



CABA BACS Market Sizing North America

Terms of Reference – Updated Jan 28, 2021

Overview and Objectives

1. This is a CABA project that operates under the sole direction and control of CABA. BSRIA Inc. was selected by CABA to undertake the collection and analysis of the research.
2. The primary objective of this research is to provide regular accurate data on the Building Automation Control System (BACS) market in North America (USA and Canada) with the maximum level of confidentiality.
3. The aggregated group data will be provided to participants on a quarterly basis so that it is appropriate for analysis into either financial or calendar years and with segmentation by products agreed upon by all the participating companies.
4. No market shares will be published (only aggregated data for the group).

Scope and coverage

5. It was agreed to start simple and potentially extending the product coverage, level of segmentation and other questions over time.
6. The group aim to include some field device products after May 2021. Coverage and OEM issues need to be discussed before this is implemented.
7. The aim is to achieve 70-80 percent market coverage for the products included in the group data collection to have sufficient value.
8. All revenue numbers (in USD) will be collected at the first point of distribution, at factory gate.
9. Collection includes two sales revenue categories: 1) branded products 2) OEM sales. OEM sales to members of the collection group need to be excluded to avoid double counting.
10. An annual meeting/call to discuss trends and related topics will be held in May.
11. In case a participant misses a quarterly deadline for data collection, the research firm will estimate their sales based on previous numbers and general trend, so that individual supplier numbers are not revealed. The correct numbers will be re-issued when the missing numbers will be delivered. While the research firm will inform the group if numbers must be estimated, the research firm will not reveal the name of the company who has missed its delivery.

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12. Building Automation Products and segmentation:

- A. Software: supervisory software, analytics and energy/BEMS software, total software revenue segmented by premise, cloud, and SaaS.
- B. Routers & Gateways: BAS protocol gateways and BAS network routers. BACnet SC hubs (hardware or software-based security).
- C. Controllers: building controller, room controllers, field level controllers, HVAC. 1) fully field programmable controllers and 2) application specific controllers.
- D. Fully field programmable controllers and application specific controllers: IP vs non-IP based controller (IP and serial based communications options on-board from the factory) and Wireless controller (i.e., controller to control wirelessly, not field devices). Actual wireless, not capable of having it.

13. The annual publication (Mid May 2021) will include:

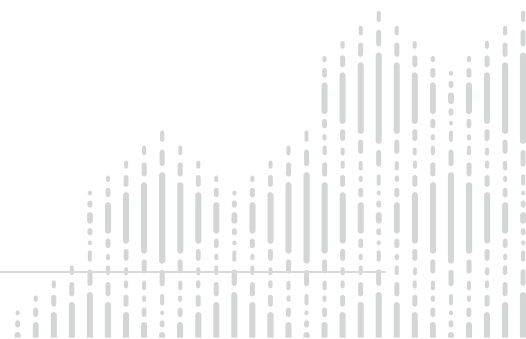
- Total market North America (US and Canada) 2020.
- Market characteristics.
- Five-year Forecast and trends.
- Verticals.
- Uptake of Convergence vs stand-alone systems.
- Channel to market.
- Installed value (BACS products + other products + labour)
- The study includes an opportunity to assess market coverage of the collection group.

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Project timelines

14. The data need to be submitted by:
 - Monday January 25, 2021.
 - Monday April 26, 2021.
 - Monday July 26, 2021.
 - Monday October 25, 2021.
15. The group output will be published no later than:
 - Monday February 15, 2021.
 - Friday May 14, 2021.
 - Friday August 13, 2021.
 - Monday November 15, 2021.

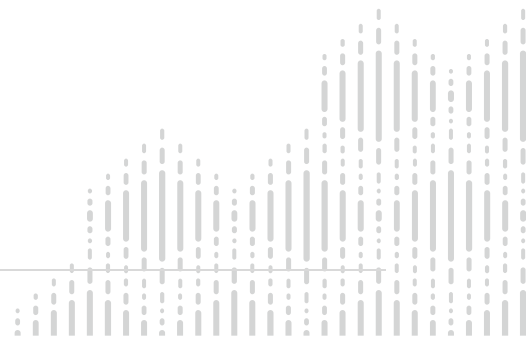
Existing members

16. If a company does not submit data on time, it will not receive the aggregated data. The aggregated data will only be delivered to companies that have submitted information. This does not apply to organizations that may have joined the research without the ability to supply data.
17. The value of the data collection relies strongly on suppliers' timely and regular delivery of data. After two late deliveries the company will be under threat to be excluded from further deliverables, with no refund payment for the remaining time of the contract.
18. All change to the scope, coverage, or any other aspect of the research must be accepted by the Steering Committee with a 2/3 majority.
19. If a participant does not want to continue with the research for the upcoming year, they will be allowed to exit the research without penalty if they notify CABA 90 days prior to the renewal date of the contract. The renewal date of the contract will be set in November of each year.

New members

20. New members will need to be accepted by a Steering Committee group vote with a 2/3 majority. Trane Technologies has already been approved by the Steering Committee to join this research if they decide to participate in the future.
21. Any new funders will need to provide data.

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Ownership and Confidentiality

22. The participant's data is jointly owned by the suppliers who participate, CABA and BSRIA. No data will be released to third parties by the research firm or CABA.
23. The supplier's data will be handled by research firm's excel team (Phil Bowring) and kept at a secure password protected drive.
24. The research firm will not disclose how many companies provided data in each category/segment.
25. Quarterly and annual results will remain strictly confidential to the group of companies taking part in the survey.
26. The aggregated annualised figures will be used to estimate the total North American BACS market (published in May and part of the deliverables). The research firm may also use the aggregated annualised figures as a quality benchmark for their US and Canada BACS reports.
27. Anti Trust Laws – What not to discuss.
 - A. Individual company prices, price lists (even if publicly available), invoices, price changes, price differentials, mark-ups, discounts or rebates, credit terms or any other data that have a bearing on price (e.g., costs, capacity, or inventories).
 - B. Individual company market shares.
 - C. "Market evolution", industry price trends or forecasts.
 - D. Individual contract bids, conditions of sale, or the corporate procedures for responding to bids.
 - E. Individual company data concerning the production, capacity utilization, distribution, or marketing of products.
 - F. Identification of current or proposed customers or sales territories.

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