

Kernex Microsystems (India) Limited

October 12, 2026

Facilities/Instruments	Name of the Regulator ¹	Amount (₹ crore)	Rating ²	Rating Action
Long-term / Short-term bank facilities	RBI	125.00 (Enhanced from 100.00)	CARE BBB; Stable / CARE A3+	Upgraded from CARE BBB-; Stable / CARE A3
Long-term bank facilities	RBI	10.00	CARE BBB; Stable	Assigned
Long-term bank facilities	RBI	525.00 (Enhanced from 175.00)	CARE BBB; Stable	Upgraded from CARE BBB-; Stable

Details of instruments/facilities in Annexure-1.

Rationale and key rating drivers

Upgrade in ratings assigned to bank facilities of Kernex Microsystems (India) Limited (KMIL) derive strength from its strong order book position reflecting substantial revenue growth in FY26 (Audited; FY refers to April 01 to March 31), growth driven by Train Collision Avoidance System (TCAS) execution, comfortable financial risk profile, and qualified management team. Being one of the only three industry players having patented technology for KAVACH puts KMIL in a strong market position. The Research Designs and Standards Organisation (RDSO) approval (October 2025) for Kavach Version 4.0 will result in an accelerated revenue growth in the near future. The company's performance remained healthy in current fiscal as can be witnessed in Q1FY27 (Abridged).

However, rating strengths are partially offset by working capital intensive operations necessitating higher reliance on bank borrowings, exposure to execution and technology risk, and tender-based nature of business.

Rating sensitivities: Factors likely to lead to rating actions

Positive factors:

- Substantial scale up of operations and ability to generate high cash flow from operations leading to improved liquidity and low reliance on working capital borrowings.
- Significant improvement in working capital cycle.

Negative factors:

- Elongation in working capital cycle beyond 150 days.
- Significant decline in revenue or profitability by over 30% from existing levels.

Analytical approach: Consolidated

CARE Ratings Limited (CareEdge Ratings) has considered consolidated financials of KMIL and its subsidiary, as entities are linked through a parent-subsidiary relationship and have operational synergies. Entities consolidated are mentioned under Annexure 5.

Outlook: Stable

CareEdge Ratings believes that the entity will continue to benefit from the patented technology for KAVACH in bagging more orders, ensuring revenue growth.

Detailed description of key rating drivers

Key strengths

Strong revenue growth driven by TCAS execution momentum

KMIL earlier manufactured anti-collision devices, which were discontinued in 2017 following Indian Railways' transition to TCAS. Thereafter, KMIL collaborated with RDSO to develop TCAS. Prolonged product approval due to stringent technical and quality requirements resulted in muted revenue and losses amid high fixed overheads until FY22. KMIL began receiving TCAS orders in

¹SEBI: Securities and Exchange Board of India; RBI: Reserve Bank of India; MCA: Ministry of Corporate Affairs; IRDAI: Insurance Regulatory and Development Authority of India; PFRDA: Pension Fund Regulatory and Development Authority

²Complete definitions of the ratings assigned are available at www.careratings.com and in other CARE Ratings Limited's publications.

FY23, though limited working capital initially constrained execution. Equity infusion of ₹53.32 crore in FY23, comprising fresh equity infusion of ₹49.17 crore and conversion of promoters' loan of ₹4.15 crore into equity, and a further fresh equity infusion of ₹52.39 crore in FY24, supported the company's operational loss funding and working-capital requirements.

Improved TCAS execution led to a turnaround in FY25, with revenue increasing to ₹189.88 crore from ₹19.60 crore in FY24, and operating margin improving to 21.55%. The execution momentum continued with total operating income (TOI) growing by 127% to ₹430.54 crore in FY26 and stood at ₹503.58 crore in Q1FY27. CareEdge Ratings expects revenue to remain higher in FY27, supported by faster execution of the Chittaranjan Locomotive Works order.

Healthy profitability

KMIL's operating profitability remained healthy, with a profit before interest, lease rentals, depreciation, and taxation (PBILDT) margin of 34.63% in FY26, an improvement of 1,308 basis points (bps) year-on-year (y-o-y), driven by lower growth in employee costs and better demand. However, the profit after tax (PAT) margin moderated due to sizable interest and depreciation costs. CareEdge Ratings expects margins to remain at similar levels in the near term.

Comfortable financial risk profile

With increase in overall debt, KMIL's capital structure has deteriorated but stood comfortable marked by an overall gearing of 0.67x as on March 31, 2026, against 0.26x as on March 31, 2025. With increase in interest cost, KMIL's debt coverage indicators have deteriorated marginally but remained comfortable as marked by interest coverage ratio of 5.30x in FY26 against 5.91x in FY25. Total debt/gross cash accruals (TD/GCA) also remains satisfactory at 1.63 years as on March 31, 2026, compared to 1.14 years as on March 31, 2025. Going forward, the company is expected to increase its reliance on working capital bank borrowing. However, leverage and coverage indicators are likely to remain comfortable backed by healthy net worth base and improvement in cash accruals.

Experienced directors and qualified team

The company has appointed qualified professionals with over two decades of experience in project planning, execution, and management. The Board of Directors comprises experienced individuals with diverse professional backgrounds, who oversee the company's overall functioning. Executive Directors, Sitarama Raju Manthena and Manthena Badari Narayana Raju, have over two and a half decades of experience and are actively involved in the company's strategic planning and overall operational management.

Patented technology with only three players in the segment

TCAS, popularly known as Kavach, has been developed by RDSO in collaboration with KMIL and other vendors. The system is aligned with the European Train Control System (ETCS) and adheres to Safety Integrity Level (SIL) four standards, representing the highest level of safety integrity for such systems. The company received approval for the latest version, KAVACH 4.0, by RDSO in October 2025, which is expected to facilitate swifter execution of projects and growth in revenue. Being one of the only three OEMs authorised to design, develop, manufacture, and deploy hardware and software for KAVACH, KMIL enjoys a strategic market position. Entry barriers in this segment are high due to complex technical requirements, stringent safety standards, and long product validation cycles. Since the company caters to the Indian Railways - one of the world's largest railway networks, it benefits from large-scale, recurring demand for such safety systems.

Strong order book, long-term revenue visibility

The company has an outstanding order book of ₹3,474 crore as on May 31, 2026, translating to an order book-to-TOI ratio of 8.07x, indicating healthy revenue visibility in the medium-to-long term. However, the order book is concentrated, with ₹1,870 crore, or ~54% of the outstanding order book, pertaining to the remaining portion of an order from Chittaranjan Locomotive Works (CLW) worth ₹2,465.70 crore for the supply and installation of 3,024 Loco TCAS (Version 4.0) units. KMIL is also bidding for new projects against tenders floated by the Indian Railways.

Liquidity: Adequate

Liquidity is adequate, supported by a moderate current ratio, moderate quick ratio, moderate utilisation of working capital limits and healthy cash accruals against low debt repayments. The current ratio was 1.27x and the quick ratio remained moderate at 0.70x as on March 31, 2026. Bank limits of ₹347.50 crore were utilised at ~69% on average for 12 months ended July 2026. The entity also had non-fund-based limits of ₹92 crore, with average utilisation of 61% during the same period. GCA remained healthy at ₹99.67 crore in FY26. In the absence of term debt, the company's profits were sufficient to meet its interest obligations. However, cash flow from operations was negative at ₹97.46 crore in FY26, while unencumbered cash and bank balance stood at ₹1.46 crore as on March 31, 2026. There were no instances of overdrawing or utilisation of ad-hoc limits.

Key weaknesses

Working capital intensive operations

The company operates in a highly working capital intensive business indicated by an elongated operating cycle of 136 days for FY26. Operations demand long turnaround time for assembly, installation, and quality checks. A significant lead time is involved in procuring material from RDSO-approved vendors where limited credit period is available widening the working capital gap. Though collections from Indian Railways are timely, bills can be raised only post-installation. Given the large order book and higher lead time, the company is required to maintain elevated inventory levels. Hence, reliance on bank borrowings is expected to increase going forward and prudent working capital management remains a key monitorable.

Execution and technology risk from RDSO-linked approvals

Execution timelines are exposed to delays arising from technological complexities and dependency on RDSO approvals. Upgradation in system specifications, such as migration from TCAS version 3.2 to version 4.0-requires fresh testing and certification by RDSO, which can temporarily stall project execution and billing. Such procedural delays in obtaining technical clearances may impact the company's ability to achieve planned revenue milestones.

Exposure to tender-based operations and dependence on Indian Railways

KMIL secures contracts by participating in tenders floated by Indian Railways for the installation of the KAVACH (TCAS), where awards are made to the lowest bidder (L1). This tender-based procurement mechanism limits the company's pricing flexibility and exposes it to competitive undercutting, often resulting in modest operating margins. However, the risk is partly mitigated due to presence of only three OEMs, including KMIL. However, since KMIL's entire revenue is derived from Indian Railways, the company remains exposed to high customer concentration and dependence on a single end-user segment.

Assumptions/Covenants: Not applicable

Environment, social, and governance (ESG) risks: Not applicable

Applicable criteria

[Consolidation](#)

[Definition of Default](#)

[Liquidity Analysis of Non-financial sector entities](#)

[Rating Outlook and Rating Watch](#)

[Manufacturing Companies](#)

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About the company and industry

Industry classification

Macroeconomic indicator	Sector	Industry	Basic industry
Industrials	Capital goods	Electrical equipment	Other electrical equipment

KMIL offers end-to-end electronic manufacturing services encompassing design, development, assembly, testing, and system integration related to railway safety systems. Its service portfolio includes design and engineering, embedded software and hardware development, wire and cable assemblies, and full turnkey solutions including mechanical assembly and packaging. In addition to manufacturing, the company also undertakes engineering, procurement, and construction (EPC) works involving installation of towers, relay rooms, and related infrastructure for railway safety projects. Under the Kavach programme, KMIL manufactures Loco TCAS, Station TCAS, Level Crossing TCAS, and takes responsibilities for installation, commissioning, and warranty support.

KMIL - Consolidated

Brief Financials (₹ crore)	March 31, 2025 (A)	March 31, 2026 (A)	Q1FY27 (UA)
Total operating income	189.88	430.54	503.58
PBILDT*	40.92	149.09	162.82
PAT	50.05	88.24	109.85
Overall gearing (times)	0.26	0.67	NA

Interest coverage (times)	5.91	5.30	12.31
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A: Audited; UA: Unaudited; NA: Not available; Note: These are latest financial results available.

*PBILDT: Profit before interest, lease rentals, depreciation, and tax

Status of non-cooperation with previous CRA: Not applicable

Any other information: Not applicable

Rating history for last three years: Annexure-2

Detailed explanation of covenants of rated instrument / facility: Annexure-3

For complexity level of instruments rated refer to Annexure-1.

Lender details: Annexure-4

Disclosure on facilities/instruments and name of regulators:

A list of facilities / instruments falling under the purview of financial sector regulators (FSRs) along with the names of respective FSRs has been duly disclosed by CareEdge Ratings on its website. A link to the same has been provided below for ready reference:

https://www.careratings.com/activities_and_regulators

Note: For facilities or instruments falling under the purview of FSRs other than Securities and Exchange Board of India (SEBI), the grievance / dispute redressal mechanisms and investor protection mechanisms provided by SEBI shall not be available.

Annexure-1: Details of instruments/facilities

Name of the Instrument	Name of the Regulator	Complexity Level	ISIN	Date of Issuance (DD-MM-YYYY)	Coupon Rate (%)	Maturity Date (DD-MM-YYYY)	Size of the Issue (₹ crore)	Rating Assigned and Rating Outlook
Fund-based - LT-Cash Credit	RBI	NA	-	-	-	-	525.00	CARE BBB; Stable
Fund-based - LT-Term Loan	RBI	NA	-	-	-	30-06-2031	10.00	CARE BBB; Stable
Non-fund-based - LT/ST-BG/LC	RBI	NA	-	-	-	-	125.00	CARE BBB; Stable / CARE A3+

NA: Not applicable

Annexure-2: Rating history for last three years

Sr. No.	Name of the Instrument/Bank Facilities	Current Ratings			Rating History			
		Type	Amount Outstanding (₹ crore)	Rating	Date(s) and Rating(s) assigned in 2026-2027	Date(s) and Rating(s) assigned in 2025-2026	Date(s) and Rating(s) assigned in 2024-2025	Date(s) and Rating(s) assigned in 2023-2024
1	Fund-based - LT-Cash Credit	LT	525.00	CARE BBB; Stable	-	1)CARE BBB-; Stable (04-Nov-25)	-	-
2	Non-fund-based - LT/ ST-BG/LC	LT/ST	125.00	CARE BBB; Stable / CARE A3+	-	1)CARE BBB-; Stable / CARE A3 (04-Nov-25)	-	-
3	Fund-based - LT-Term Loan	LT	10.00	CARE BBB; Stable	-	-	-	-

LT: Long term; LT/ST: Long term/Short term

Annexure-3: Detailed explanation of covenants of rated instruments/facilities: Not applicable**Annexure-4: Lender details**To view lender-wise details of bank facilities please [click here](#)**Annexure-5: List of entities consolidated**

Sr. No.	Name of the entity	Extent of consolidation	Rationale for consolidation
1	Avant-Garde Info Systems Inc, USA	Full	Wholly owned subsidiary
2	KERNEX TCAS JV	Proportionate	Kernex share in JV- 80%
3	VRRC KERNEX-CE RVR JV	Proportionate	Kernex share in JV- 35%
4	KERNEX-VRRC JV	Proportionate	Kernex share in JV- 80%
5	KERNEX BHEPL JV	Proportionate	Kernex share in JV- 51%

Note on complexity levels of rated instruments: CareEdge Ratings has classified instruments rated by it based on complexity. Investors/market intermediaries/regulators or others are welcome to write to care@careedge.in for clarifications.

Contact us

Media Contact Mradul Mishra Director CARE Ratings Limited Phone: +91-22-6754 3596 E-mail: mradul.mishra@careedge.in	Analytical Contacts Karthik Raj K Director CARE Ratings Limited Phone: +91-80-4662-5555 E-mail: karthik.raj@careedge.in
Relationship Contact Saikat Roy Senior Director CARE Ratings Limited Phone: 912267543404 E-mail: saiikat.roy@careedge.in	Y Tejeshwar Reddy Associate Director CARE Ratings Limited Phone: +91-40-6793-7406 E-mail: Tejeshwar.Reddy@careedge.in
	Shivam Sinha Analyst CARE Ratings Limited E-mail: Shivam.Sinha@careedge.in

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