

KERNEX MICROSYSTEMS

Rating

BUY

Price: 445

Conviction Rating



Surge Capital Focuses on Six Key Attributes of Long-Term Earnings Growth



Strong Business Model



Innovation & Pivot



Change & External Trend ✓



Optionalities ✓



Leadership & Edge



Stellar Management Execution

Investment Bucket: Non-Linear

Industry:	Railways
Market Cap:	Rs750 Crores
Revenues:	Rs11 Crores
Net Loss:	Rs16 Crores
Net Debt:	Rs17 Crores

✓ Indicates attributes present in the stock

Brief Thesis

Kernex is an IP backed OEM (original equipment manufacturer) focused on railways.

It is one of the three approved OEMs of the indigenously developed train collision avoidance system-KAVACH.

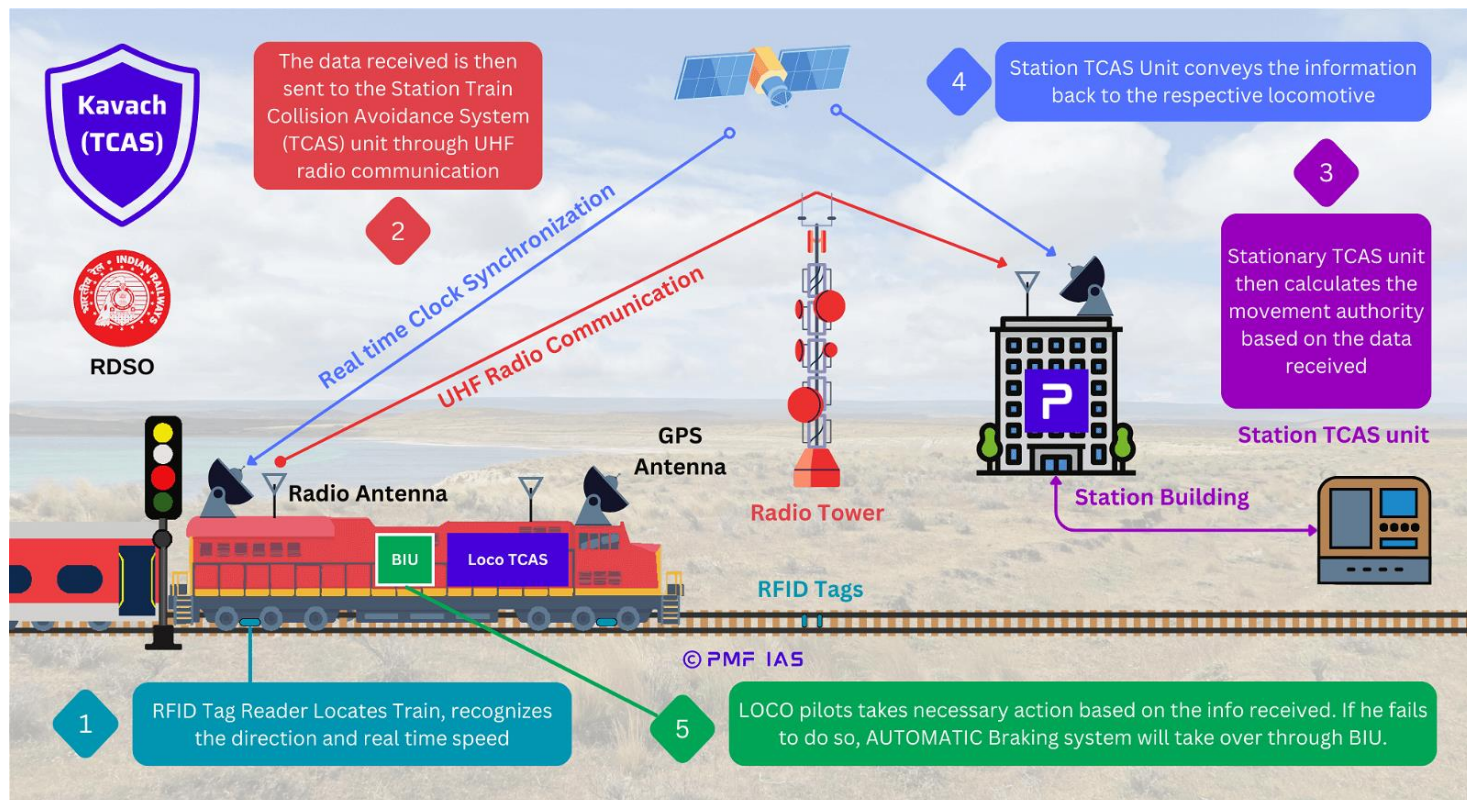
We have seen in the recent years that the government has been actively releasing orders within the defence & railways sector; Kavach is ~Rs35000 crores opportunity which is yet to play out.

We believe that there is high likelihood of new & acceleration of orders by railways for Kavach in the coming years and Kernex should generate substantial profits from this opportunity.

KERNEX & KAVACH

Kernex is an IP backed OEM focused primarily on railways. The primary product for Kernex is the indigenously developed train collision avoidance system- KAVACH.

Kavach has been developed by RDSO (Research Design and Standards Organization) as a cheaper alternative to global ATP (automatic train protection) systems.



Brief history of Kavach;

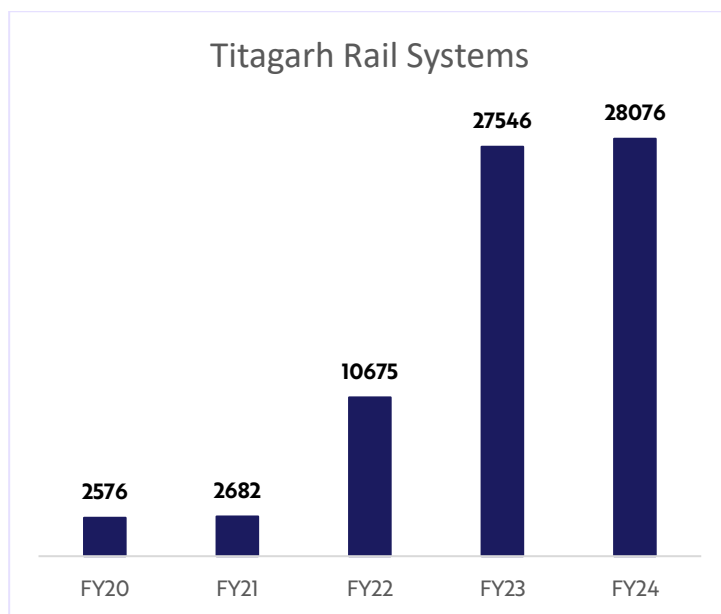
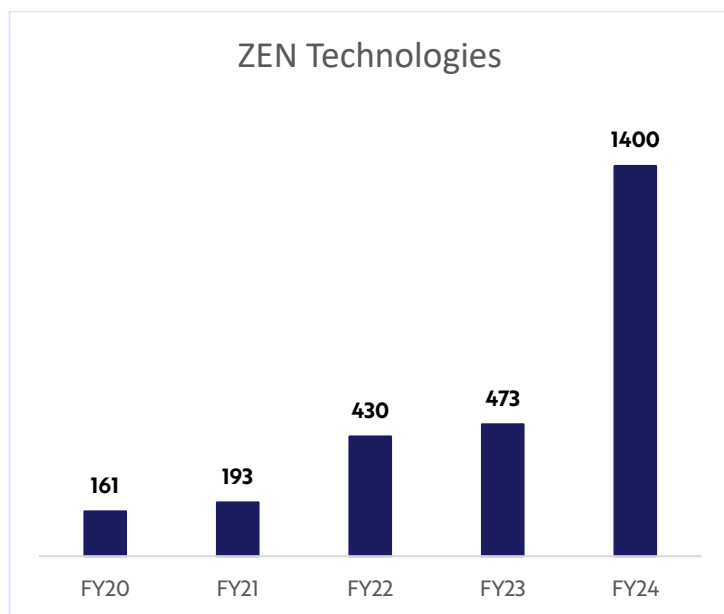
2011	R&D on Kavach started
2012	Initial prototype achieved
2014	Initial trial commenced
2015-2017	Extensive field trials were carried out and final specification of the system were finalized in Mar'2017
2019	Final approval for the system was granted
Budget 2022	Budget allocated funds for rapid implementation of Kavach system on 2000 Kms track and sanctioned plans to install Kavach across ~34,000 Kms track by FY28

INVESTMENT SETUP

Our core thesis in Kernex is based on the fact that there are many OEMs within railways and defence who have worked on R&D over last 1-1.5 decade, have the products approved and are just waiting for government to give commercial orders to monetize the IP developed over last few decades.

In the recent years we have seen substantial pickup in orders from the government and that has led to extremely strong growth & future prospects for most defence & railway companies.

Orderbook of some companies have grown by ~10x;



Kavach is one area wherein the orders are yet to be released in a major way, despite the stated intent of the government to roll-out the system.

Orders totaling ~3000 Kms and ~Rs2400 crores in value were released in later part of 2022; of this Kernex had secured ~Rs540 crores of orders and HBL Power had secured ~Rs800 crores of order.

However, post that we have not seen many major new orders.

Earlier there were expectation of new tenders of ~Rs4500 crores in Oct-Dec'23 and ~Rs9000 crores in Mar-Apr'24. But the same have got delayed due to ongoing upgradation of Kavach system from version 3.2 to 4.0

We believe that with this upgradation getting completed, there is high likelihood of new orders coming out this year and acceleration in Kavach rollout by railways over coming years.

The opportunity size for Kavach is extremely large with limited number of players;

Cost of Kavach System

~Rs50 lakhs per km of track

+

~Rs70 lakh per locomotive

Total Opportunity Size

~Rs35000 Crores

Only 3 Approved OEMs

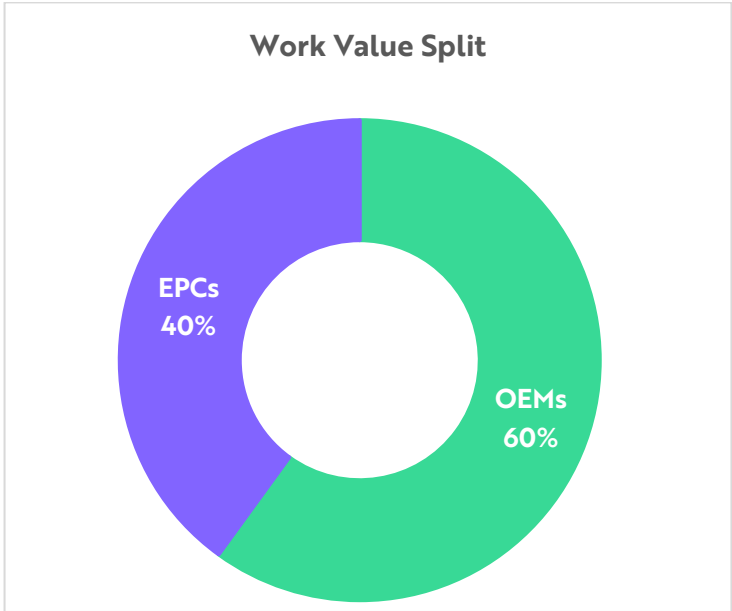
Kernex Microsystems

HBL Power

Medha

**3-4 more players are under various stages of approval*

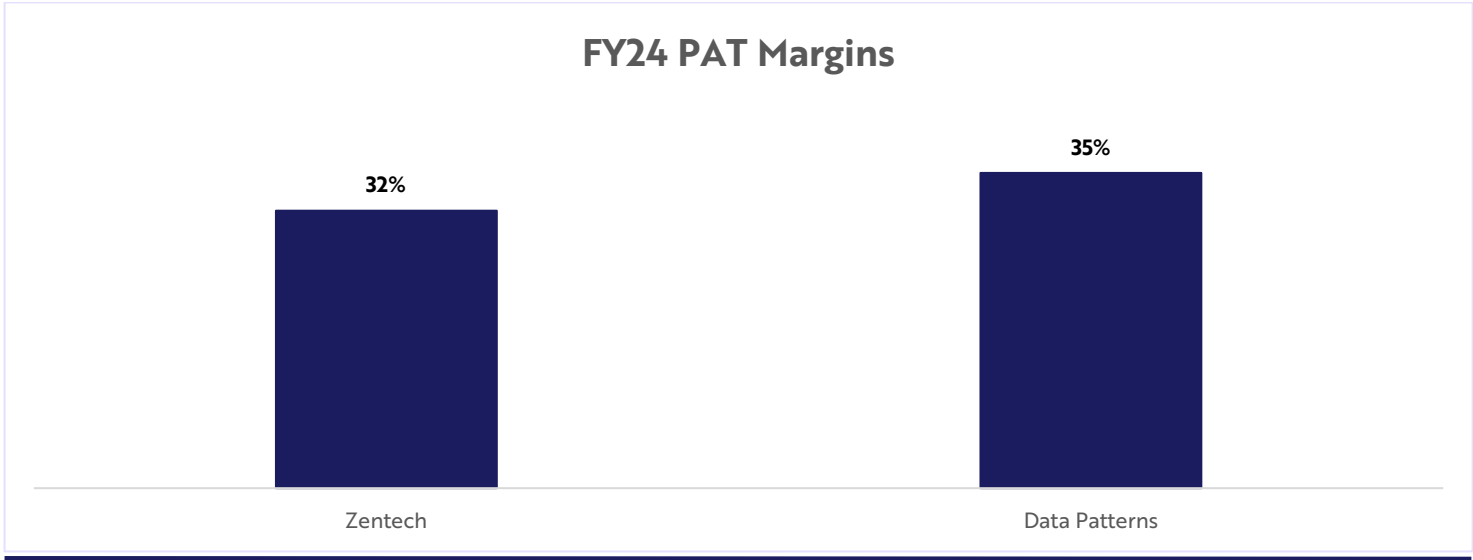
The OEMs are bidding for these orders in partnership with EPC players, who will carry out the installation of fiber, radios etc along the railway lines, while OEMs will supply the equipment.



Kernex has partnered with

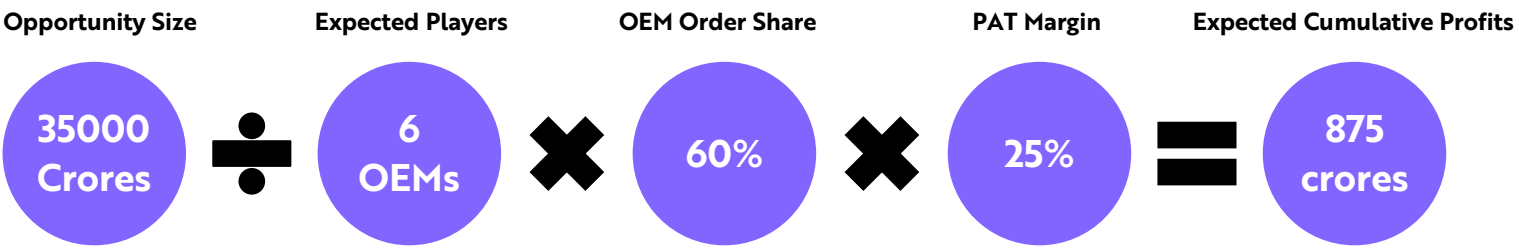
KEC INTERNATIONAL LIMITED

An important aspect to add here is that the profit margins in such kind of IP based OEM supply is very high. We have seen that some of the defence OEMs are making ~30%+ PAT margins on their commercial supplies.



We believe that if the opportunity plays out, then the quantum of profits that Kernex can report would be very large.

Kernex over next 3-4 years can report cumulative profits more than its current marketcap of ~Rs750 crores;




On top of this, we also have optionality from signaling & moving block projects which is another area wherein the company has built some IP and expertise.

Kernex is one of the 5 OEMs shortlisted by Centre of Excellence (Indian Railways) for Moving Blocks, design and development.

Recently it has won an order of ~Rs110 crores for a Block Signaling System.

Our Focus

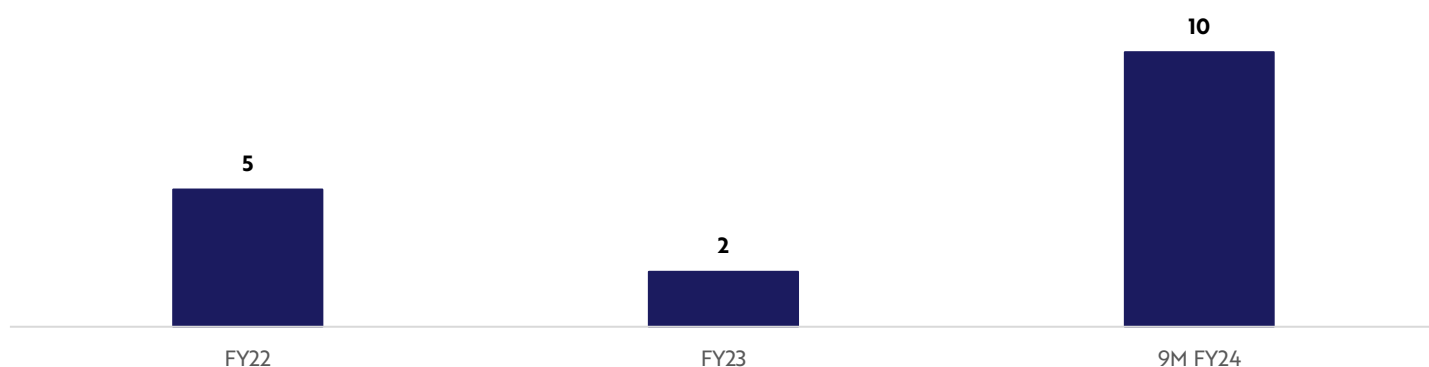


Train Protection	<ul style="list-style-type: none">• Kavach
Headway Improvement	<ul style="list-style-type: none">• Moving Blocks• CBTC
Signaling	<ul style="list-style-type: none">• Absolute Block Signaling• Level Crossing Gates
System Integration	<ul style="list-style-type: none">• CCTV for Railways
Water Solutions	<ul style="list-style-type: none">• Smart water solutions• Water distribution

Kernex have won orders of ~Rs660 crores in last two years and hardly any execution has happened till date. The key Kavach orders won in 2022 have near term deadlines and thus FY25 should be a year of not only new order wins but also actual revenue & profit generation for the company.

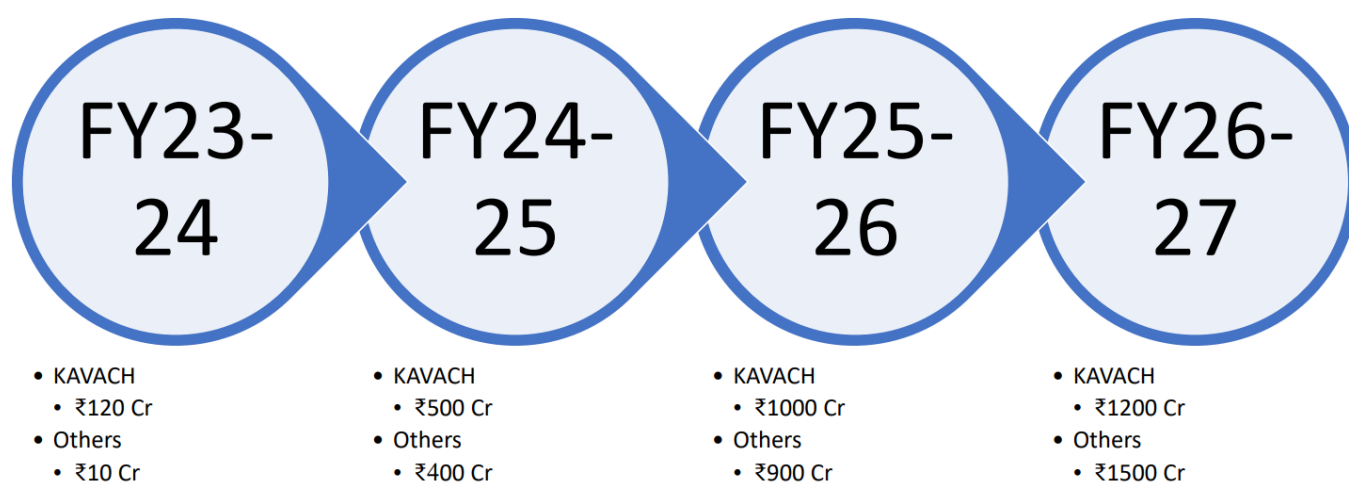
KERNEX Order Book			
Date of Announcement	Area	Order Value (Rs crore)	Execution Timeline
02/08/2022	Kavach	26.74	Before July'23
01/09/2022	Kavach	255.22	650 Days
30/09/2022	Kavach	254.86	650 Days
01/01/2024	Block Signaling System	109.47	600 Days
23/04/2024	Kavach	8.26	Before Aug'24
04/05/2024	Kavach	5.77	By Mar'25
Total		660.32	

Kernex Revenues (Rs crores)



In Feb'24, Kernex came out with an investor presentation wherein it has provided the following guidance for coming years;

Financial Outlook



Though we do not take these numbers on face value, but if we look at the kind of revenues that its peer-HBL Power was expecting from Kavach before the new orders were delayed, we can see that HBL was also expecting a similar number for FY25; which to an extent indicates that these numbers quoted by Kernex are not unreasonable expectations but are in-line with the potential opportunity that is expected to play out.

SALES AND EBITDA BY BUSINESS SEGMENT
Actual FY 24 & Expected FY 25 As on 27.5.2024

Rs crores

Year	Total Sales	EBITDA	EBITDA %	Industrial Batteries	Defence Batteries	Electronics	Others
FY 24 Actuals	2209	435	20	1424	180	515	90
FY 25 as intimated on February 08, 2024	2650	530	20	1450	220	950 This was based on total 6000 KMs of Kavach tenders being floated in March 2024.	30
FY 25 Revised as on 27 May '24	2093 Excluding FY25 Kavach tenders	407	19	1424	222	421 Excluding FY25 Kavach tenders	26

For HBL Power Systems Limited

HBL was also expecting ~Rs500 crore revenues from Kavach in FY25 based of new orders.

(Source: HBL Power Press Release 27/05/2024)

EXPECTATIONS GOING AHEAD

We believe that if orders do start coming out, then Kernex could deliver returns in multiples in a very short period of time. **However, members should also note that if the orders do not come then we can lose ~50% in no time here and thus members should buy & allocate keeping this risk:reward dynamic in mind.**

With our initiation we have tried to balance the risk:reward and timing;

1. because once the orders are out, it would be very difficult to buy into the stock due to its small circuit filter and thus initiation had to be pre-emptive
2. Stock has recently corrected ~50% from its highs to price levels that were there when the major orders were won in 2022. And in a situation like Kernex wherein one will need patience to hold till the time the orders come, a lower buy price helps (mentally) in terms of holding onto the stock.

RISK

The obvious primary risk here is a situation wherein orders are not released in the near term.

The 2nd risk is the risk of execution. We have seen that the orders received in 2022 have not been executed yet. Earlier there was an expectation of ~Rs100 crores of revenues being booked in Q4FY24, however company is yet to report its Q4 results.

Though some of the execution issue is primarily due to railways ask to upgrade the existing system to new version as well.

Finally, the last risk area is new OEM approvals. Currently there are 3-4 new OEMs who are at various stages of development & approval. If many new OEMs get approved in near term, then that can dilute the potential opportunity size for Kernex.

Ratings Explanation:

Buy: Expected total return (price appreciation plus dividend yield) of more than 10% over next 12 months.

Hold: Expected total return (price appreciation plus dividend yield) of +/- 10% over next 12 months.

Exit: No Further Coverage/Update on the stock.

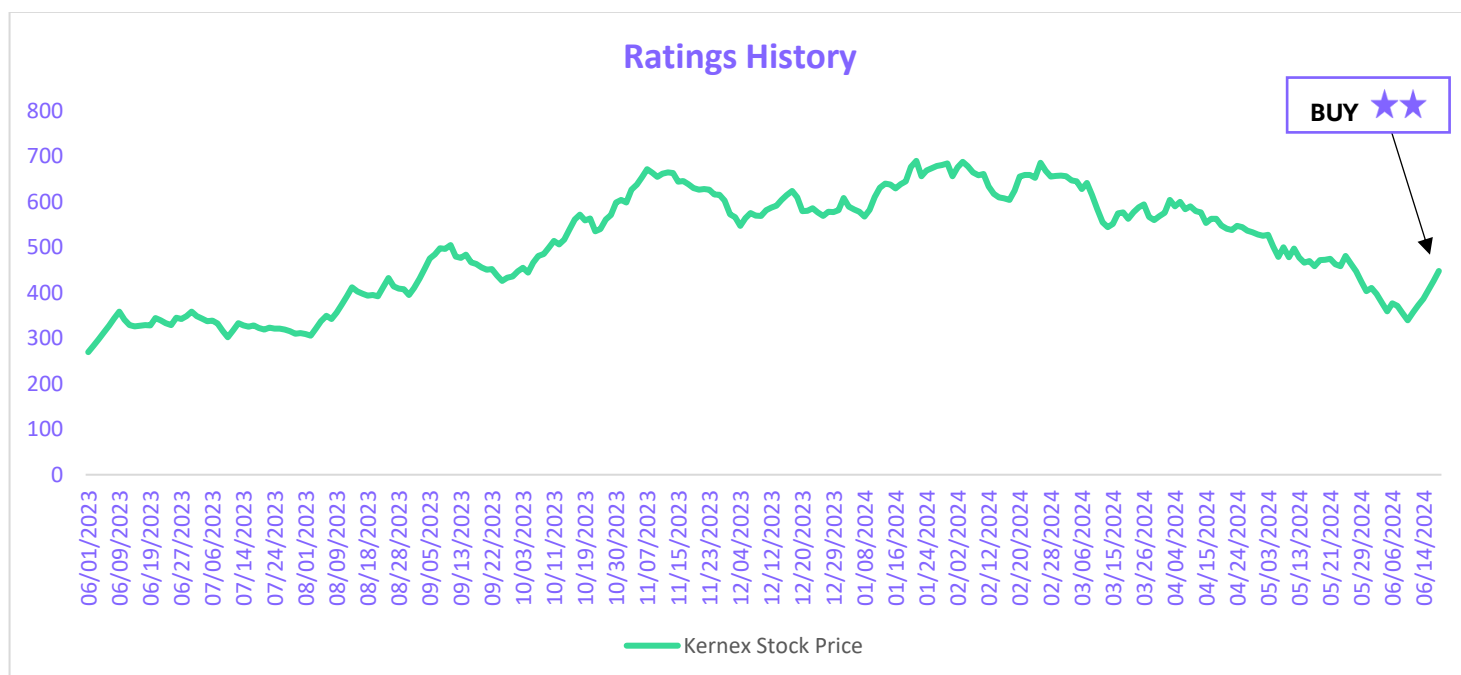
Conviction Rating:

Conviction rating reflects our understanding of return:risk ratio of the underlying stock for next 12 months. The rating is given within a range of 1-5 stars, wherein each higher star reflects a higher return:risk ratio; so, 1 star indicates a low return:risk ratio and 5 star indicates a high return:risk ratio.

The rating is based on our qualitative understanding of how the four factors of- Price Action, Earnings Growth, Valuations & Perception will play out over next 12 months for the stock.

Conviction ratings are to be read along with Buy & Hold ratings and no conviction rating is assigned for stocks with Exit rating.

Note: Ratings are valid till changed.



Note: Above chart indicates ratings assigned (including changes) over the period of coverage of stock.

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No associates

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