

The Case for Vertical Search in the Electronics Industry



Why Google & similar web search engines fail to understand the needs of the Electronics industry in comparison to vertical search engines.

Abstract

The use of traditional, horizontal search engines such as Google or Yahoo in the electronics industry to locate parts information has resulted in a number of costly inefficiencies. Large amounts of man-hours are lost to meticulous data combing. Part selection is sub-optimal, and at-risk parts are either not identified as such or cannot accurately have their level of risk determined.

By contrast, the use of vertical search engines can provide electronics manufacturers and part distributors with not only a larger

amount of useful parts data, but with pre-performed analysis of that data. In effect, the use of vertical search engines can turn data into actionable intelligence, which can reduce man-hours, cut costs, and improve part selection and risk management. This whitepaper makes the case that all electronics manufacturing OEMs and distributors, regardless of size, would greatly benefit from the use of vertical search engines for their part selection, procurement and part risk management needs.

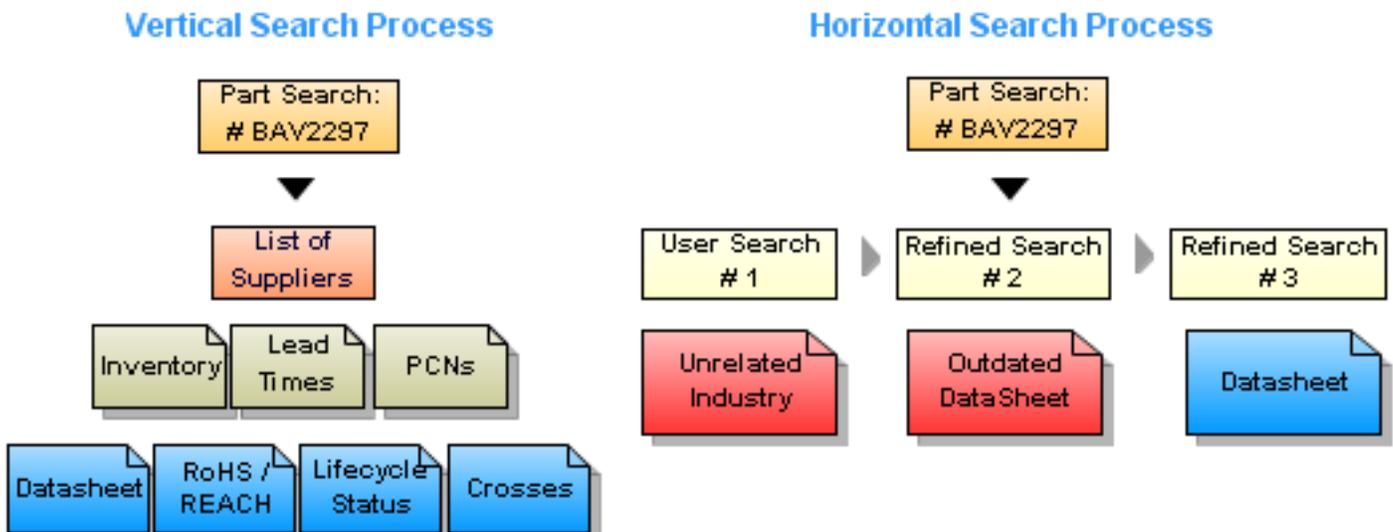
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Vertical electronics part search vs Google, Yahoo, and others

Vertical search engines focus on a specific type or set of industry data and provide a level of depth into a particular subject which traditional web search engines typically cannot. By focusing on a single topic, vertical search engines seek to provide users with a “one-stop-shop” for data on a given subject, rather than sending them careening around the entire Web searching for scattered information. Traditional search engines like Google and Yahoo are mostly text-based and lack the intelligence to understand the proper context of a given search string. For instance, if an

OEM performing a part search were to type “Part #1234” into a horizontal search engine, they would receive results containing that text string from all over the Web, regardless of industry or context. Vertical search engines, by contrast, understand the search as a part number and can automatically and intelligently narrow search focus to improve results.

Figure A - Vertical Search Process vs Traditional Horizontal Part Search



“ (Vertical search engines) excel in their niche because they have an intimate understanding of the semantics of information in their topics. ”

- Alex Iskold, Techblogger

Minimizing legwork when searching for electronic parts

In the electronics industry, the use of vertical search engines can significantly reduce the amount of man-hours dedicated to part search and research. While horizontal web search engines demand the manual combing of large amounts of data, vertical search engines can provide an intelligent access point to an optimal data set—one which it would be difficult, if not impossible, to generate using horizontal search.

Returning to the example of the OEM searching for “Part #1234,” if this search were performed on a horizontal search engine such as Google or Yahoo, it would generate a large data set which would need to be manually culled. Useless information, such as data pertaining to other industries,

would need to be sifted through in search of the correct information.

Even then, the task likely would not be complete as further searching would be necessary to obtain other essential information, such as obsolescence data, market availability, and environmental compliance data. Depending on the experience and resources of the user performing these tasks, errors can be common—not to mention costly.

By contrast, a vertical electronic parts search engine can provide all of this information automatically and in one place, largely nullifying the need for manual data analysis and radically reducing user error. Datasheets, parts lifecycle status, and other valuable information can be located and identified quickly. Man-hours are saved, freeing users to concentrate on other, potentially more profit-driven tasks.

Improving electronic parts selection through focused search

Part selection is a key area of focus for the electronics manufacturing industry. Poor part selection can lead to lost revenue through improper obsolescence management, low market availability, non-compliance with environmental standards,

“ People want relevancy, and the more horizontal search they do, the more they tire of wading through pages of superfluous material. Although users can always narrow their search to hone in on their desired result, vertical search engines do the narrowing for them. - PC Magazine ”

and lack of adequate replacement or cross parts. The use of vertical electronic part search engines can mitigate these risks and ensure optimal part selection.

Vertical search engines frequently employ parametric search, allowing users to locate the optimal part along a number of parameters. Depending on the product type, these parameters can include but are not limited to: vendor, type, number of channels per chip, technology, rail to rail, power supply type, typical gain bandwidth product, minimum CMRR range, and minimum/maximum operating temperature. With vertical search, users can filter through any or all of these parameters to more accurately narrow search results.

Identifying and mitigating risk is another important aspect of part selection. With vertical search, users can easily and automatically identify the current lifecycle status and risk level of any given part.

Many vertical search engines in this space provide year to end-of-life forecasting and PCN categorization, grouping and analysis, greatly improving obsolescence management. Vertical search also can provide access to market availability, environmental compliance, and cross reference data, often within a single click. By placing all of this data at the user's fingertips and in a single location, vertical search enables users to make more intelligent product selections.

“ Component databases bring a unique perspective to calculating obsolescence forecasts, using historical and algorithmic methods to predict component events. ”

- Industry whitepaper

Intelligence, not data

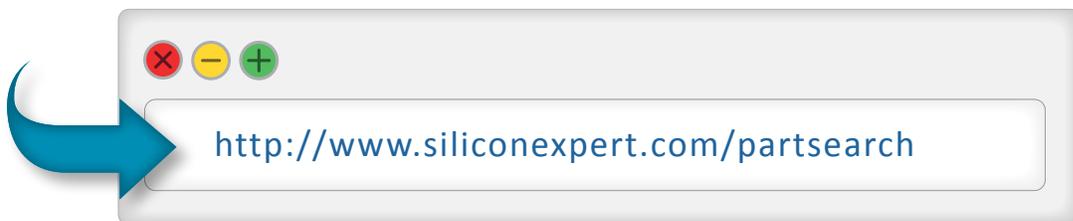
Part search is often a mystifying, frustrating process that can burn through countless man-hours and eat away at profits. By using vertical search, OEMs and distributors can simplify the process, avoid the manual legwork, and cure many of the headaches associated with part search. Superfluous data is ignored, buried information is uncovered, and insight is built in. With vertical search, the search task becomes less about locating data and more about locating intelligence.

About SiliconExpert Technologies

When it comes to accurate search results, leading OEMs turn to SiliconExpert Technologies' comprehensive & up to date electronics data for their component intelligence needs. SiliconExpert's tools lets users parametrically search and cross reference over 185 million electronic parts to easily identify parts at risk and gain an in-depth look into electronic component lifecycle statuses, multi-sourcing, available inventory,

and environmental compliance data.

Founded in 2000, SiliconExpert Technologies has built the world's largest electronic components database and provides this data through a secure, on-demand web-service to the electronics industry. SiliconExpert provides extensive compliance data for electronic components for EU RoHS, China RoHS, REACH, WEEE and other environmental regulations. In particular, chemical data, material declarations, RoHS compliance and SVHCs for REACH are easily accessible for millions of components in SiliconExpert's Parts Database. End-of-life (EOL) forecasting, finding Cross References (form, fit and function alternatives), Lifecycle statuses, Parametric Data and Product Change Notice (PCN) alerts are a few of the features of SiliconExpert's suite of products that provide Part Search, BOM Management and Obsolescence mitigation solutions. SiliconExpert's customer base includes leading commercial and government OEMs, top-tier authorized distributors, contract manufacturers and component suppliers. Learn more about SiliconExpert Technologies' solutions at <http://www.siliconexpert.com>.



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