

Manan Goyal
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Issue Details

Issue Details	
Issue Size (Value in ₹ million, Upper Band)	8,650.0
Fresh Issue (No. of Shares in Lakhs)	125.0
Offer for Sale (No. of Shares in Lakhs)	73.4
Bid/Issue opens on	03-Apr-23
Bid/Issue closes on	06-Apr-23
Face Value	Rs. 2
Price Band	415-436
Minimum Lot	34

Objects of the Issue

- **Fresh issue : ₹ 3,200 million**
Prepayment or repayment of all or a portion of certain outstanding borrowings availed by the Company and one of their Material Subsidiaries, ATSP
Funding the working capital requirements of the Company
General corporate purposes.
- **Offer for sale : ₹5,450 million**

Book Running Lead Managers	
JM Financial Limited	
DAM capital advisors Limited	
IIFL Securities Limited	
Nomura Financial Advisory and Securities Limited	
Registrar to the Offer	
Link Intime India Private Limited	

Capital Structure (₹ million)	Aggregate Value
Authorized share capital	220.00
Subscribed paid up capital (Pre-Offer)	115.91
Paid up capital (Post - Offer)	130.59

Share Holding Pattern %	Pre-Issue	Post Issue
Promoters & Promoter group	70.75	51.24
Public – Selling shareholders	29.25	47.76
Total	100	100

Financials

Particulars (₹ In million)	8M FY23	FY22	FY21	FY20
Revenue from operations	5,848	8,407	6,905	6,419
Operating expenses	5,167	7,432	6,243	5,774
EBITDA	681	975	661	645
Other Income	122	109	54	113
Depreciation	124	172	157	155
EBIT	678	913	558	603
Interest	205	248	270	450
PBT	474	664	288	153
Exceptional items	-	200	-	-
Tax	132	183	57	30
Consolidated PAT	342	682	231	123
EPS	5.24	10.44	3.54	1.89
Ratios	8M FY23	FY22	FY21	FY20
EBITDAM	11.64%	11.60%	9.58%	10.05%
PATM	5.85%	8.11%	3.34%	1.92%
Sales growth		21.76%	7.57%	

Company Description

Avalon Technologies is one of the leading fully integrated Electronic Manufacturing Services (EMS) companies with end-to-end capabilities in delivering box build solutions in India, with a focus on high value precision engineered products. They provide a full stack product and solution suite, right from printed circuit board design and assembly to the manufacture of complete electronic systems to certain global original equipment manufacturers (OEMs), including OEMs located in the United States, China, Netherlands, and Japan.

The company commenced its operations in 1999 as a pure play PCB assembler with a niche focus on their capabilities and has become vertically integrated to include multiple offerings. They have a significant level of vertical integration in the EMS industry that includes PCB assembly, cable assembly and wire harnesses, sheet metal fabrications and machining, injection molded plastics, magnetics and end-to-end box build.

Currently, they have 12 manufacturing facilities spread across the United States and India i.e 1 unit in Atlanta, Georgia, 1 unit in Fremont, California, 7 units in Chennai, Tamil Nadu, 1 unit in Kanchipuram, Tamil Nadu and 2 units in Bengaluru, Karnataka. Moreover, their electronic manufacturing facilities comprise an aggregate of 66 production lines, consisting of 11 Surface Mount Technology (SMT) lines, 12 Through Hole Technology (THT) lines and 43 assembly lines.

Company have developed long relationships with certain of their customers through a client servicing model which aims to provide fully integrated solutions, robust manufacturing capabilities, delivering quality products on time, supply chain efficiency as well as a focus on new product development. Their new product development approach typically starts with component level design engagement with customers. This allows them to be entrenched with the customer from the conception of their product, and subsequently move up the value chain with them by leveraging their fully integrated offerings.

Some of the marquee customers includes Kyosan India Private Limited, Faiveley Transport Rail Technologies India Private Limited, a Wabtec Company, TransDigm Technologies, India Private Limited, Zonar Systems Inc., and Collins Aerospace in the mobility industry, Caire Inc., in the medical industry, e-Infochips Private Limited and Haas Automation, Inc. in the industrial sector, TMEIC and Ohmium India Private Limited in the clean energy sector. Their key customer base increased from 72 as of November 30, 2021 to 89 as of November 30, 2022, increasing their order book (open order) from ₹9,182.32 million as of November 30, 2021 to ₹11,902.46 million as of November 30, 2022.

Valuation & Outlook

Avalon Technologies Ltd. has end-to-end integrated solutions, providing a "One Stop Shop" for electronics and electro – mechanical design and manufacturing services with high entry barriers to business through their collective cross-industry experience, customer engagement capabilities and leading position in the high mix flexible volume product manufacturing segment and global delivery footprint with high quality standards and advanced manufacturing and assembly capabilities.

At the upper price band company is valuing at P/E of 41x with a market cap of ₹ 28,467 million post issue of equity shares and return on net worth of 85%.

We believe that company is fully priced and recommend a "Subscribe- Long term" rating to the IPO.

Company's Operations:-

Avalon Technologies offers integrated design and manufacturing solutions for domestic and internationally recognized OEMs, along with promising start-ups. Their solutions spectrum spans EMS box builds, PCB assemblies, cable assembly and wire harnesses, sheet metal fabrication, injection molded plastics, machining and magnetics. They also offer design services and new product development services. The key functional aspects of their business are Manufacturing and assembly, Design, analysis and prototyping of printed board assemblies, Engineering and development, Components, Sourcing, Supply chain development, Logistics and distribution and Aftermarket services. Each of the diversified capabilities stands alone on its own merit, providing customers with a No. of options which enables to augur growth in each of these areas. Further, company provide design and new product development services, leading to an end-to-end service offering. In addition, they have a unique set of customers for each capability.

Integration capabilities in Electronic Manufacturing Services (EMS)

- **PCB Design and Assembly:** Avalon is a leading EMS provider serving customers across the globe. They are an end-to-end service provider of PCBAs, with in-house capabilities to support the entire value chain for their customers. Their services and capabilities include Printed Circuit Board (PCB) Design and Analysis; Printed Circuit Board Assembly (PCBA) and Inspection and Test. The company provides a variety of services which includes highly complex double-sided PCB assembly, high mix assembly, low to medium volume assembly, flex and rigid PCB assembly, RoHS and non-RoHS processes, SMT assembly, through-hole and mix technology assembly, and backplanes assembly.
- **Metals Sheet Metal Fabrication:** The company fabricates metal sheets which is the process of forming desired shapes from metal sheets using various manufacturing methods. Moreover, they are an AS 9100D and ISO 9001:2015 certified company for sheet metal fabrications.
- **Cable Assembly and Wire Harnesses:** Avalon maintains an integrated manufacturing facility for custom wire harnessing and over-moulding, which is equipped to carry out processes such as automatic wire stripping, cutting, crimping, soldering, laser stripping and harness braiding. Its cable assembly and wire harness assemblies cover commercial and military applications and designs, which are customizable to suit specific demands of their customers. They also provide test solutions for high quality mould and die fixtures.

Magnetics division: The products and services includes

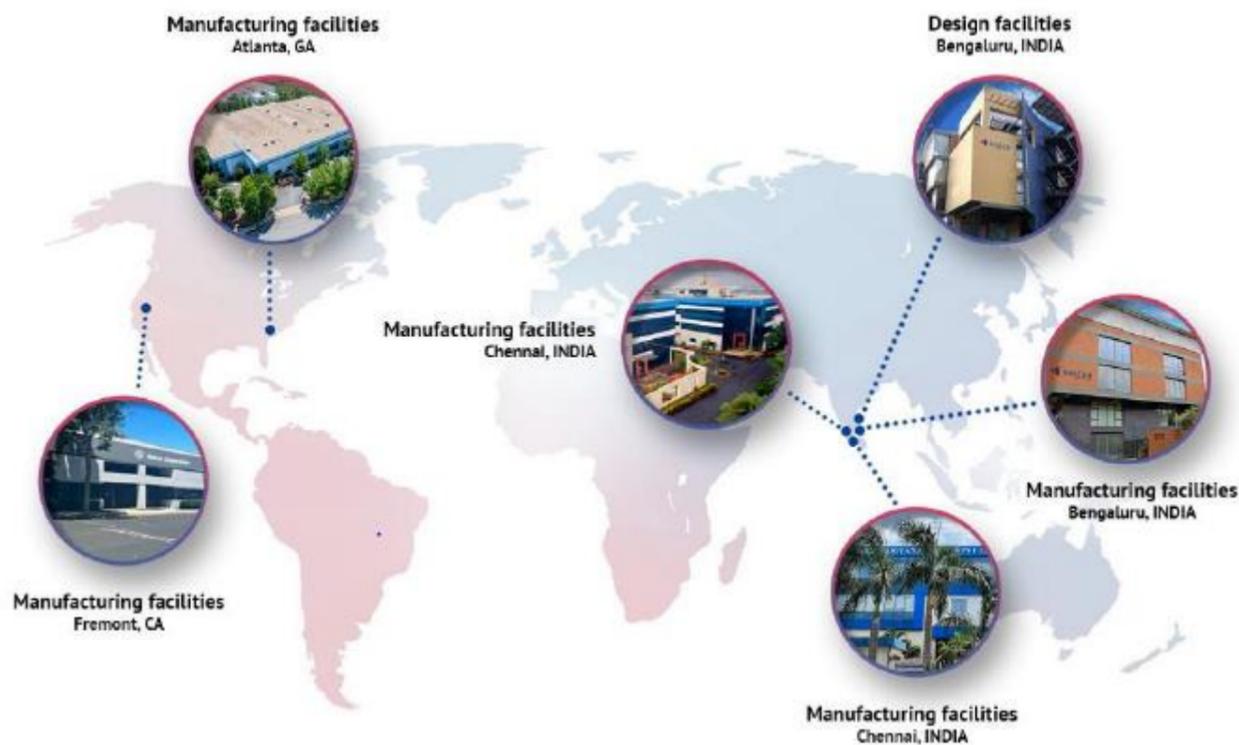
- **Transformers:** transformers are used in various industries including aerospace, industrial and pharmaceuticals. They also manufacture power transformers, current transformers, ferrite transformers and fly back transformers.
- **Chokes and Inductors:** The company manufactures common mode and differential mode chokes, powered iron core inductors, ferrite core inductors, laminated core inductors and ferrite rod inductors.
- **Injection Moulded Plastics:** Avalon specializes in small precise plastic injection moulded parts for a variety of applications including aerospace. They use various types of plastic resins and additives in their injection moulding process.

End to End services offerings



Global delivery footprint presence

The company currently operates through 12 manufacturing units, spread across two states in the US (California and Georgia) and two states in India (Karnataka and Tamil Nadu) backed by 1,783 permanent employees and 221 persons employed as contract workers/temporary employees, as of Nov'22. In addition, they have a new facility in Chennai, Tamil Nadu, which is currently under construction and renovation. All the locations have been chosen keeping in mind the availability of skilled labor and a strong pool of engineering/managerial talent. The company serves customers primarily in North America, India and Europe through these locations.

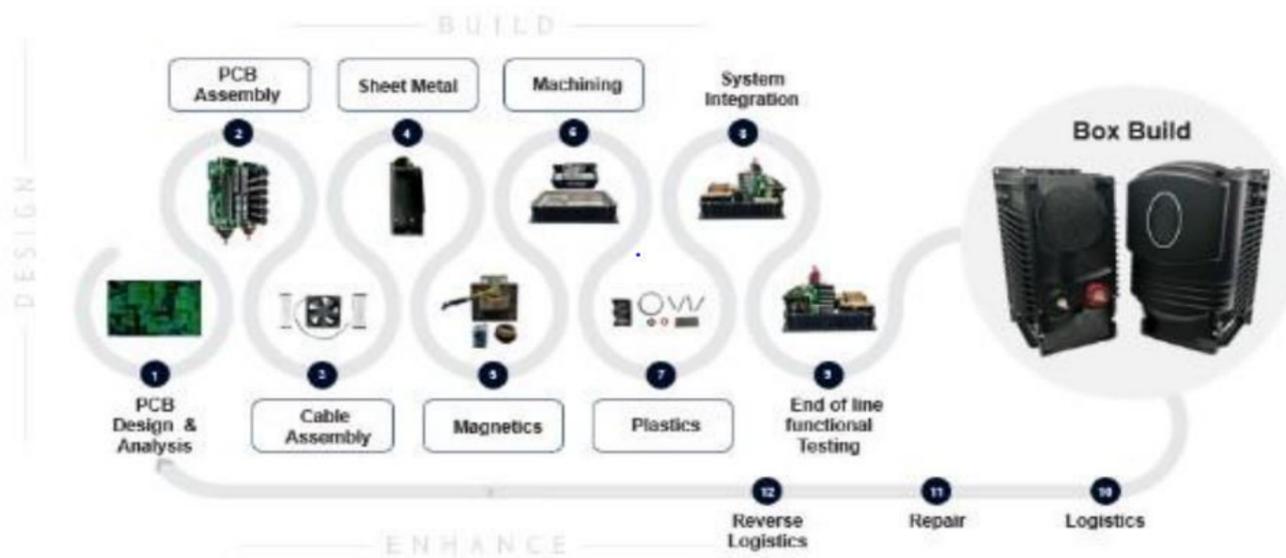
**No. of customers by end-use industry**

End use Industry	8MFY23	FY22	FY21	FY20
Clean Energy	14	11	6	4
Mobility	13	14	12	11
Industrial	39	38	30	26
Communication	11	8	6	5
Medical & Others	12	10	8	8
Total	89	81	62	54

Strengths:

➤ **End-to-end integrated solutions, providing a “One Stop Shop” for electronics and electro-mechanical design and manufacturing services**

With a focus on their customers' needs, they offer an integrated and well diversified solution suite comprising PCB design and assembly, manufacture of cable assembly and wire harnesses, sheet metal fabrication, sheet metal machining, plastic injection molding, magnetics, and electro-mechanical integration, which combined allow them to offer end-to-end box build solutions. They are one of the few EMS companies in India that offer one-stop services from PCB design and analysis to new product development (“NPD”) and subsequent volume production. Company focus on NPD as a means to build long-term customer relationships. They are able to support NPD initiatives by virtue of their diversified offerings and their ability to catalyze transformation of products from the prototype stage to production. As of March 31, 2022, they had 21 customers for their box-build services, which contributed to 44.48% of their revenue from operations in Fiscal 2022 and as of November 30, 2022, they had 29 customers for their box-build services, which contributed to 48.21% of their revenue from operations in the eight months ended November 30, 2022. Further, their capabilities in high precision engineering has led to robust Gross Margins. Further, they focus on continually expanding their technological expertise in manufacturing for diverse industries, integrating their services, and thereby enhancing their capability to serve multiple industry verticals. Their dedication to manufacturing and supply of quality products throughout their infrastructure ensures customer satisfaction, fosters customer loyalty and generates repeat business.



- **High entry barriers to business through the collective cross-industry experience, customer engagement capabilities and leading position in the high mix flexible volume product manufacturing segment.**

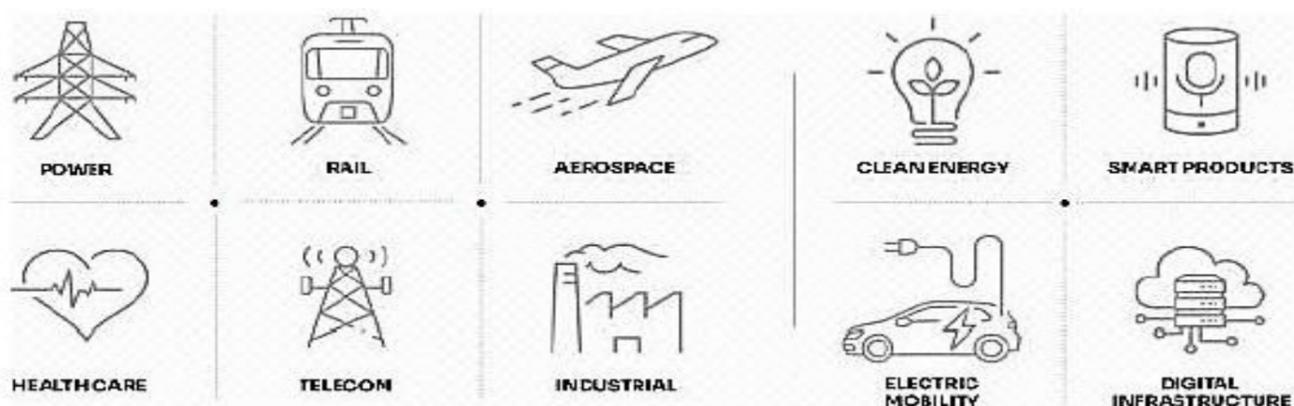
Avalon Technologies has built long term relationships with an average relationship of 8 years as on Nov'22, with customers who accounted for 80% of their revenue. Their experience in offering EMS services across product and industry verticals for customers globally for several years serves as an entry barrier in the industry for any new entrants. Given the depth and nature of the engagement with longstanding customers, their customers engage with long lifecycle industries such as power, railways, aerospace, medical, etc. would not find it easy to switchover to alternative EMS providers as the cost, time and effort for such transitions is high. They are one of the leaders in high mix, flexible volume product manufacturing and are present in most industry verticals including the power, industrial, railways, communications, automotive, aerospace and medical industries. Avalon believes that the leading position in the market is driven by focus on quality and customer relationships nurtured through reliable and efficient services.

- **Well-diversified business leading to strong growth avenues**

The company is well diversified and are present in virtually every major industry vertical, including clean energy, mobility, industrial, communication and medical. They service a variety of industries, including the power, clean energy, railways, aerospace and medical industries, which according to the F&S Report are characterized by long life cycles. This diversified industry presence hedges against global market and industry cycle volatilities. They also have penetration in sunrise industries such as clean energy with presence in the solar, hydrogen, and electric vehicles industries. The company also caters to industries which require high precision manufacturing which includes aerospace, defense and medical.

	Phase 1	Phase 2	Phase 3
	1995	1999	2007
	2009	2010	2011
	2018	Today	
	Sierra Corp incorporated in San Jose	Avalon Technologies incorporated in Chennai, India for EMS manufacturing	Expansion of manufacturing capabilities in the US
		Acquired design capabilities	Entry into Aerospace vertical
			Strategic entry into Railway vertical
			ATS established to enhance Box Build capabilities
Customer presence	Florida, GA - USA Atlanta, GA - USA	USA Europe INDIA	USA Europe INDIA Japan
Customers served	<ul style="list-style-type: none"> Power Communication 	<ul style="list-style-type: none"> Power Communication Aerospace 	<ul style="list-style-type: none"> Mobility Industrial Medical and Others
Capabilities	<ul style="list-style-type: none"> PCB assembly 	<ul style="list-style-type: none"> PCB assembly Metal, Cables In-house design 	<ul style="list-style-type: none"> PCB assembly Metals, Cables In-house design Plastics Magnetics System Integration

Industries catered by Avalon



Details of revenue contribution by end-use industry

Industry category	Industry vertical	8MFY23	FY22	FY21	FY20
Clean Energy	Solar Electric Vehicle Hydrogen	23.26%	20.28%	17.74%	15.71%
Mobility/Transportation	Railways Automotive Aerospace	22.39%	26.59%	28.51%	30.8%
Industrial	Power Automation	28.07%	30.04%	29.35%	27.92%
Communication	Telecom & satellite digital infrastructure	9.03%	7.18%	7.86%	6.27%
Medical & Others	NM	8.70%	7.71%	7.83%	8.07%
Others	Defense design	8.54%	8.21%	8.72%	11.22%
Total		100%	100%	100%	100%

➤ **Long-term relationships with marquee domestic and global customers.**

Company's product portfolio has helped them forge strong relationships with their major clients. They have established and will continue to focus on strengthening longstanding relationships with well-known customers across the end-use industries. They are a supplier to certain key customers in the railway and aerospace vertical in India. They also provide final integrated solutions to some of their customers' end clients, through logistics and warehousing support, realizing significant supply chain efficiencies for such customers. Certain customers locate their distribution centres inside company's manufacturing facilities in addition to having dedicated lines, ensuring highly efficient distribution operations for their customers. Avalon Technologies has been recognized by their customers with various awards including "Best Supplier Award" from Collins Aerospace, Bengaluru in 2019, "Supplier Excellence Award for Strategic Partnership" from Faiveley Transport Rail Technologies India Pvt Ltd, a Wabtec Company in 2018 to ATSP, "Prime Supplier" from Toshiba Mitsubishi Electric Industrial Systems Corporation, Japan in 2017, "Environmental Leadership Award" at the Indian ABO Suppliers Conference from Cummins in 2015, and "Best Indian Supplier 2012" from CE+T.

Length of relationship with certain customers (no. of years):

End use Industry	8MFY23	FY22	FY21	FY20
Average length of relationship with customers who contribute to top 80% revenue.	8.26	7.95	7.68	7.15

➤ **Global delivery footprint with high quality standards and advanced manufacturing and assembly capabilities**

Company currently operate through 12 manufacturing units, spread across two states in the US (California and Georgia) and two states in India (Karnataka and Tamil Nadu), and are supported by 1,783 permanent employees and 221 persons employed as contract workers/temporary employees, as of November 30, 2022. In addition, they have a new facility in Chennai, Tamil Nadu, which is currently under construction and renovation. All their locations have been chosen keeping in mind the availability of skilled labor and a strong pool of engineering/managerial talent. Company serve customers primarily in North America, India and Europe through these locations. Their manufacturing facilities have an aggregate of 66 production lines, consisting of 11 SMT lines, 12 THT lines and 43 assembly lines, with total installed SMT capacity of 366 million component placements per year in Fiscal 2022 and 322 component placements per eight months in the eight month period ended November 30, 2022. They operate two shifts a day, with sufficient buffer capacity to ramp up production and address spikes in order volumes.



Key Strategies:➤ **Invest in expanding the technological capabilities and manufacturing capacities**

Company's existing manufacturing facilities in Tamil Nadu are located on 0.37 msf, of which they are utilizing only 0.26 msf, as of November 30, 2022, which leaves additional area for any expansion which may be required. This includes their proposed new manufacturing facility in MEPZ, Chennai, through which they will increase their capacity for PCBA and Box build. From FY20 to FY22, they have increased the aggregate SMT production lines of their manufacturing facilities from 8 to 10, and the total installed SMT capacity from 244 million component placement per year to 366 million component placement per year. During the 8 months ended November 30, 2022, they have increased the number of SMT lines to 11 with a corresponding increase in component placements per year to 322 million component placements per year.

➤ **Creating high growth opportunities for the existing offerings**

As business lines of PCBA, cable assembly and wire harnesses, sheet metal fabrication, machining, magnetics and injection moulded plastics are capable of functioning independently, the company intends to focus on high growth opportunities in each of these business verticals. In sheet metal and injection moulded plastics they have witnessed high growth potential in the aerospace vertical, where they are already present. In magnetics, the company sees high growth opportunities in the power electronics and clean energy vertical. With the emergence of the trend to add new applications by leading manufacturers to their portfolios, a number of opportunities have arisen for power electronic devices such as transformers, chokes and inductors, for the control and operation of heavy machinery. Electric vehicles are one of the key growth opportunity verticals, due to the technology transformation currently underway with autonomous car development and electric vehicle commercialization activities.

➤ **Sustaining and catering to high growth sunrise industry sectors such as clean energy and emerging communication technologies**

The company aims to focus on high margin value products within the clean energy and emerging communication technologies sectors. The clean energy sector comprises solar, electric vehicles and hydrogen. The communication sector comprises telecom, satellite and digital infrastructure.

The highlights of their strategy to grow within these sectors, and industry trends within these sectors:

- **Clean Energy:** The company caters to 14 customers within the clean energy sector, as of November 30, 2022 and, since 2020, they have on-boarded 3 new customers within this industry, including Ohmium India Pvt Ltd. Revenues from clean energy is expected to grow at a CAGR of 87.3%, to reach ₹76 bn by FY26.
- **Communication Technology:** The company caters to 11 customers in the communication technology sector, as of November 30, 2022, and since 2020, they have on-boarded 3 new customers within this industry, including Live View Technologies, Inc.

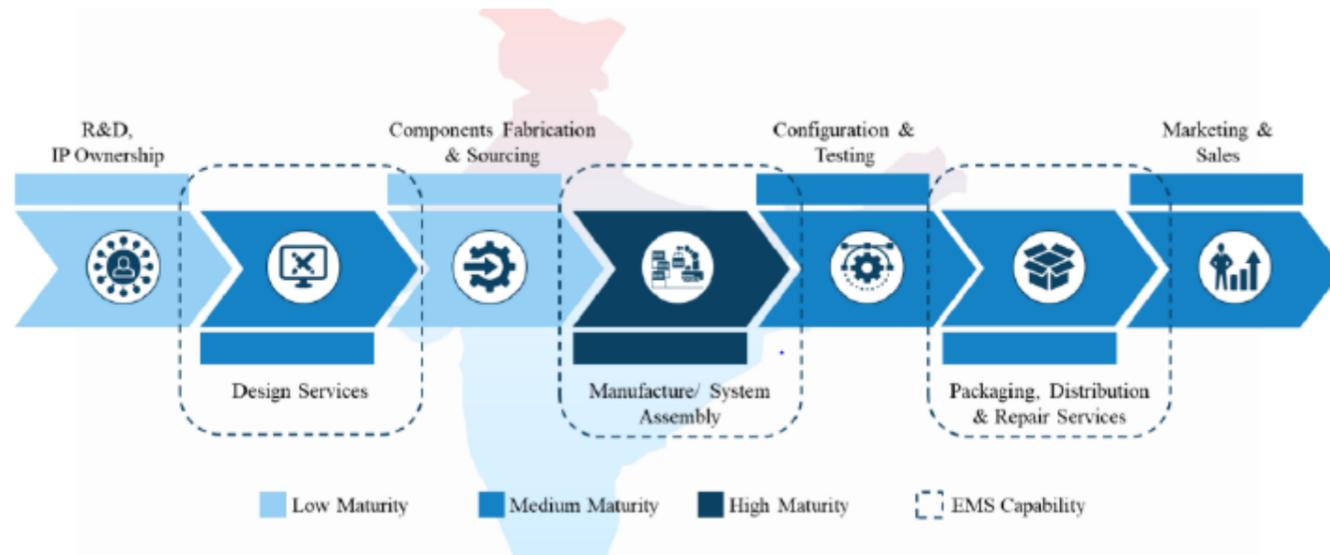
➤ **Consolidate and expand the position in global markets for existing industry verticals**

The company intends to continue to consolidate their position in well-established end-use industries including industrial, communications, mobility, and medical devices. The strategy to grow within these sectors, and industry trends within these sectors which will support the growth.

- **Industrial:** The company caters to 39 customers in the industrial sector, as of November 30, 2022 and, since January 1, 2020, they have on-boarded 1 new customers within this industry. The industrial sector, which includes power and automation, was estimated at Rs58 bn in FY22 in India, and is expected to grow at a CAGR of 18.7% to reach Rs115 bn by FY26.
- **Communications:** The company caters to 11 customers in the communications sector, as of November 30, 2022 and, since January 1, 2020, they have on-boarded 3 new customers within this industry, including Live View Technologies, Inc. The communications sector, which includes the telecom and satellite sector and digital infrastructure sector, was estimated at Rs57 bn in FY22 in India and is expected to grow at a CAGR of 17.6% to reach Rs109 bn by FY 2026.
- **Mobility:** The company caters to 13 customers as of November 30, 2022. The mobility sector, which includes automotive, railways and aerospace, was estimated at Rs78 bn in FY22 in India and is expected to grow at a CAGR of 21.6% to reach Rs171 bn by FY 2026.
- **Medical and Others:** The company caters to 12 customers in the medical and other sectors as of November 30, 2022. They have on-boarded 2 new customers within these sectors. The medical devices sector was estimated at ₹23 bn in FY22 in India and is expected to grow at a CAGR of 43% to reach Rs94 bn by FY26.

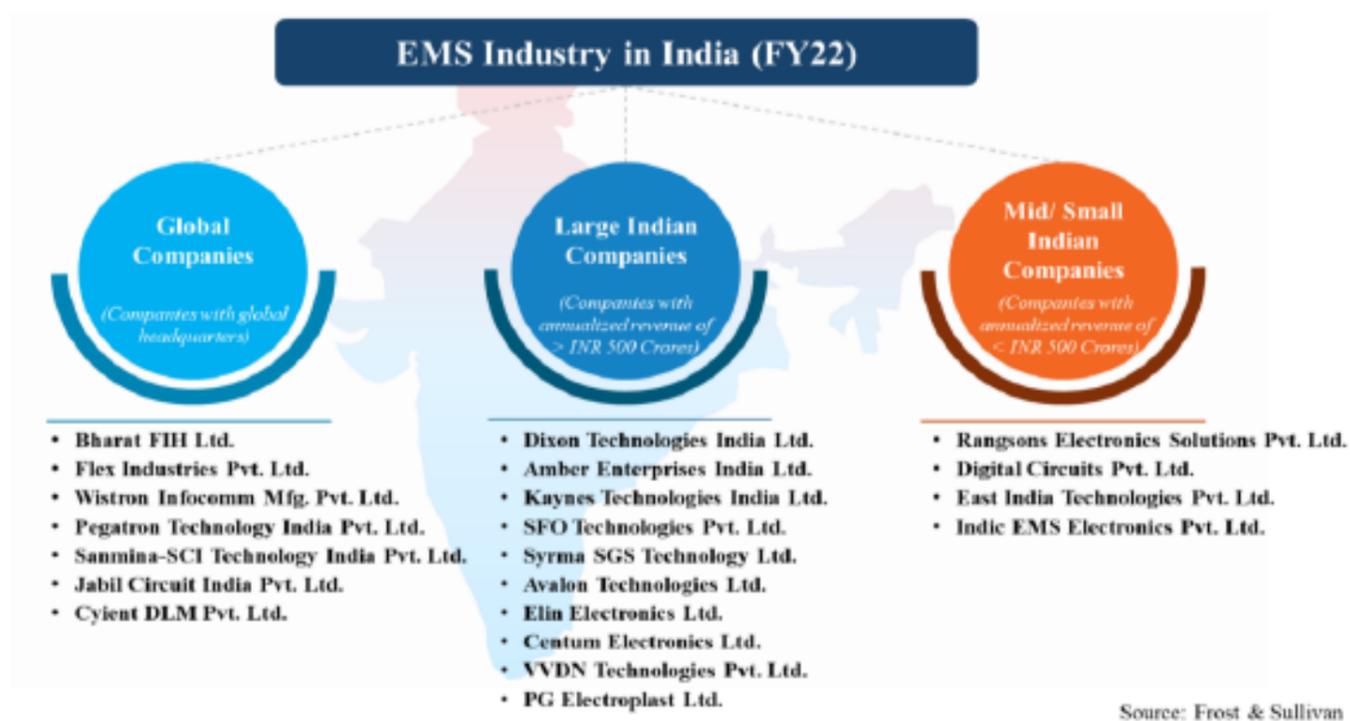
Industry Snapshot:**Value chain of EMS in India**

EMS providers in India have moderate maturity levels in packaging, distribution, repair, sales and marketing functions to meet geographical standards and cater to local requirements. After-sales services, which include repair and maintenance, are important for the Indian buyer and EMS companies having an extra ability to provide these reverse logistics will be favored by OEMs, and at the same time would play a significant role in e-waste management which is a huge concern globally. Many players such as Dixon, Flextronics, etc. are offering after-market services such as repair, refurbishment, logistics, and vendor management. Manufacturers in India lack mature set-ups due to large capex investments and long gestation periods. Europe and the U.S. continue to dominate R&D and IP ownership of related work with most MNCs holding their IP in their headquarter locations. However, India has a competitive edge in design services, since most such work is outsourced to cost-effective destinations (China, South Korea, Thailand). In terms of manufacturing and system assembly, India has an established set-up. Many EMS providers are slowly evolving to offer complete design services apart from contract manufacturing. EMS players obtain higher margins through this model.



Market overview of EMS industry in India

There are nearly 700 EMS companies in the market, ranging from large to medium-sized to small players. Major global companies are Bharat FIH, Flex, Wistron, Pegatron, Jabil; large Indian companies include Dixon, Amber, SFO Technologies, Syrma, Elin, Avalon Technologies etc. Ambitious expansion plans and an increase in capacity of Indian EMS players to capitalize on favorable policy initiatives ensure that the EMS sector in India will witness heightened growth in coming years.



Indian EMS market, value in INR billion, USD billion, growth in %, FY16-FY26E



- Accounting ratios**

Particulars	Eight month ended November 30, 2022	FY 2022	FY 2021	FY 2020
(Amounts in Rs millions, except EPS, %, and ratios)				
Revenue from Operations	5,847.86	8,407.18	6,904.71	6,418.67
Total Income	5,969.75	8,516.50	6,958.97	6,531.48
Material Margin	2,169.65	2,865.85	2,344.72	2,306.15
Material Margin (% of Revenue from Operations)	37.10%	34.09%	33.96%	35.93
EBITDA	680.56	975.49	661.44	644.79
EBITDA Margin (%) of Total Revenue	11.64	11.60%	9.58%	10.05%
PAT	341.86	681.64	230.82	123.26
PAT Margin (%) of Total Revenue	5.73%	8.00%	3.32%	1.89%
Order book	11,902.46	8,578.69	6,345.79	5,046.72
Net working capital	3521.30	2,777.38	2,199.61	1,499.10
Net debt	3,045.18	2,839.14	2,618.07	2,218.85

Comparison with listed entity

Name of the company	Latest FY	Face value	P/E	EPS (Basic) (₹)	EPS (Diluted) (₹)	RONW (%)	NAV per equity share (₹)
Avalon Technologies Limited	Consolidated	2	41.7*	10.44**	10.44	85.86	15.60
Listed peers							
Dixon Technologies Limited	Consolidated	2	72.0	32.31	32.0	21.93	167.73
Amber Enterprises India Limited	Consolidated	10	55.2	32.41	32.41	6.54	514.70
Syrma SGS Technology Limited	Consolidated	10	61.4	5.25	5.17	13.09	41.57
Kaynes Technology India Ltd	Consolidated	10	108.1	9.70	8.93	24.29	43.89

Note: 1) P/E Ratio has been computed based on the closing market price of equity shares on NSE on March 31, 2023.

2) ** P/E of company is calculated on EPS of FY22 and post issue no. of equity shares issued.

Key Risk:

- The markets in which the customers compete are characterized by sectors specific to the industries which the company caters to, and the rapidly changing preferences and other related factors including lower manufacturing costs and therefore as a result they may be affected by any disruptions in the industry.
- The company is dependent on certain customers for a portion of their revenues. Loss of relationship with any of these customers or a reduction in their demand for their products may have a material adverse effect on their profitability and results of operations.
- The company has negative cash flows from operating activities in the past and may continue to have negative cash flows in the future.
- Avalon requires them to obtain and renew certain accreditations, licenses and permits from government, regulatory authorities including in relation to quality standards and the failure to obtain or renew them in a timely manner may adversely affect their business operations.
- The company's business and results of operations are dependent on the contracts that they enter into and/or purchase orders that they enter into. Any breach of the conditions under these contracts may adversely affect the business and results of operations.
- Business operations depend on the availability of timely and cost-efficient transportation and other logistic facilities and any prolonged disruption may adversely affect the business and results of operations.
- The global nature of the company's operations exposes them to numerous risks that could materially adversely affect their financial condition and results of operations.
- The company has certain contingent liabilities that have not been provided for in their financial statements, which if materialized, may adversely affect the financial condition.
- The company's operations depend on the availability of timely and cost-efficient transportation and other logistic facilities and any prolonged disruption may adversely affect the business and results of operations.
- The company's dependence on their Subsidiaries exposes them to significant risks.

Valuation:

Avalon Technologies Ltd. has end-to-end integrated solutions, providing a “One Stop Shop” for electronics and electro – mechanical design and manufacturing services with high entry barriers to business through their collective cross-industry experience, customer engagement capabilities and leading position in the high mix flexible volume product manufacturing segment and global delivery footprint with high quality standards and advanced manufacturing and assembly capabilities.

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Ratings Methodology

- ❑ Analysts' ratings and the corresponding expected returns take into account our definitions of Large Caps (>₹300 Bn) and Mid/Small Caps (<₹300 Bn) or SEBI definition vide its circular SEBI/HO/IMD/DF3/CIR/P/2017/114 dated 6th October 2017, whichever is higher and as described in the Ratings Table below:

Ratings Guide (12 months)	Buy	Hold	Sell
Large Caps (>₹300Bn.)	15%	5%-10%	Below 5%
Mid/Small Caps (<₹300 Bn.)	20%	10%-15%	Below 10%

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