIVER

PORPOISE for Naval Submarines

SUPERHET RECEIVER FRONT END



HIM SHRUTHI
for Ground Based Hill Application

DF RECEIVER (30 MHz - 6 GHz)




NGARM PROGRAM

PASSIVE HOMING HEAD (PHH)



KITE & EAGLE
for Naval Helicopters

1-18 GHz EDLVA



2-18 GHz EDLVA

2-8 GHz BLI SUPER COMPONENT

0.5-2 GHz EDLVA

8-18 GHz BLI SUPER COMPONENT

SAMYUKTA
for Vehicle Mounted System of Army



LCA ASPJ: AATRU, VAAU

Diverse Offerings – Telemetry & Strategic Electronics



Astra Microwave Products Ltd.

A1 TO A5 PROJECTS

K4 PROJECT

SAAW PROJECT

RUDRAM-III PROJECT

QUICK REACTION SURFACE TO AIR MISSILE (QRSAM)

PORPOISE for Naval Submarines

BRAHMOS

PROSPINA / NAG MISSILE

ANTI-TANK GUIDED MISSILE - DHRUVASTRA

HELINA (HELICOPTER BASED NAG)

RUDRAM PROJECT

K5 PROJECT

NGARM

LONG RANGE GLIDE BOMB (LRGB)

ASTRA PROJECT

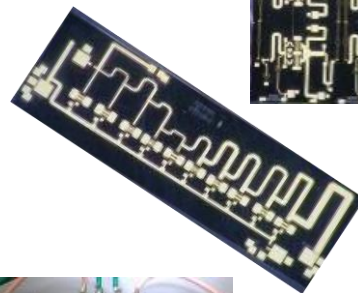
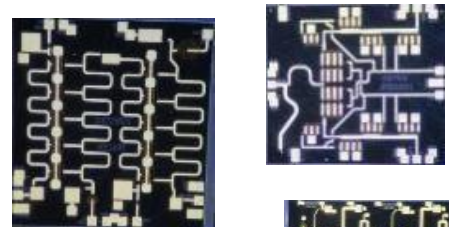
Diverse Offerings – Hydro/Meteorology Products

- SSPA-based Doppler Weather Radar
- Avalanche Radar
- Satellite based Multi Mission Meteorological Data Receiving Earth Station
- Water Level Measurement (Bubbler/Radar Sensor)
- Automatic Weather Stations (AWS)
- Agromet Meteorological Stations (AMS)
- Automatic Rain Gauge (ARG)
- Wind Profile Radars for Atmospheric Studies & Monitoring



MMIC Products

- Multi-functional Chips
- Integrated Core Chip
- Power Amplifiers
- Ultra Low Noise Amplifiers
- Phase Shifters
- Broadband Digital Attenuators
- High isolation switches
- Wide band amplifiers
- Gain equalizers
- Mixers
- GaN High Power Amplifiers in S,C,X & Ku bands



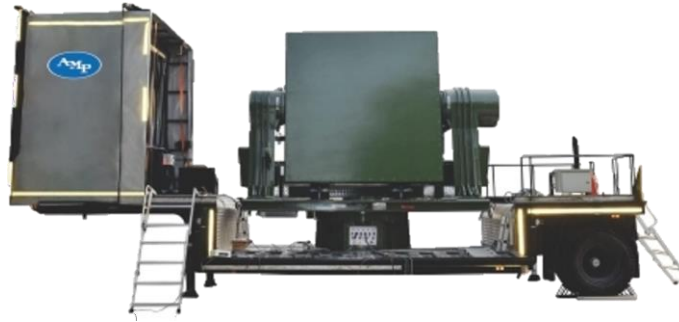
- Wide-band Spiral Antennas
- Sectoral Horn Antennas
- Sectoral BLI Antennas
- Horn Antennas
- Micro strip Antennas
- Helical Antenna
- Vivaldi Antenna
- Patch Antenna
- Yagi Antennas
- Panel Antennas
- Omni Antennas
- Grid Parabolic Antennas



Diverse Offerings – Systems



Pulsed Phased Array Tracking Radar (PPTR)



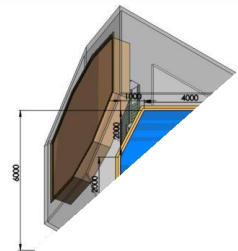
Phased Array Telemetry (PATM)



T&E Facility for Radar EW Systems



Bird Detection & Monitoring Radar (BMDR)



AAAU for Ship-Borne Radar



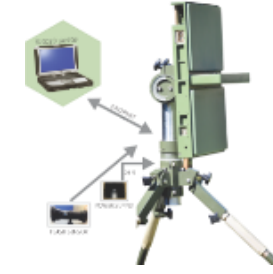
AAAU for Uttam AESA Radar



Ground Surv. Radar



Counter-Drone Radar



Fixed Head Doppler Radar (FHDR)



Coastal Surv. Radar (CSR)

Way Forward

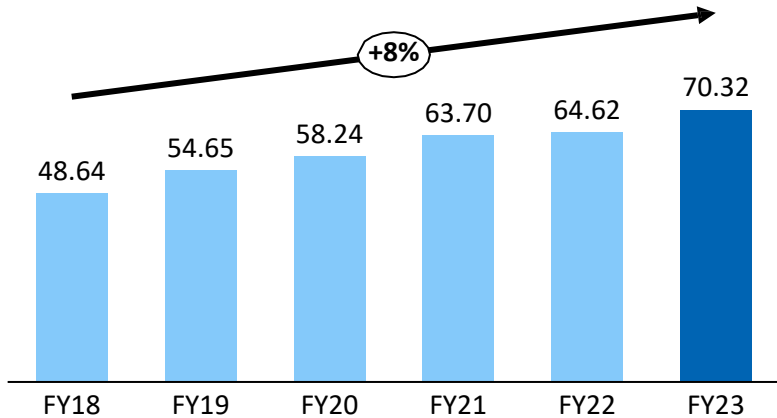


Indian Defence Industry... is Growing

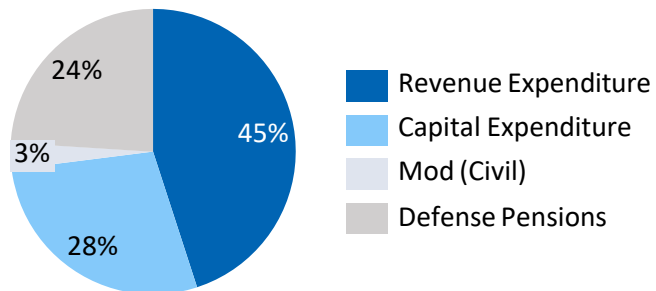
India's extensive modernisation plans, an increased focus on homeland security to increase government allocation for defence expenditure along with Make in India focus are expected to drive healthy growth in the sector

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

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

Imports Embargo

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

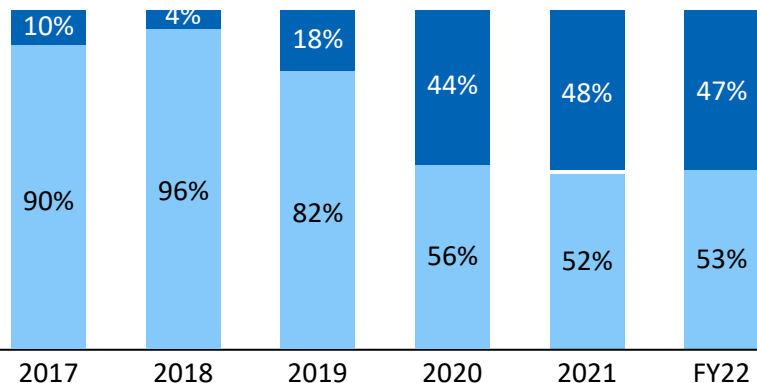
- Antennas
- EDLVA and BLI Super Components
- EW Simulators
- DIFM Receivers
- Front End Receivers
- Up/Down convertors
- Homodyne Receivers

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



■ Export ■ Domestic

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



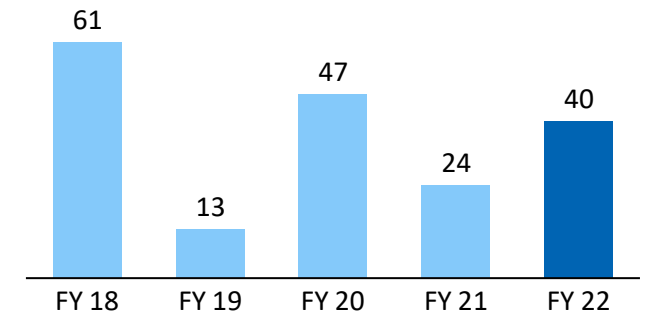
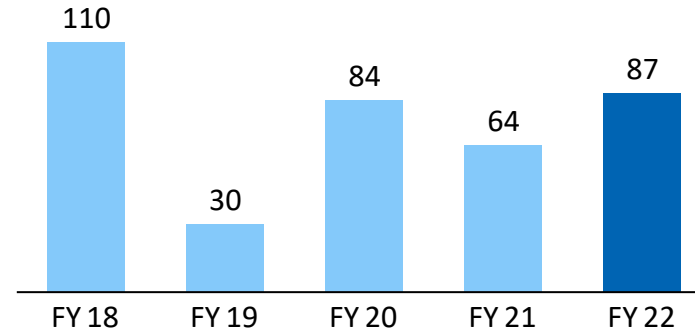
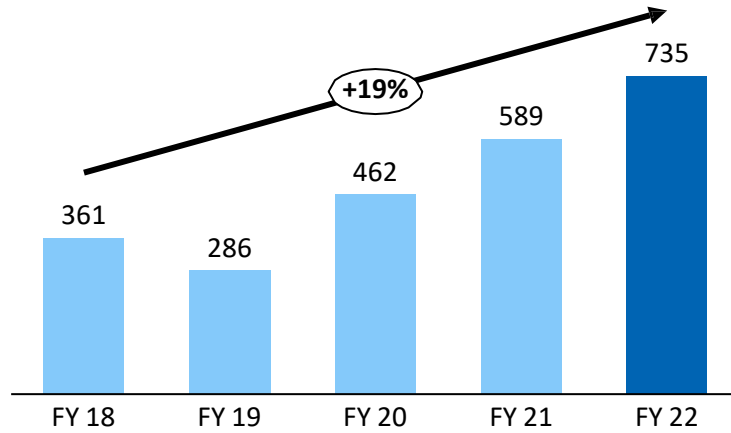
Astra Microwave Products Ltd.

Revenue (Rs. in Crs)

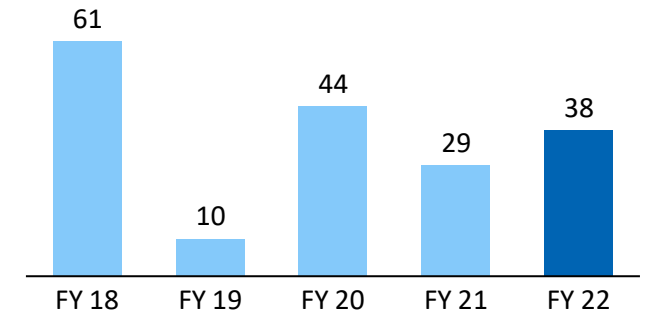
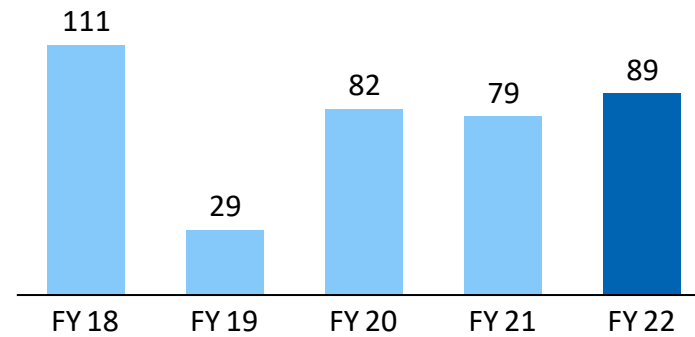
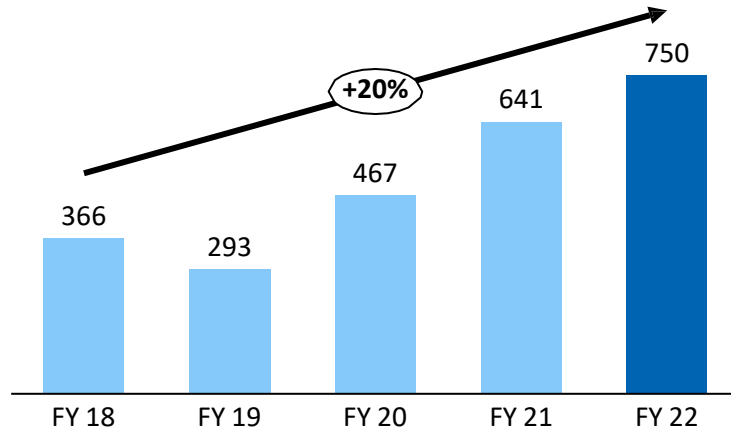
EBIDTA (Rs. in Crs)

PAT (Rs. in Crs)

Standalone



Consolidated



Historical Standalone Profit & Loss

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



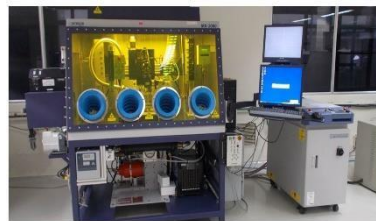
Astra Microwave Products Ltd.

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



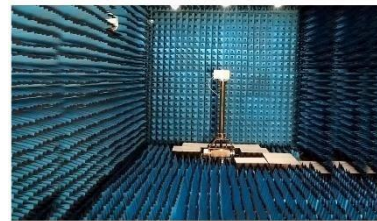
SMT Lines



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

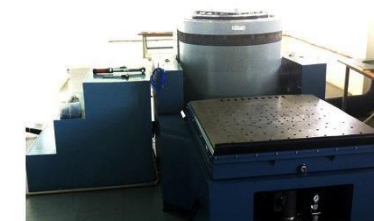
- EMI/EMC Test facility
- HASS/HALT Chambers
- Environment Chambers (-650C to +1750C; 98% RH)
- Vibration systems
- Weiss Chamber



EMI-EMC TEST



ENVIRONMENTAL CHAMBER



Vibration



Hass Chamber

Significant Entry Barriers



Astra Microwave Products Ltd.

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, Imarath 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



Page 1 of 1

This use of the UKAS Accreditation Mark indicates registration in respect of those activities covered by the accreditation certificate number 60007 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 (Bedfordshire) LU2 5CA, United Kingdom. This certificate is the property of NQA and must be returned on request.



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, Automatic Testers Systems, Repeaters, Filters, Manufacturing and supply of Microwave Printed Circuits Boards used in Defense, Space, Meteorology and Telecommunications. It also Covers EMC-EMC testing, SMT for PCB/MIC Assembly.

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



Certificate Number: 000430

Initial Certification Date: 18 November 2015

Date of Certification Decision: 18 November 2015

Issuing Date: 18 November 2021

Valid Until: 18 November 2024

Cain Moldovean
President, Business Assurance

Intertek Certification Limited, 10A Victoria Park, Victory Road, Derby DE24 8DZ, United Kingdom

Intertek Certification Limited is a UKAS accredited body under schedule of accreditation no. 014.



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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: 01 December 2021

Valid Until: 13 December 2024




Cain Moldovean
President, Business Assurance

Intertek Certification Limited, 10A Victoria Park, Victory Road, Derby DE24 8DZ, United Kingdom

Intertek Certification Limited is a UKAS accredited body under schedule of accreditation no. 014.



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: 000430

Initial Certification Date: 19 October 2016

Date of Certification Decision: 04 September 2019

Issuing Date: 05 September 2019

Valid Until: 18 October 2022




Cain Moldovean
President, Business Assurance

Intertek Certification Limited, 10A Victoria Park, Victory Road, Derby DE24 8DZ, United Kingdom

Intertek Certification Limited is a UKAS accredited body under schedule of accreditation no. 014.



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: 000430

Initial Certification Date: 19 October 2016

Date of Certification Decision: 04 September 2019

Issuing Date: 05 September 2019

Valid Until: 18 October 2022




Cain Moldovean
President, Business Assurance

Intertek Certification Limited, 10A Victoria Park, Victory Road, Derby DE24 8DZ, United Kingdom

Intertek Certification Limited is a UKAS accredited body under schedule of accreditation no. 014.



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. Venkateswaram
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

Guided by Eminent Board of Directors



Astra Microwave Products Ltd.



Dr. Avnish Chander
Chairman & Independent Director

- 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



Mr. S. Gurunatha Reddy
Managing 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. M. V. Reddy
Joint 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. PA Chitrakar
Non-Executive 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. Atim Kabra
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



Ms. Kiran Dhingra
Independent 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.



Mr. S. K. Sharma
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.

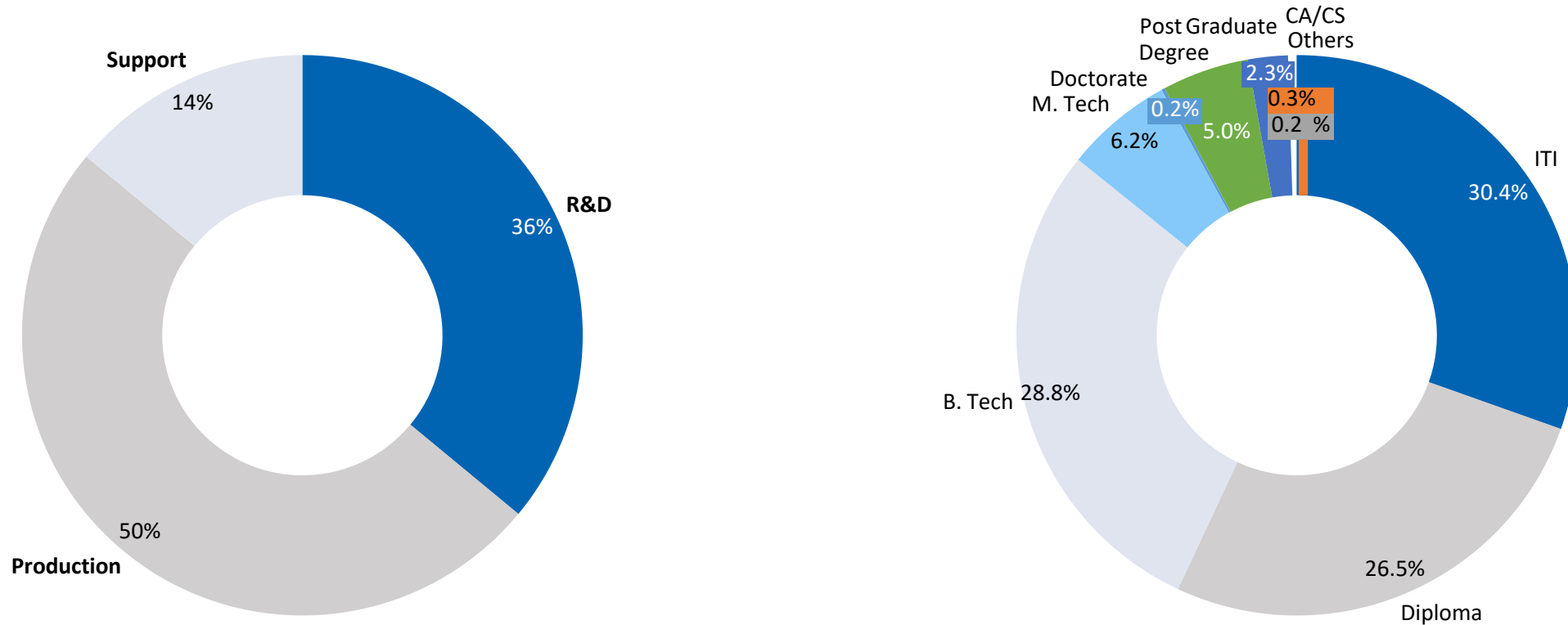
Our Intellectual Capital



Astra Microwave Products Ltd.




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



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.

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

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