

In the interests of efficient and reliable preparation of offers, we place special emphasis on providing complete data needed for valuation and production on request. To estimate the cost of materials and production on behalf of the project, we need the following files and input data:

1. Bill of materials (BOM).

It is preferable that the BOM be provided in the form of an editable file (spreadsheet), where the rows contain subsequent components and the columns contain detailed information. The following is an example of unique information that should be included in the BOM to enable unambiguous identification of components:

Designator	Value	Footprint	Description	Assembly	Quantity	Manufacturer	Manufacturer Number	Part	Supplier 1	Supplier Part Number 1	Supplier 2
C58	15pF	201	Ceramic Capacitor C0G, NP0 0201, ±5% 25V	SMT	1	Walsin	0201N150J250CT		Digi-Key	1292-1138-1-ND	
C62	150pF	201	Ceramic Capacitor C0G, NP0 0201, ±5% 25V	SMT	1	Murata	GRM0335C1E151JA01D		Digi-Key	1292-1138-1-ND	
L7	2.2µH	1212	Ferrite Inductor, Shielded, 1,5A, 72mOhm	SMT	1	Taiyo Yuden	NR3015T2R2M		Digi-Key	587-1648-1-ND	Farnell
P7	Pin List 1x8	LIST_1x8_SMD	Pin List 1x8, 2.54mm (100mil), SMD	Not mounted	0	W-CON	1125-1108S0M116R2		Cabcon	1125-1108S0M116R2	Samtec
P13, P15, P17	Pin Header 2x8	HDR_2x8	Pin Header 2x8, 2.54mm (100mil)	THT	1						
Bag_1	Bag antistatic		Antistatic bag with ZipLock 100x100mm	Mechanical	1						

2. Pick and Place (PnP) file.

We prefer the PnP file to be provided in CSV, TXT format containing data on the positioning of SMD components on the PCB.

Designator	B/T	Center-X(mm)	Center-Y(mm)	Rotation
C54	T	48.5902	19.8120	180
C14	T	50.4952	15.0876	360
C55	T	44.5770	19.8120	180
R36	T	57.0214	48.4282	180
R35	T	57.0214	47.3614	180
R34	B	57.0214	46.2946	180
R33	B	57.0214	45.2278	180
C47	B	53.5176	43.8854	360

3. PCB documentation

PCB documentation should be sent in the form of Gerber files in RS-274X format, together with drill files for a single board. If the subject of the service is surface mounting, Gerber files should contain a paste layer that will be used to produce the paste template. PCB panelisation is performed by InterPhone Service. If the PCB is entrusted by the Employer, the dimensions of the panel and the arrangement of the PCB should be consulted with InterPhone Service in advance and Gerber files for the assembled panel should be provided.

The following information is required to properly manufacture PCBs:

- laminate type,
- soldermask color,
- the number of layers,
- final thickness of copper,
- laminate thickness,
- type of coverage,
- stack-up,
- description color.

4. Assembly drawings.

Assembly drawings should contain:

- the outline layer of SMD components with element designators on the TOP / BOTTOM side,
- THT components contour layer with designators of THT elements on the TOP / BOTTOM side,
- symbols identifying component polarity (if applicable),
- remarks regarding special assembly requirements (e.g. distance assembly, etc.),
- product isometry (if applicable).

5. Electrical diagram.

Please provide the electrical diagram in the form of a PDF file.

6. Serialization.

If the customer requires labeling of products, we require documentation containing serialization. By arrangement with the customer, we can laser-tag or label the product.

7. X-Ray test.

At the request of the customer, we perform the X-Ray test of the assembled circuit after the delivery of the PCB design in ODB ++ format.

8. Application of the protective coating.

If the scope of the offer includes the varnishing process, it is necessary to indicate the expected varnishing area, including elements to be avoided. From the edges of the PCB, connectors, mounting holes and forbidden areas a margin of 3mm will be used, which is the area of varnish flow. This area may not be 100% varnish coated. Protective coatings are made with Electrolube APL acrylic varnish

9. Resin application (potting).

If the scope of the offer includes the process of pouring resin, it is necessary to indicate the expected area of application. Pouring is carried out with Elan-tron® PU 501LR / PH 3 material.

10. ICT, FCT, EOL tests

If the scope of the offer includes the ICT, FCT or EOL testing process, it is necessary to provide software, programming / testing instructions, and information about the tester / programmer used. InterPhone Service may also, by arrangement with the customer, prepare the station and testing software.

11. Product samples / photos.

It is good practice for the customer to provide the device model or photos for inspection

12. Packing.

It is important to provide packaging specifications for the product. If the orderer does not have a packing specification, by arrangement we propose a convenient form of packing products.

13. Quality Control.

Please provide the necessary documentation for components and the product in the qualitative assessment of the details and the product.

14. Entrusted components.

Components should be delivered on rolls, trays and occasionally in tubes after consultations with InterPhone Service. The components should be delivered with a provision for process bleeds. In the event that the contracting authority supplies SMD components not adapted for automatic assembly (so-called "packed" loosely), it may be necessary to make dedicated assembly trays. Trays are an additional paid element and their number depends on the size of the ordered production series. Delivery of components that do not meet the above guidelines may cause delays in production dates, changes in the price included in the original offer.

15. Assembly.

InterPhone Service performs assembly of components in accordance with the IPC-A-610F standard. Installation takes place according to class II. In the event that the customer requires the implementation of printed circuits or assembly in accordance with class III IPC, we must know about it at the valuation stage. Installation will be carried out in accordance with the agreed scope confirmed by the contracting authority.