

Valor BOM Connector

Decreasing quoting time and increasing accuracy in an EMS environment

Benefits

- Decreases quoting time and increases accuracy in an EMS environment
- Maps customer BOM quickly and accurately in your ERP system for component suppliers
- Reduces quoting time for repeat BOM files from the same customer
- Connects to component vendor web portals for latest pricing
- Avoids production mistakes caused by sourcing incorrect parts that do not fit the board

Summary

Electronic manufacturing services (EMS) companies are required to provide quotations for many projects, even those that do not make it into production. Design companies send out several requests for quote (RFQ) and review them to select the best manufacturer for each project.

Due to sheer volume, it is imperative that quotations be created accurately and in a timely manner without relying on input from the manufacturing process engineers.

Valor™ BOM Connector software addresses these challenges and complements the existing Valor portfolio to reduce the time needed to create accurate quotations for the components of PCB assemblies. The Valor portfolio is part of the Xcelerator™ portfolio, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries Software.

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The Valor BOM Connector addresses the unique challenges of an EMS quoting department by providing the capability to source many different types of customer bill-of-materials (BOM) files and mapping them to parts that are either available in the warehouse or need to be sourced from material suppliers. File

types, formats and content all differ depending on a BOM file's source and even among multiple BOM files from the same customer. It is also possible that parts listed on a BOM do not fit the PCB itself. Missing these issues up front can result in inaccurate quotes and cause problems during expensive production runs.

BOM	RefDes	Description	CPN	tol	value	type	type
Comparison status: The same key with different values							
Key: C200							
a	C200		70232001834	1%	.01uF	CAP	
b	C200		7023201834	1%	.01uF	CAP	
Key: C201							
a	C201		70232001834	1%	.01uF	CAP	
b	C201		70232001834	1%	1uF	CAP	
Key: C202							
a	C202		70232001834	1%	.01uF	CAP	
b	C202		70232001834	1%	1uF	CAP	
Key: C203							
a	C203		70232001834	1%	.01uF	CAP	
b	C203		70232001834	1%	1uF	CAP	
Key: C204							
a	C204		70232001834	1%	.01uF	CAP	
b	C204		70232001834	1%	1uF	CAP	
Key: C205							
a	C205		70232001834	1%	.01uF	CAP	
b	C205		70232001834	1%	1uF	CAP	
Key: C206							
a	C206		70232001834	1%	.01uF	CAP	
b	C206		70232001834	1%	1uF	CAP	

Figure 1: Powerful BOM checking ensures that potential issues are highlighted early in the quoting process.

The Valor BOM Connector provides a complete set of capabilities to parse the customer BOM and extract key information. Customer part number, description, component counts, quantities and approved vendor list (AVL) data are all crucial to understanding the parts detailed in the BOM. It is not unusual for

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a single BOM file to be internally inconsistent, so the Valor BOM Connector is used to also check the BOM for discrepancies. The data validation is further extended by integration with Valor Process Preparation software, which provides complete computer-aided design (CAD) translation capabilities to deliver an accurate understanding of the PCB that can be used to confirm the CAD and the BOM's consistency.

Once the key BOM data has been extracted, several power searches are available to connect the customer's part number with the internal part number of the EMS company. Any previous connections can be immediately applied. However, the real power of the Valor BOM Connector is it can be used to address missing connections quickly and accurately using automated online searches and queries based on part descriptions. Each possible connection is ranked to identify the most likely connection. The result is a complete and accurate "golden BOM" that can be uploaded to the EMS enterprise resource planning (ERP) system.

The screenshot shows a detailed ERP table with columns for production quantity, base quantity, cost, and various pricing points (Price 1, Price 2, Price 3). It lists suppliers like MURATA and Farnell, and includes a search bar and filter options.

Figure 2: Component suppliers have access to give up-to-date pricing and availability information for each part.

Valor BOM Connector has already been proven with existing customers using many popular ERP systems. Staying connected to this ERP information allows the Valor BOM Connector to provide accurate sourcing and pricing for each specific BOM.

Powerful online searches can then be used to determine accurate pricing for the project. Connections are made to the common part suppliers with the credentials already used by the EMS company. This ensures that preferential pricing and deliveries are available, along with additional information such

as obsolete dates and quantity price breaks. If needed, requests for price quotes can be made by email or directly through the component vendor portals.

The screenshot shows a 'Customer BOM' table with columns for CPN, RC, Description, Device Ty, and Tolerance. Below it is a 'SmartSearch' section with a search bar and a list of results from the 'ERP System'.

CPN	RC	Description	Device Ty	Tolerance
68	20-565-1097	100NF 50V X7R 0603 10%	Capacitor	10
65	20-565-1101	0.1UF 16V X7R 0603 +10%/-10%	Capacitor	10
56	20-565-1102	10NF 50 X7R 0603 +5%/-5%	Capacitor	10
15	20-575-1021	270UF 1020 PTH140 80X105 20%	Capacitor	10

Description	Status
65 C 100nF 0603 10% 16V X7R	Active
60 C 100NF 50V 0603 X7R 10% SAMSUNG CL10B104KB8NNNC -TARGET-	Active
60 C 100NF 50V 0603 X7R 10% SAMSUNG CL10B104KB8NNNC	Active

Figure 3: Quickly compare the customer BOM with the latest information in your ERP system.

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[siemens.com/software](https://www.siemens.com/software)

Americas +1 314 264 8499
 Europe +44 (0) 1276 413200
 Asia-Pacific +852 2230 3333