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Q3 and 9M Performance

Growth Par Excellence



Mr. Srinivasagopalan Rangarajan Promoter, Chairman & Managing Director

"We debut with strong earnings in our first results post IPO. In Q3FY22 our topline has doubled and we have maintained high profitability. Our strong order book and bidding pipeline gives us good visibility of strong growth trajectory. Macro environment remains favorable, and we are confident of delivering superior performance over next few years. We maintain our focus on superior project execution, developing high quality products and delivering cost efficient solutions to other customers".



Consistent Growth

Strong order book as on 31st December is at Rs 5,770mn

Revenue grew 2x YOY to Rs 438mn; EBITDA increased 32x YOY

Healthy EBITDA Margins of 35.7% for Q3 and 38.1% for 9M period

Strong Balance Sheet; Net Debt Free Company

High Return ratios - RoE and RoCE at 29% and 34% on TTM basis

Strong revenue visibility – Expected to maintain the growth trajectory

Working with ISRO for last 20 Years

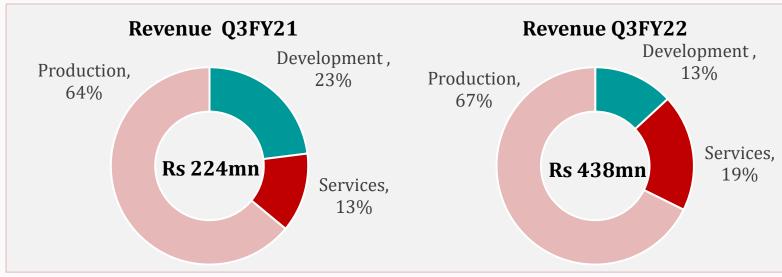


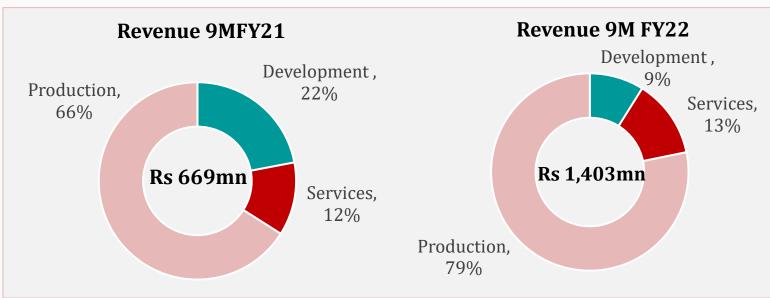


Financial Highlights of Q3 and 9MFY22

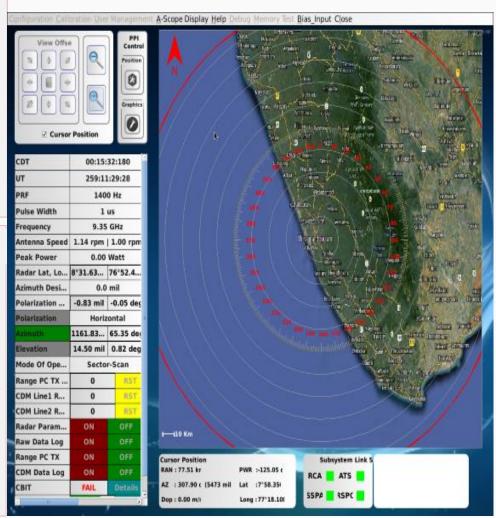
Particulars (Rs. Mn)	Q3FY22	Q3FY21	YoY(%)	Q2FY22	QoQ (%)	9MFY22	9MFY21	YoY (%)
Revenue from Operations	438	224	96	592	-26	1,403	669	110
Gross Profit	386	175	121	418	-8	1,139	455	150
Gross Profit Margin (%)	88.0	78.0	10	70.5	18	81.2	68.1	13
EBITDA	157	5	-	210	-26	535	35	-
EBITDA Margin (%)	35.7	2.1	34	35.5	0.1	38.1	5.2	33
Depreciation / Amortization	17	15	18	16	9	48	42	13
Other Income	7	5	30	6	27	14	19	-27
EBIT	139	-10	-	195	-28	487	-7	-
EBIT Margin (%)	31.8	-4.5	36	32.8	-1	34.7	-1.1	36
Finance Cost	27	39	-31	29	-8	75	113	-34
PBT	120	-43	-	171	-30	426	-102	-
Tax expense	30	1	-	42	-30	105	2	-
Profit(Loss)for the period	90	-44	-	129	-30	322	-104	-
PAT Margin (%)	20.6	-19.6	40	21.8	-120	22.9	-15.5	38
EPS (Rs)	1.9	-0.9		2.8		6.9	-2.2	

Revenue Composition Improving





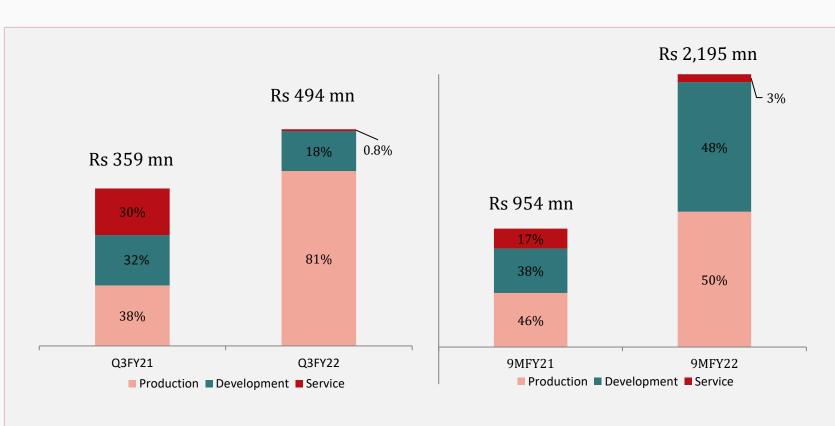
Sriharikota Launch Countdown System operating for 2 decades without failure





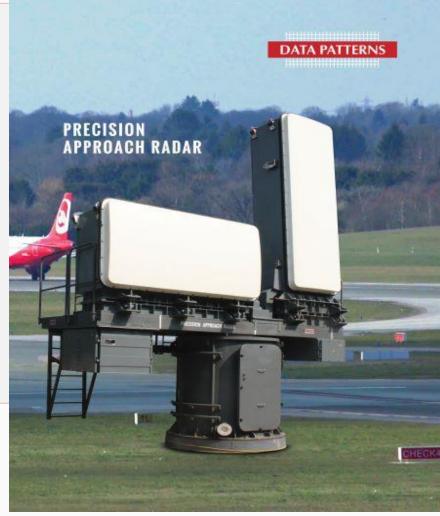
Driven by Strong Order Inflows

Order Inflows - Q3FY22 and 9MFY22



Expected order inflow of Rs 500+cr in next one year

Strong team of 450+ Engineers





Order Book Buildup in 9MFY22

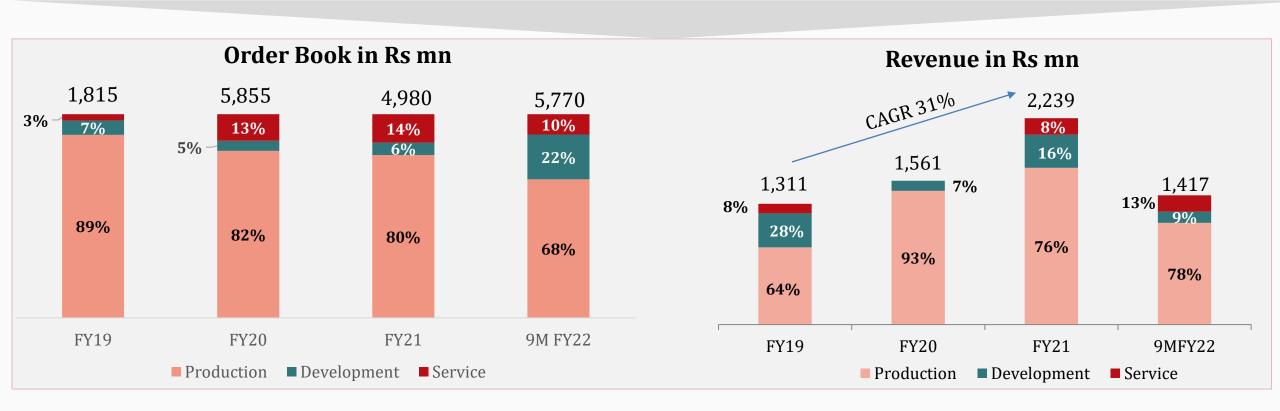


On track to have a strong order book in the current year



Diversified Order Book and Revenue Portfolio

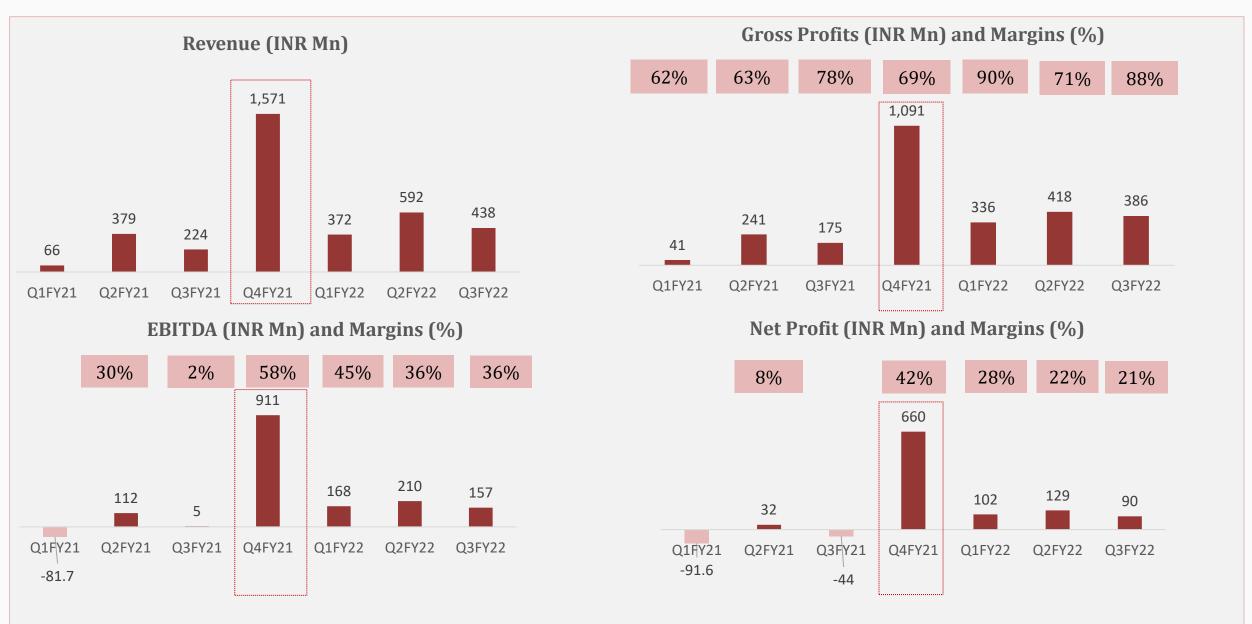
Developmental contracts/order book translates to strong production revenues



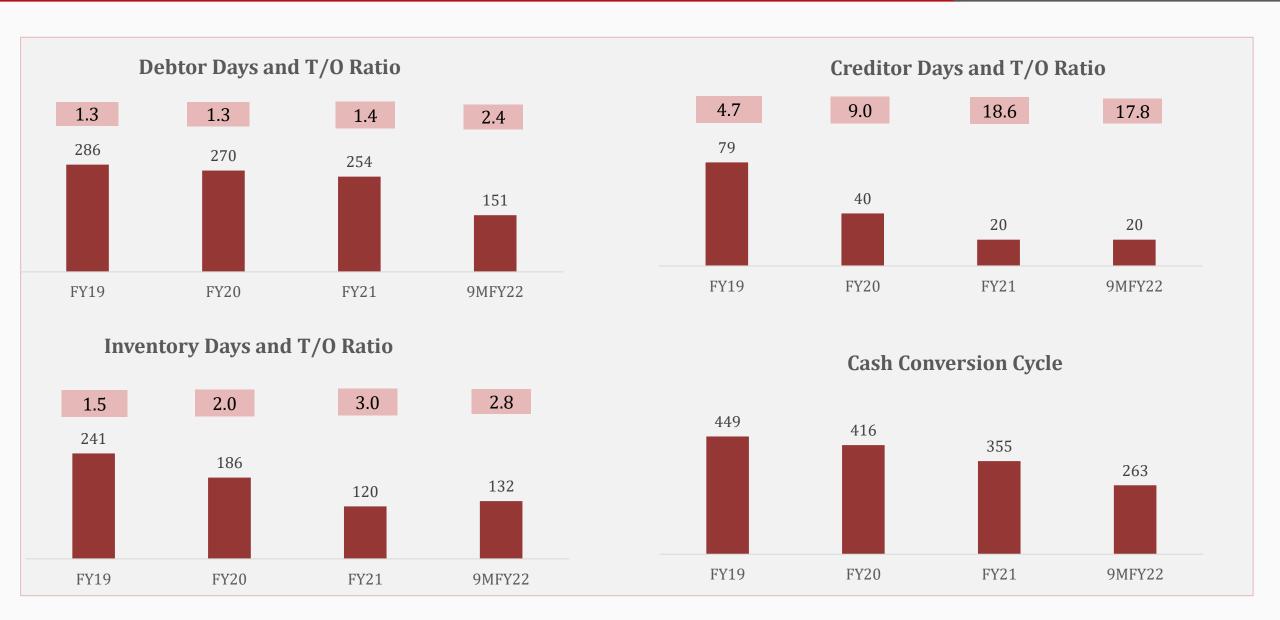
- · Robust development contracts order book ensures higher production contracts visibility
- · Bill to book ratio improving significantly; Growing Service contract order book to lend stability
- Revenue seasonality reducing but high Q4 is still >50% of yearly revenue



Robust Performance: Seasonality Improving but Q4 still Significant



Working Efficiently



^{• 9}MFY22 WC is calculated on TTM revenue basis



[•] All Days are calculated on revenue

Domestic Push for Defence; Budget 2023

Increased Defence Expenditure

Govt increased the defence expenditure from Rs 4.8lacs cr to Rs 5.2lac cr in FY23 ith a major push on procurement of weapons and military platforms from domestic manufacturers

Data Patterns well positioned Leverage its strong and strategic position in Defence and Aerospace segment

Collaboration with Private Sector R&D

25% of the allocation for defence research and development (R&D) will be kept for collaboration with the private sector

Data Patterns has Strong focus on R&D; led by team of technocrats

Thrust on Make in India

68% of the outlay for defence procurement will be set aside for buying from domestic industry

Budgetary allocation for the Ministry of Defence

	2019-20	2020-21	2021-22	2022-23 (Budgetary Estimate)
Defence services (Revenue)	2,23,240.83	2,24,351.76	2,38,717.09	2,39,743.71
Capital outlay	1,11,092	1,34,304.92	1,38,850.90	1,52,369.61
Defence pensions	1,17,810	1,28,065.88	1,16,878	1,19,696

Source: Ministry of Finance, all figures in INR crore



m Mint

Budget 2022: ₹5.25 lakh cr allocated for defence, focus on domestic players

Union Budget 2022-23: The central government on Tuesday increased the defence budget to ₹5.25 lakh crore for 2022-23 from last year's...

2 days ago





Defence budget 2022-23: Securing India, pursuing selfreliance

Defence budget 2022-23: Securing India, pursuing self-reliance; 2019-20, 2020-21; Defence services (Revenue), 2,23,240.83, 2,24,351.76; Capital...

1 day ago





With Focus on 'Self-Reliance' in Defence, Budget Provides 68% Allocation To Domestic Industry





Investment Thesis

Well Positioned to benefit from GOI thrust on 'Make in India' **De-risked Business Model** Well Invested and State of the Art Manufacturing **Facilities Growing Order Book** Well Reputed and Experienced Management Team **Consistent Track Record of Profitable Growth** Q3 & 9MFY22 Earnings Presentation



Corporate Overview

Data Patterns – One of the fastest growing companies in the Defence and Aerospace Electronics sector in India...

Among the few vertically integrated defence and aerospace electronics solutions providers catering to the indigenously developed defence products industry

Vertically integrated defence and aerospace electronics solutions **Aerospace 30+** Years of experience Defence with end to end capabilities and a large addressable market Products supplied for programmes Focused on in-house development and manufacturing facilities **Design to Delivery** LCA-Tejas, Light Utility led by innovation and design and development efforts Helicopter, BrahMos missile Beneficiary of shifting procurement trends in Defence – Aatma Increasing indigenization, 3 **TAM of USD 4.65 bn by 2030** Nirbhar Bharat, Make in India, new defence acquisition policies among Domestic defence procurement, Higher growing at CAGR - 9% from 2020* share of electronics in warfare others CAGR - 40+% Diversified order book with marquee customers along with state of the Rs. 5,770mn Rs. 1.787 mn art manufacturing facilities Order book as on Dec '21 Order book as of Apr'18 Many senior personnel 5 **818** employees with more than Experienced management team and skilled workforce associated with Company for **500** qualified engineers more than **2 decades**

Highest Revenue growth, EBIDTA margin, ROCE and ROE (for FY20 & FY21) amongst key Indian defence and aerospace companies

30.71%Revenue CAGR
(FY19-FY21)

68.92%Gross Margin%
(FY21)

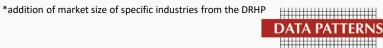
41.75% EBITDA% (FY21)

34.69%RoCE (FY21)

26.75% RoE (FY21)

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One of the fastest growing companies in the Defence and Aerospace Electronics sector in India



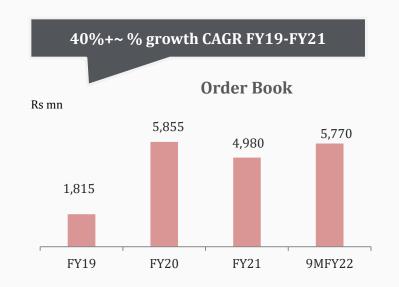
...With a Consistent track record of Profitable Growth

Robust revenue and order book growth

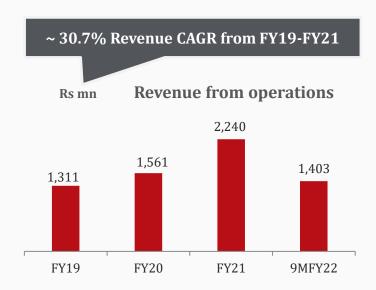
Consistently higher gross margins and improving EBITDA margin%

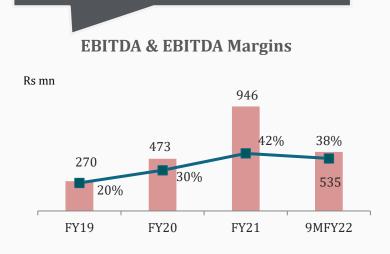
¹Gross margins have been computed by reducing total income with cost of materials, change in inventory

*EBITDA has been calculated as follows – Profit Before tax + Depreciation + Finance Costs; EBITDA margins have been calculated as EBITDA/Total Income









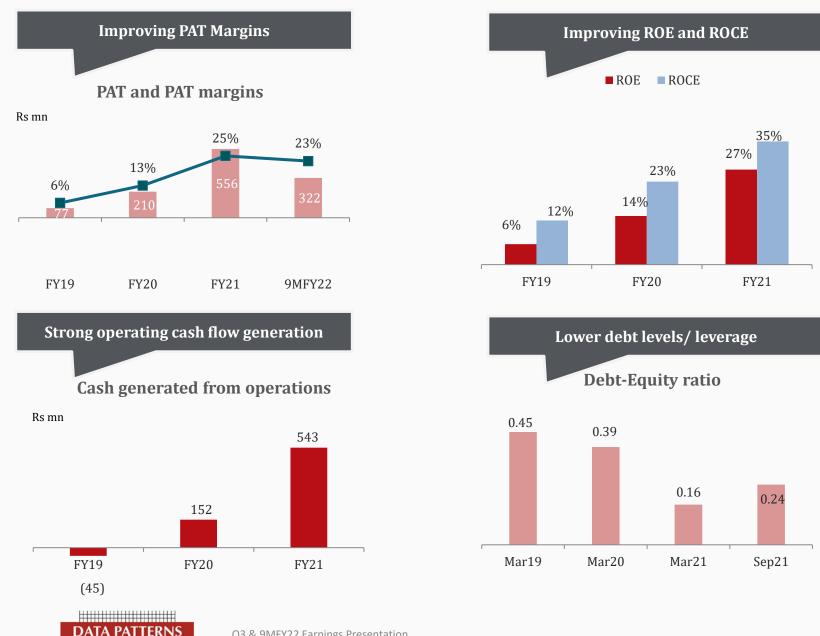
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~ 87.2% EBITDA CAGR from FY19-FY21

...and Growing Profitability

Improving PAT margins and high **ROCE**

Strong cash flow generation and low leverage



...Diverse Product Offering

Select Product offerings Category Category **Select Product offerings** COTS modules designed **BrahMos Commercial** Fire control systems in context of reusable off the shelf **Programme** building blocks for (COTS) · Mobile autonomous launcher building Military · Airborne launcher and Electronics systems VPX Zynq VPX Multi High Density DIU • Other electronic systems with a quick turnaround MPSoC based core SBC Missile Checkout Quad Core Air Version Launcher for time Brahmos Sukhoi-30 System Light Utility Helicopter Cockpit display Digital Direction Finder Radar Warning Receiver Surveillance and **Avionics Electronic** Avionics displays used on: Warfare intelligence gathering ("SIGINT") • Light Combat Aircraft ("LCA"), Airborne Radar Warning Receiver • Intermediate Jet Trainers Further divided into • Light Utility Helicopters ("LUH") **COMINT** and **ELINT** Surveillance radars Coastal Surveillance Radar Weather radars Communicati • Underwater electronics / Communications / Other Systems Radars ons, ATEs and Satellites • Automated Test Equipment (ATE) Small and Nano Satellites



Oceanography

Product

Automated Test

equipment for INS Shikra

....Over Last Three Decades



Launch pad countdown system



Fixed Wing Cockpit Displays



TERLS Tracking Radar



C-Band Tracking Radar



Wind Profile Radar

Designed and developed

complete Radar Capability



Micro Satellite Designed wide open RWR and **ELINT** for airborne platforms



- Initiated expansion of manufacturing facility with doubling of available floor area
- · Building of capacity to handle large and heavy equipment and integration of large radars and mobile EW systems, satellite integration facility

Developed Glass Cockpit **Displays / Avionics**

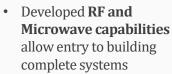


- Developed a Fire **Control System** for Brahmos
- Designed & developed the launch pad countdown system



Fire control system for the BrahMos







RF & Microwave **Products**



Coastal Surveillance Radar (Dept. of Space)





Wideband Fast Scan receiver



V/UHF Monitoring Receiver



Real Time Monitoring Receiver

Data Patterns has a long history

of association with India Space

Organization. Data Patterns built



V/UHF Search Receiver



Precision Approach Radar



Expanding capacity



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...A De-Risked Business Model

1 Developmental Contracts

DRDO

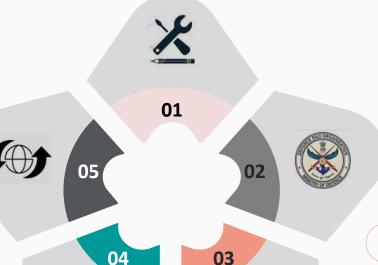


Defence PSU

5 Exports / Offsets

Available
Products /
Systems

Radars, Electronic Warfare, Fire control systems, Avionics, Missile Seekers, Communications, Small satellites Projects leads to Production / Repeat requirements
Programs leads to Annuity requirements



2 MoD Tenders

Available Products /
Systems
Partnership with
OEM



Requirements is for large numbers and longer timeframe

4 Civilian Requirements

Satellites and Wind profile radars

- Ability to build nano satellites
- Wind profile radar similar to the radar developed by our company is now required by government meteorological department in the civilian space





3 Indian Defence Eco-system

Platform /
Weapon System
Development

- Develop Sensors, Electronics, Avionics
 - In-house
 - In partnership with OEM



...Well-Positioned to benefit from Make in India Opportunity

Focused on designing & developing indigenized products making it a beneficiary of India's "AtmaNirbhar" defence structural reforms



Focused on designing and building own products across the manufacturing value chain to developing products and sub-systems



Well positioned to rapidly commercialise or **scale-up a number of existing products or building blocks to end systems** or complete solutions



Concentrate on building complete systems from the building blocks and sub-systems already developed, provides a **higher value addition while distributing development costs**

Examples:



Wind profile radar built for Cochin University of Science and Technology is the world's first 205MHz radar – complete in house development



Using the experience of working with DRDO and development of wind profile radar, the company successfully bid and won a contract of Rs 380Cr from Ministry of Defence for nine precision approach radars for Navy and Airforce which are currently at delivery stage



Developed and deployed our first Nano Satellite in 2017



Subsequently received contracts to build 2 more Nano Satellites



Developed and supplied Military COTS type processor for DRDO



Subsequently redeployed for other projects by various DRDO laboratories including in naval applications in ships & helicopters

Defence Modernization Program



Arudhra Radar



Light weight EW requirements



Ashwini LLTR



Airborne surveillance radar



Dharashakti programme



Radar Warning Receivers



...Driven by Innovation Focused Business Model

Focused on in-house development led by innovation and design and development efforts



Building complete systems from the building blocks and sub-systems already developed



Partner with customers through the life cycle of a **product**, from conception till deployment and thereafter



450+ engineers, most of whom have served in design and development departments

Track record of utilizing pre-developed building blocks and sub-systems in the development of complete systems

- Military grade processor modules,
- Cockpit displays,
- Actuator controllers for missiles and torpedoes,
- > Flight control computers,
- Digital receivers and
- Up/Down converters for radars

Present programmes with building blocks Designed & Developed by Data Patterns...

- ➤ Airborne phased array radar
- Frequency hopping radio relays
- ➤ Next generation EW products
- ➤ Integrated EW solution for national security



Seeker model

 \ldots along with "Future Ready" products already designed and developed by the company

#	Product(s)	Details		
1.	Monopulse RF Seeker	Delivered prototypes to DRDO		
2.	X-Band Doppler Weather	Prototype installed in Chennai for		
۷.	Radar	meteorology department		
2	205MHz Wind Profile Radar	Installed at Cochin for a government		
3.	for CUSAT	owned university		
4.	Radar for Naval Utility	Protetyma delivered to LDDE		
4.	Helicopter	Prototype delivered to LRDE		
5.	A Next-Generation Software	Duatatura davidanad fan DEAL		
Э.	Defined Radio	Prototype developed for DEAL		
	A Next-Generation Radar	Duatatura davidanad fan DI DI		
6.	Warning Receiver	Prototype developed for DLRL		
7.	A Next-Generation COMINT	Prototype developed for DLRL		
0	A Next-Generation ELINT	Duatatura delivered for DI DI		
8.	System	Prototype delivered for DLRL		
9.	Nano Satellite	Being delivered to industry		



... Servicing Marquee Clients

Marqee customers in the Indian defence & aerospace ecosystem

Government Departments

Ministry of Defence



Indian government space organisation **Indian DPSU**







Others



History of business continuity & reliable product service for marquee customers



History of reliable product service for several customers

Supplying products to Indian govt. space org. for 20+ years; which continue to be under AMC Products supplied to BrahMos operational from 2006



Invest in product development ensuring continuity of business

Developed cockpit displays for LUH, which has potential to generate additional annuity revenues from the new units



Products form critical components

Launch systems for ground based BrahMos missile launcher, "take me home" displays for the Tejas



Supply of products to prestigious defence projects in India

Like LCA, the HAL Dhruv, LUH and the BrahMos missile programme



...Through Well-Invested and State of the Art Manufacturing Facilities

~ 5.75 Acres

Of land in Chennai, SIPCOT area

~ 100,000 sq. ft

Aggregate of built up area of manufacturing facility

~2.81 acres

Land for proposed expansion



- JSS55555
- MIL-STD-461
- MIL-STD-810 including for Highly Accelerated Life Test / Highly accelerated stress screening.

Key features of manufacturing facility

- √ 100,000 class clean room
- ✓ Electronic assembly facility
- ✓ BGA repair work station with display
- ✓ Manual soldering certified to Space grade standards
- ✓ EMS assembly capacity of 600 boards per day
- ✓ Capability to handle complex boards with 22 layer, 6k components and 21k solder points
- ✓ Dedicated 70 work stations for testing modules and small systems
- ✓ Harness preparation of 2k points per day
- ✓ 20 Dedicated Mechanical assembly stations to assemble small and large systems

and various others...

Our systems and processes are subject to periodic audit by customer such as

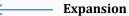
- ✓ Indian Government Space Organization
- ✓ Hindustan Aeronautics Limited (HAL)
- ✓ Other Government departments

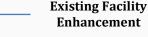
Proposed expansion

- ✓ Spend Rs 627m towards upgrading and expanding existing facilities
- ✓ Proposed doubling of floor area and manufacturing capacity
- ✓ Addition of large & heavy equipment, integration of large radars & mobile electronic warfare systems.

Manufacturing facility at Chennai, India









- Large Systems Integration Hangar
- Complete Radar Integration
- Electronic Warfare Vehicle Integration
- Additional Test Facility
- Augmented Environmental Test Infrastructure



- Augmented Design & Development Facility
- Additional Space For Design and Development Resources
- Clean Room for Satellite Integration
- · Additional EMS Line
- Multi Ton material handling



EMS Line



Multizone Reflow Oven



X ray inspection system



...Led by a Highly Reputed and an Experienced Management Team



Mr. Srinivasagopalan Rangarajan *Promoter, Chairman & Managing Director*

- Over 3 decades of experience in business development, corporate affairs, finance and marketing
- B.Tech in Chemical Engineering from University of Madras,
 M.S from IIT, Madras



Ms. Rekha Murthy Rangarajan *Promoter, Whole Time Director*

- Over 2 decades of experience in administration, facility maintenance, HRD, process engineering and special projects
- B.A from Bangalore University, M.A in applied Psychology from Madras University



Mr. Venkata Subramanian Venkatachalam *Chief Financial Officer*

- Over 2 decades of experience in finance sector
- B.Com from Madurai Kamaraj University, Member of ICAI
- Associated with Data Patterns 20+ years



Mr. Vijay Ananth KCOO and Chief Information Security Officer

- Over 2 decades of experience in software engineering and product management
- BCS from Manomanian Sundaranar
 University and Masters degree in computer
 applications from the University of Madras
- Associated with Data Patterns 20+ years



Mr. Desinguraja Parthasarathy Chief Technology Officer

- 32 years experience in product development
- B.E from University of Madras
- Associated with Data Patterns 30+ years



Mr. Thomas Mathuram Susikaran

SVP – Business Development

- 21 years of experience in Business
 Development and marketing
- B.E from Madurai Kamaraj University and a Masters' degree of tech in electrical engineering, IIT – Madras
- Associated with Data Patterns 20+ years



Ms. Nandaki Devi Ramachandracharya *DGM and Management Representative*

Quality Management System

- 22 years of experience in test engineering
- B.E in electronics and communications and Advanced Diploma in Software Quality
 Management from AmitySoft Education.
- Associated with Data Patterns 15+ years



Ms. Manvi Bhasin

Company Secretary and Compliance Officer

- 3 years of experience in legal and secretarial matters
- PGDM from Lal Bahadur Shastri Institute,, Associate of the ICSI
- Joined Data Patterns in 2021





Appendix

Well Rounded and Diverse Board



Mr. Prasad Raghava Menon

Non-executive, Independent Director

- Served as Managing Director of Tata
 Chemicals Ltd and Ex-Tata Power Company
 Ltd.
- Bachelor's degree from IIT, Kharagpur



Mr. Sowmyan Ramakrishnan

Non-executive, Independent Director

- Ex-Executive Director and CFO of Tata Power.
- Bachelor's degree in technology (mechanical engineering) from IIT-M and a PG Diploma in Business Administration from IIM-A and M.A from Department of Oriental Studies and Research



Mr. Vadlamani Venkata Rama Sastry

Non-executive, Independent Director

- Retired Chairman and M.D of Bharat Electronics Limited and ex-Executive Director of Centre for Development of Telematics
- B.Sc and B.E in electronics and communication from Andhra University



Ms. Sabitha Rao

Non-executive, Independent Director

Working with Cerebrus Consultants Pvt Ltd;
 PG Diploma in Management from IIM-C



Mr. Mathew Cyriac

Nominee Director

- 23 years of experience in investment banking and private equity.
- Previously associated with Blackstone Advisors, Bank of America, DLJ Merchant Banking Partners and Credit Suisse
- Bachelor's degree in technology (mechanical engineering) from Anna University and Post graduate diploma in management from IIM-B (gold medalist)



Historical Statement of Profit and Loss

Particulars (Rs. Mn)	FY19	FY20	FY21
Revenue from Contract with Customers	1310.63	1560.98	2239.50
Other Income	14.46	40.94	26.00
Total Revenue	1325.09	1601.92	2265.50
Expenses:			
a) Cost of materials consumed	454.31	532.13	629.78
b) Changes in inventories of FG, WIP and SIT	35.16	28.76	74.25
c) Employee benefits expenses	376.49	422.71	484.21
d) Finance cost	107.77	133.43	145.02
e) Depreciation / Amortization	58.57	54.78	55.52
f) Other expenses	189.20	145.82	131.38
Total Expenses	1221.50	1317.63	1520.16
Profit before tax	103.59	284.29	745.34
Tax expense	26.57	73.81	189.63
Profit(Loss)for the period	77.02	210.48	555.71
Other Comprehensive Income	(5.11)	(0.37)	(9.56)
Total Comprehensive Income for the year	71.91	210.11	546.15
PAT%	5.81%	13.14%	24.53%
EBITDA ¹	269.93	472.50	945.88
EBITDA margin%	20.37%	29.50%	41.75%
Return on Net Worth ²	5.80%	13.71%	26.75%
Total Debt ³	601.33	605.66	332.21
Debt to Equity	0.45	0.39	0.16

Note: 1. Adj. EBITDA is calculated as the sum of profit, tax expenses, depreciation and amortization expense, finance costs, stock option expenses, impairment of goodwill and foreign exchange fluctuations. 2. Calculated as net profit after taxation and minority interest attributable to the equity shareholders of the Company divided by Net worth. Shareholders' funds = Share capital + reserves & surplus – revaluation reserves 3. Net Debt is calculated as the sum of non-current borrowings, current maturities of non-current borrowings and accrued interest



Historical Balance Sheet

Particulars (Rs. Mn)	Mar19	Mar20	Mar21	Sep21
ASSETS				
Non-current assets				
(a) Property, Plant and Equipment	294.21	278.21	292.08	354.85
(b) Capital Work in Progress	-	-	-	20.01
(c) Intangible Assets	2.33	1.59	5.55	11.85
(d) Right of Use Assets	67.89	53.68	32.21	24.93
(e) Other Financial Assets	390.37	464.75	340.71	599.40
Total non-current assets	754.80	798.23	670.55	1011.04
Current assets				
(a) Inventories	866.86	794.14	737.45	868.18
(b) Financial Assets				
(i) Trade receivables	1,029.4 0	1,156.34	1,559.35	1,345.27
(ii) Cash and cash equivalents	3.12	15.11	88.06	76.88
(iii) Other Financial Assets	3.05	37.24	50.96	46.82
(c) Other current assets	117.04	152.57	177.34	209.81
Total current assets	2,019.4 7	2,155.40	2,613.16	2,546.96
TOTAL ASSETS	2,774.2 7	2,953.63	3,283.71	3,558.00

Particulars (Rs. Mn)	Mar19	Mar20	Mar21	Sep21
EQUITY AND LIABILITIES				
Equity				
(a) Share capital	17.00	17.00	17.00	93.49
(b) Other Equity	1,311.93	1,517.95	2,060.70	2,072.75
Total equity and liabilities	1,328.93	1,534.95	2,077.70	2,166.24
Liabilities				
Non-current liabilities				
(a) Financial Liabilities				
(i) Borrowings	-	5.53	97.70	88.59
(ii) Lease Liabilities	59.29	38.46	24.35	17.00
(b) Provisions	47.78	56.38	85.15	91.78
(c) Deferred Tax Liability (Net)	9.30	7.60	8.13	9.80
(d) Other Non Current liabilities	251.89	143.24	273.68	279.75
Total non-current liabilities	368.26	251.21	489.01	486.92
Current liabilities				
(a) Financial Liabilities				
(i) Borrowings	601.33	600.13	234.51	435.55
(ii) Trade payables	158.61	172.58	119.95	100.56
(iii) Other Financial Liabilities	35.98	79.15	40.05	64.39
(iv) Lease Liabilities	10.77	20.83	15.15	14.81
(b) Other current liabilities	247.72	224.7	246.41	163.26
(c) Provisions	14.39	14.85	9.59	4.27
(d) Current tax Liabilities	8.28	55.23	51.34	122.00
Total current liabilities	1,077.08	1,167.47	717.00	904.84
TOTAL EQUITY AND LIABILITIES	2,774.27	2,953.63	3,283.71	3,558.00



Historical Cash Flow

Particulars (Rs. Mn)	Mar19	Mar20	Mar21	Sep21
Net Profit before tax	103.59	284.29	745.34	307.75
Adjustments for:				
Add : Depreciation	58.57	54.78	55.52	29.58
Add : Interest And Finance Charges	107.77	133.43	145.02	48.14
Less: Profit on sale of assets	-	(1.78)	(1.24)	-
Less: Interest Income	(14.46)	(25.64)	(22.21)	(6.98)
Less: Gain/loss on disposal of Right of Use of Asset	-	-	-	(0.06)
Operating Profit Before Working Capital Changes	255.47	445.08	922.43	378.43
Adjustments For Working Capital Movements:	(289.35)	(264.29)	(189.58)	(273.69)
Cash Generated From Operations	(33.88)	180.79	732.84	104.74
Direct Taxes (Paid) /adjusted	(11.07)	(28.41)	(189.79)	(3.33)
Net Cash flow From Operating Activities (A)	(44.94)	152.38	543.05	101.41
Cash Flow From Investing Activities (B)	4.29	14.10	(27.40)	(104.81)
Cash Flow From Financing Activities (C)	22.46	(154.47)	(442.71)	(7.78)
Net Increase in Cash & Cash Equivalents (A+B+C)	(18.18)	11.99	72.95	(11.18)
Cash & Cash Equivalent At The Beginning Of The Year	21.30	3.12	15.11	88.06
Cash & Cash Equivalent At The End Of The Year	3.12	15.11	88.06	76.88



Defence modernization programmes



Arudhra Radar

- Expected to supply ~55 units of AGRU/ Arudhra radar
- Likely to generate revenues in the next 3-4 years based on the requirement projection of IAF



Light weight EW requirements

 EW capability will help in supplying products for Light weight EW products which have a heavy requirement in mountainous borders as they are not adequately covered, and the same has been prioritised due to the increased geo-political tension



Ashwini LLTR

- Partner in development of these radars as a single vendor incl. TR modules, AGRU, signal processor, etc
- Expected to realise revenue between \$10-30 million in the next few years.



Airborne surveillance radar

 Has delivered an airborne surveillance radar (all of the hardware) to LRDE which is expected to be flight tested in the next few months and will be likely inducted in Navy's Dornier upgrade and new helicopter programmes



Dharashakti programme

- Has received single vendor orders from DLRL for development and supply of all of the COMINT search receivers, Direction Finder & Monitoring receivers.
- In a position to be an OEM for the entire receiver systems with likely revenues of \$ 50 million on complete execution



Radar Warning Receivers

 Also a part of the Radar Warning Receivers for the Airborne Early Warning System ("AEW &C") to DLRL which has been fitted on the Embraer early warning radar developed by Centre for Air Borne System ("CABS")



MI 17 Upgrades, Dornier Upgrades, Aerostat upgrades,

 Expertise gained in the Dharashakti project would also position to cater for airborne COMINT and ELINT equipment for various upgrades of any new rotary wing programmes



Next Gen completely wide open for LCA Mk IA and Sukhoi 30 platforms

- Likely to deliver Next Gen completely wide open for LCA Mk IA and Sukhoi
 30 platforms subject to flight testing.
- After flight testing, these can be fitted on the 83 LCA MK IA on order as well as the Sukhoi 30 upgrades (approximately 270 numbers), attack helicopters, etc.



Core groups or departments for design and development of products

Total Employee Strength



Department	# of Employees
Design & Engineering (D&E)	416
Manufacturing	263
Support	79
Marketing & Customer support	60
Total	818

500 qualified Engineers out of 818

Our senior members in hardware, design and development have been with us for more than **15 years**

Group/Department	Responsibility / Scope
Hardware Development Department	Design and development of all types of high-end and complex electronics modules and building blocks. Includes Single board computers, Field Interface modules, Communication Modules, Custom I/O Modules, Mezzanine modules, Signal conditioning modules etc.
Software Development Department	Design and development all types of embedded, real-time and application software. Includes devices drivers, Operating system porting, real-time data transfer, GUI application for various Operating systems and hardware.
Mechanical Engineering Department	Design and development of all types of mechanical packaging, big structure systems and jigs and fixtures. Incudes standard ATR chassis, heat spreaders, structural and thermal analysis etc.
CAD / CAM Group	PCB schematics, Artwork, signal analysis, power analysis, electrical wiring, all modules/systems performance, and maintenance statistics like MTBF etc. Includes up to 26 Layer PCB design, hybrid electrical interface design etc
Algorithm Development Group	Design and development of various domain algorithms for RADAR, Electronic Warfare, Communication waveform etc. Uses all types of algorithm development including mathematical modelling, statistical modelling, feedback modelling etc.
Radio Frequency Modules Group	Design and development of all types of RF modules and sub-systems. Includes simple RF receiver/exciter, filters, upconverters/downconverters, synthesizers etc.

Group/Department	Responsibility / Scope
DOMAIN Systems Groups	Design and Development of product verticals as a system. Including RADAR, EW, Communication, ATEs, Fire-control systems, Satellite, Avionics etc.
Production Department	All the products are functionally and environmentally tested by this department. Includes testing of modules and subsystems, wiring, mechanical assembly, and integration etc.
Electronics Manufacturing Services (EMS)	Fabrication of all electronics modules. Including automated pick-n-place, manual soldering, conformal coating etc.
Harnessing Group	Fabrication of all types of cable harness including internal wiring, external interface wiring, testing of cables for continuity, impedance etc.
Mechanical Integration Group	Assembly and integration of all types of mechanical parts. Including various types like LRU assembly, board assembly, system assembly, system integration etc.
Project Management Group	Responsible for Delivering all the orders both internal and external. Vertical integration of groups and product development responsibilities. Includes all types of projects from simple module delivery to full system delivery. Utilizes, project plan, metrics, GANNT charts, budgeting and control, optimal execution methods etc



Indian defence and aerospace industry is rapidly evolving into a self sustaining one

Competition at two levels for Data Patterns

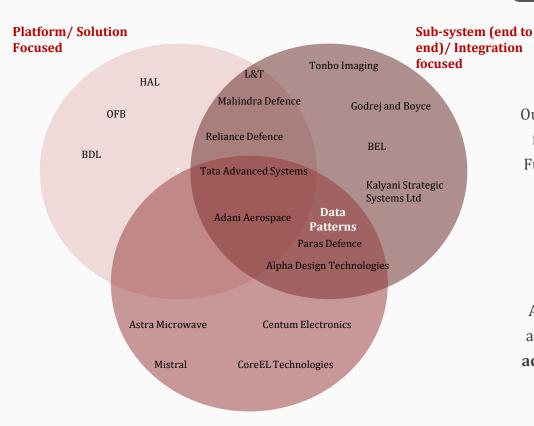


During **development stage** in DRDO requirements **from small and medium size companies** building custom solutions and/or integrating solutions around imported COTS products



From large corporates offering complete systems, often under a partnership with International OEMs, for products and programmes directly procured by the Indian government space organization

Indian defence suppliers - Anticipated Future Positioning



Subcomponents focused

We are poised to take up emerging opportunities



Our products are **developed** to **compete with international and domestic equivalents**.

Further, we offer **end to end solutions** to the

customer



Ability to offer wide range of products. We also have strong and balanced capabilities across 12 defence and aerospace segments



Thank You

For further information, please get in touch with:

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