

Prototyping adapters convert any package type to 0.1" pitch

## Prototyping Adapters

A prototyping environment is designed to fit 0.1" spacing, which worked well with DIP (dual-in-line) packages, but the proliferation of new, higher density package types created a need for adapters.

Prototyping adapters are designed to accept a particular package type, either in a socket or directly mounted on the adapter, and convert the package footprint to a 0.1" environment.

### SURFACE MOUNT PADS

These adapters allow the user to mount the IC directly to the adapter. The user then utilizes a pin map table to connect the IC signals to the test interface. This style of adapter offers the user the same convenient method of prototyping as our socketable adapters but at a much lower price point. High density ZIF sockets can be expensive.

### SOCKETABLE ADAPTERS

Our most popular form of prototype adapters are ones that come with some form of IC socket, which allows the user more flexibility in their design environment. These adapters can be provided with top of the line test and burn in sockets, auto-eject style, or low cost production sockets.

### VARIATIONS

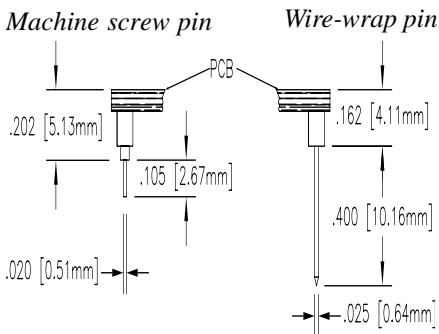
Another configuration of prototype adapters allows the user to convert their IC for testing on a UTI test instrument. These adapters convert the IC package to a 25 by 25 standard PGA pattern. We can also help if you have already purchased the IC socket from another source thinking you were going to be able to plug it into your breadboard. Chances are that we already have a board designed for that particular socket pattern and salvation is just a phone call away.

### Adapter Variations

- Surface-mount pads (no socket)
- Socket provided by the user
- Clamshell type of socket (ZIF or burn-in)
- Auto-eject (ZIF) socket
- Production socket

## Prototype board Interface Variations

### Pin Types



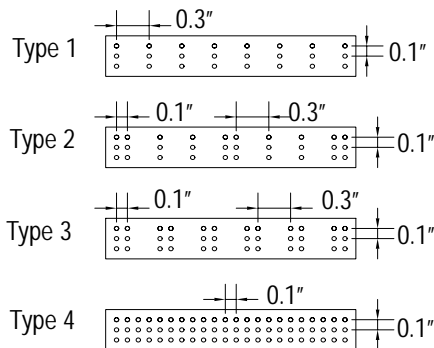
### MACHINE SCREW PINS

- 0.018-0.020 DIAMETER
- OFF THE SHELF SUPPORT
- LOW PROFILE DESIGN

### WIRE WRAP PINS

- 0.025 SQUARE
- WE HAVE THE SOLUTIONS

### Panel Types



### PANEL TYPES

- SUPPORT FOR ALL
- BREADBOARD TYPES

## BGA Prototyping Adapters

BGA, Micro BGA, Mini BGA, TinyBGA, 1mm, 1.27mm whatever the name, whatever the size the Ball Grid Array has become the most widely used IC form factor for today's development environment. With this in mind Adapters.com has put considerable effort into developing broad line support for all forms of BGA packages. Our technical sales staff exceeds in researching and problem solving for our customers to keep your development on time and on budget.

### IC PACKAGING

BGA IC packages have some of the most detailed, tolerance sensitive mechanical variations of any IC form factor. With this in mind, and to recommend the best adapter for your requirement it is imperative we see the mechanical drawing of the IC package you are working with.

### SURFACE MOUNT ADAPTERS

Adapters that you mount the chip directly to offer a low profile, low cost alternative to adapters with expensive IC sockets. If soldering the device is preferable these adapters perform just as well as all our socketable ones. Although not our most popular style of adapter, in some cases they work better than our socketable versions depending on your requirements.

### ADAPTER SELECTION

In most cases we advise that you forward us your IC package information first, this allows us to determine which adapter will provide you with the best fit for your needs. In some rare cases we may even ask for package samples.

## SURFACE MOUNT TYPE

OFF THE SHELF SUPPORT

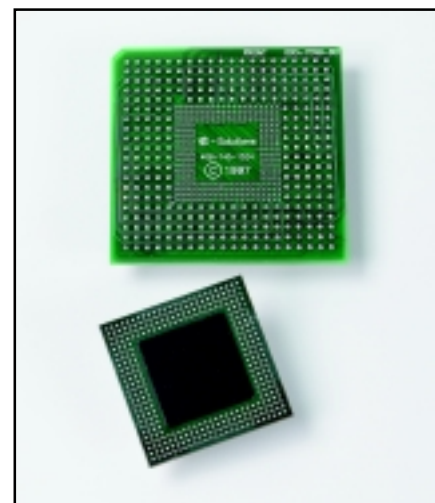
LOW PROFILE DESIGN

IC MOUNTING SERVICE

## TECH SUPPORT

WE HAVE THE KNOWLEDGE

WE HAVE THE SOLUTIONS



Prototyping boards for surface mount ICs

## WORK THE WEB

SEARCH ON-LINE

### 1.00mm SMT BGA Adapters

Ball Count	Array	Body (mm)	Panel Type	Part number
324	20 x 20	call	T4	160-6205-00
420	24 x 24	call	T4	160-6228-00

### 1.27mm SMT BGA Adapters

Ball Count	Array	Body (mm)	Panel Type	Part number
119	7 x 17	14 x 22	T3	160-6154-00
128	12 x 12	call	T3	160-6156-00
153	9 x 17	14 x 22	T3	160-6165-00
169	13 x 13	19	T3	160-6169-00
174	18 x 18	23	T3	160-6171-00
204	20 x 20	27	T4	160-6177-00
208	20 x 20	27	T4	160-6178-00
216	25 x 25	35	T4	160-6180-00
240	19 x 19	25	T3	160-6185-00
272	20 x 20	27	T3	160-6201-00
256	16 x 16	21	T3	160-6187-00

### QUICK ORDER GUIDE: DETERMINE

- Acquire the IC package mechanical specifications
- Choose the pin configuration and panel type on page 56.
- The desired socket type by looking at the IC socket section pages 46-51.
- Note any extra requirements, ie: height and size restrictions



Adapters for all BGA IC types

## ZIF ADAPTERS

EASY TO USE  
FLIP-TOP SOCKETS

OPEN-TOP SOCKETS

AUTO-EJECT SOCKETS

CYCLE LIFES UP TO 10,000

### 0.75mm BGA ZIF Socket Adapters

Ball Count	Array	Body (mm)	Panel Type	Part number
46	6 x 8	6 x 8	T4	160-6105-70
48	6 x 8	6.9 x 7.2	T4	160-6109-70
48	6 x 8	7	T4	160-6105-85
74	call	12.9 x 8.1	T4	160-6130-75

### 0.8mm BGA ZIF Socket Adapters

Ball Count	Array	Body (mm)	Panel Type	Part number
48	6 x 8	6 x 8	T4	160-6110-70
48	6 x 8	6 x 9	T4	160-6111-80
49	7 x 7	7	T4	160-6113-70
64	8 x 8	8	T4	160-6120-70
66	8 x 8	8 x 12	T4	160-6121-70
79	10 x 12	10 x 12	T4	160-6133-70
176	15 x 15	13 x 13	T4	160-6160-70
208	17 x 17	call	T4	160-6165-70
288	22 x 22	19 x 19	T4	160-6198-70
324	18 x 18	16 x 16	T4	160-6205-70

### 1.0mm BGA ZIF Socket Adapters

Ball Count	Array	Body (mm)	Panel Type	Part number
32	7 x 4	13	T3	160-6118-50
56	13 x 13	10	T3	160-6130-50
64	11 x 11	13	T3	160-6133-50
80	11 x 11	13	T3	160-6140-50
100	10 x 10	call	T4	160-6149-70
108	12 x 12	call	T4	160-6151-70
144	12 x 12	13	T4	160-6157-70
160	14 x 14	15	T4	160-6167-70
196	14 x 14	15	T4	160-6176-70

### 1.5mm BGA ZIF Socket Adapters

Ball Count	Array	Body (mm)	Panel Type	Part number
108	13 x 13	23	T3	160-6151-50
117	11 x 11	19	T3	160-6153-50
121	11 x 11	19	T3	160-6155-50
144	12 x 12	21	T4	160-6157-70
160	15 x 15	27	T4	160-6168-70
225	15 x 15	27	T4	160-6182-70



Adapters with clamshell or flip-top ZIF sockets

# BGA Prototyping Adapters

Adapters.com prides itself on being a one stop solution for our customers. Our complete line offering of BGA development adapters goes a long way in supporting that claim. We offer hundreds of off the shelf designs utilizing the who's who of today's top IC socket manufacturers. In the case your IC is not normal we are the fast turn experts for custom designs. Need help finding a socket adapter for your device? No problem, our technical sales staff were all there when the BGA IC was first introduced and have many years of experience in problem solving with this high density form factor.

### ADAPTER SELECTION

In selecting a BGA adapter that will work for you, much consideration is given to what type of socket you prefer to work with. Due to the grid array of BGA packages you can choose between several manufacturers, and several socket configurations. Open-top, lidded or clamshell style being the most common, but others, lever actuated, pogo pin, and screw lock lid type are also available.

In dealing with BGA IC's day in and day out slight variations in packages can severely affect the ability of these adapters to perform. In determining what socket will work best for you we would need to make sure of the package specifics. Which ever you decide on, all styles are offered with the machine screw pin or wire wrap pin options. Please refer to page 66 for the pin and panel type diagrams.

### IC PACKAGING

With no other IC package type is it as important that we start by looking at your mechanical specs than with the BGA IC. With so many variables, eliminating any mistakes by simply using information provided by the customer is critical. To accurately recommend a socket for your package type great care will be paid to several dimensions, to ensure a fit that will produce consistent reliable contact. The diagram on the following page highlights these points.

A. Ball spacing "pitch" B. Package width, C. Grid Array, D. Package thickness, E. Ball diameter

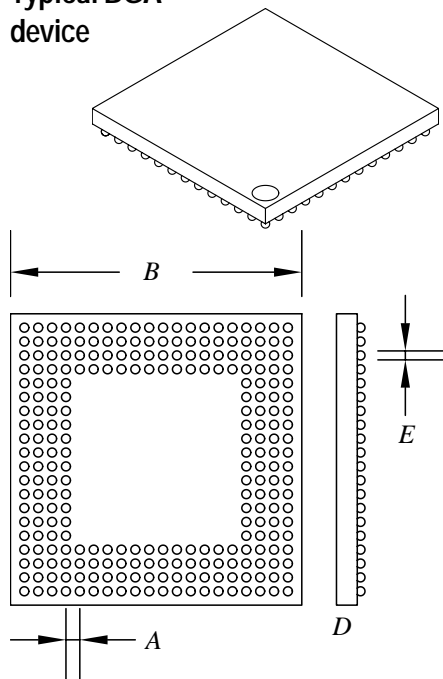
## BGA Prototyping Adapters

Not sure of what or who to turn to? Make your first call to the adapter pros at [Adapters.com](http://Adapters.com) and let your development solution get on the fast track. With hundreds of solutions, top notch technical support, and quick turn custom designs our team will help you and your current and future projects succeed.

### BGA / UTI TEST ADAPTERS

Our line of UTI (Unbelievable terrific and Incredible) test adapters started out as one phone call from an IC packaging house and has turned into a full fledged product offering. We have now developed several adapters that are capable of being utilized on a wide variety of BGA IC package form factors. With this designed-in flexibility these adapters have fast become an integral part of our product offering.

### Typical BGA device

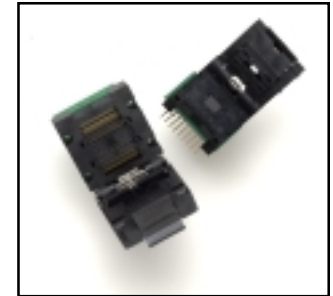


### TECH SUPPORT

WE HAVE THE KNOWLEDGE  
WE HAVE THE SOLUTIONS

### WORK THE WEB

SEARCH ON-LINE



Adapters for all BGA IC types

### 1.27mm BGA Open-Top ZIF Socket Adapters

Ball Count	Array	Body (mm)	Panel Type	Part number
136	19 x 19	25	T3	160-6156-60
168	17 x 17	23	T3	160-6163-60
192	19 x 19	25	T3	160-6171-60
204	20 x 20	27	T3	160-6176-50
213	19 x 19	call	T4	160-6178-80
224	18 x 18	23	T3	160-6179-60
240	19 x 19	25	T3	160-6184-60
255	20 x 20	27	T4	160-6186-
256	20 x 20	27	T4	160-6186-85
272	20 x 20	27	T4	160-6190-80
289	17 x 17	23	T4	160-6197-70
352	26 x 26	35	T3	160-6210-80
356	26 x 26	35	T4	160-6214-70
388	26 x 26	35	T4	160-6221-70

Note 1: "C" on the previous page, the grid or array is usually listed as series of numbers like the following example 20\*20 or for rectangular packages 8\*16

Note 2: "\*" when an asterik appears in a part table, this signifies more than 2 variations available and we request you call us for assistance

### 1.27mm BGA Lidded ZIF Socket Adapters

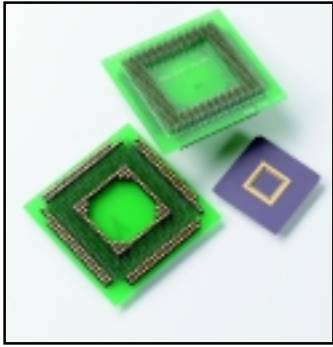
Ball Count	Array	Body (mm)	Panel Type	Part number
52	14 x 14	19	T3	160-6112-**
64	17 x 17	23	T3	160-6116-**
72	11 x 11	15	T3	160-6120-**
96	11 x 11	15	T3	160-6123-**
119	7 x 17	14 x 22	T3	160-6154-75
144	20 x 20	27	T3	160-6157-**
256	20 x 20	27	T4	160-6186-**
272	20 x 20	27	T4	160-6190-**
276	26 x 26	35	T4	160-6196-80
289	17 x 17	23	T4	160-6197-70
292	20 x 20	27	T4	160-6199-70
352	26 x 26	35	T4	160-6210-70
388	26 x 26	35	T4	160-6220-70

### BGA - UTI Tester Adapters

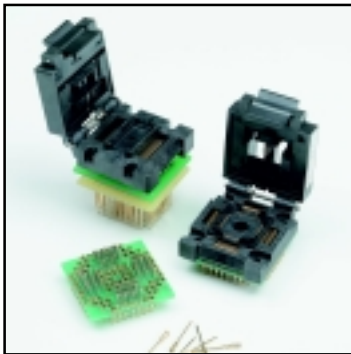
Ball Count	Array	Body	Part number
420	26	35	160-6226-75
484	22	23	160-6240-75
480	29	37	160-6242-75
580			160-6270-70

### QUICK ORDER GUIDE: DETERMINE

- Acquire the IC package mechanical specifications
- Choose the pin configuration and panel type on page 56.
- Determine the desired socket type by looking at the IC socket section pages 46-51
- Note any extra requirements like size and height restrictions



Adapters for PGA and IPGA



Adapters for PLCC

## Shrink DIP Prototyping Adapters

Lead Count	Socket type	Panel Type	Part number
42	production	T1	160-6955-10
		T2	160-6955-40
56	production	T2	160-6970-30
64	production	T1	160-6975-00
		T3	160-6975-05

## IPGA Prototyping Adapters

Lead Count	Array	Panel Type	Part number
325	35 x 35	T3	160-7063-50
503	43 x 43	T4	160-7103-75
559	43 x 43	T4	160-7109-70
599	47 x 47	T4	160-7110-70

## PLCC Prototyping Adapters

Lead Count	Socket type	Panel Type	Part number
28	production auto-eject	T3	160-8180-07
		T1	160-8181-20
32	production auto-eject	T1	160-8205-20
		T4	160-8205-70
44	production auto-eject	T1	160-8222-10
		T4	160-8227-70
52	production auto-eject	T1	160-8250-20
		T3	160-8250-50
68	production	T3	160-8271-50
84	production	T3	160-8285-60

# DIP, SDIP, PLCC, PGA, and IPGA Prototyping Adapters

Adapting IC's to a .100 form factor has been a significant part of our business for many years. In some cases the IC form factor has been around for ten even fifteen years but we still get request from students, engineers and hobbyist everyday to help them establish there design environment. With this in mind we have accumulated a vast inventory of design for an incredible array of IC package types. Whether you are looking for a PLCC adapter or even a DIP, chances are good that we have a solution to fit your needs.

### ADAPTER VARIATIONS

For all these package types we have a wealth of surface mount adapters to choose from. If a socketable adapter is what you desire our array of adapters featuring either Open-top, lever actuated, auto-eject, production, lidded and or clamshell style will provide you with more than one solution to choose from.

### IC PACKAGING

With so many IC package types and adapter variations it may be required to scan through our convenient IC packaging section or visit our web-site to find out exactly what you might require. If still unsure you will find a well educated technical support person at Adapters.com, with every support person having at least 10 years of experience with IC packaging

## QFN Prototyping Adapters

At Adapters.com we realize that the IC packaging industry rarely stands still. With this in mind we must remain focused to finding emerging technologies and working closely with packaging houses, IC companies, and socket manufactures to stay on top. Our line of QFN adapters came from this constant devotion to being a one stop adapter warehouse for our dedicated customers. The QFN or "Micro lead frame" package is an emerging force for the developer in the telecommunication industry and we have an unmatched selection to choose from.

### ADAPTER VARIATIONS

Currently we offer only a lidded or "clamshell style" socket for our QFN adapters. We have developed adapters for the 1.27mm and the higher density form factors.

### IC PACKAGING

The QFN or Micro lead frame package has similar characteristics as the LCC package from days past. The difference lay in the size of the overall package and the density of the lead spacing. As you can probably guess for yourself the differences are measured by how much smaller the size is and how much denser the lead spacing is.

A. Ball spacing "pitch" B. Package width, C. Grid Array, D. Package thickness, E. Ball diameter



*Adapters for Micro Lead Frame or Quad Flat no Lead IC packages*

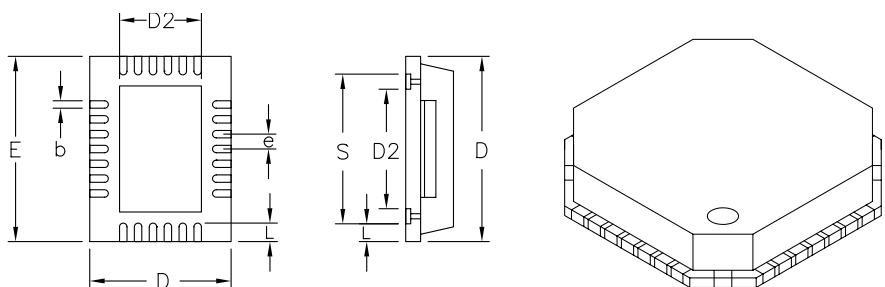
### 0.5mm QFN/MLF Prototyping Adapters

Lead Count	Body (mm)	Panel Type	Part number
12	3 x 3	T4	160-9105-70
16	3 x 3	T4	160-9109-70
20	4 x 4	T4	160-9113-70
24	4 x 4	T4	160-9117-70
28	5 x 5	T4	160-9121-70
32	5 x 5	T4	160-9125-70
44	7 x 7	T4	160-9137-70
48	7 x 7	T4	160-9140-70
68	10 x 10	T4	160-9160-70

### 1.27mm QFN/MLF ZIF Prototyping Adapters

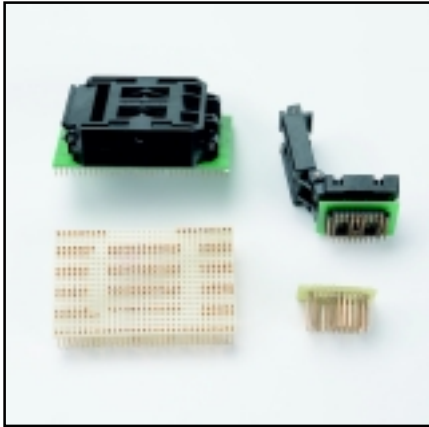
Lead Count	Body (mm)	Panel Type	Part number
8	5 x 6	T4	160-9103-70

### Typical QFN / MLF IC packaging



### QUICK ORDER GUIDE: DETERMINE

- Acquire the IC package mechanical specifications
- Choose the pin configuration and panel type on page 56.
- Determine the desired socket type by looking at the IC socket section pages 46-51
- Note any extra requirements like size and height restrictions



Adapters for all types of QFP IC packages

## ZIF ADAPTERS

- EASY TO USE
- FLIP-TOP SOCKETS
- OPEN-TOP SOCKETS
- AUTO-EJECT SOCKETS
- UP TO 10,000 CYCLES

## CUSTOM DESIGNS

- WE ARE THE DESIGN EXPERTS
- CALL US

# QFP Prototyping Adapter

Adapting today's high density IC packaging has been one of our strengths for many years at Adapters.com. In development with high density IC packages the need to convert signals to standard prototyping boards is a common problem and a staple of our product line. These QFP prototyping adapters give the user the ability to convert the signal of the D.U.T. to .100" pin grid array for circuit development and analysis. To make things easier a pin or signal map is provided to keep setup time to a minimum. On these 2 pages are just a sampling of the hundreds of adapters we have to offer for QFP packages.

### 0.4mm QFP Surface Mount Adapters

Lead Count	Panel Type	Part number
120	T4	160-8670-70
128	T4	160-8691-08

### 0.65mm QFP Surface Mount Adapters

Lead Count	Panel Type	Part number
52	T3	160-8404-07
80	T4	160-8550-08
100/R	T4	160-8625-00
100/R	T1	160-8626-05
112	T4	160-8651-08
144	T1	160-8760-10
160	T1	160-8834-20
168	T4	160-8859-70
184	T4	160-8919-70

### ADAPTER VARIATIONS

In most cases we have several solutions for the same IC. Over the years we have built a substantial library of designs for the most popular and rarest of IC package types.

### 0.5mm QFP Surface Mount Adapters

Lead Count	Panel Type	Part number
32	T4	160-8300-08
48	T4	160-8365-80
64	T3	160-8454-60
80	T4	160-8537-08
100	T3	160-8613-07
128/R	T4	160-8703-08
144	T1	160-8754-00
144	T4	160-8754-08
160	T3	160-8831-07
176	T4	160-8895-80
208	T1	160-8958-01
208	T4	160-8958-09
240	T3	160-9013-00
256	T4	160-9033-70
304	T4	160-9060-03

If soldering the device to the board is not a problem considerable cost saving can be achieved with this type of adapter, due to not having to provide a ZIF socket for the device. To use, the device is soldered to a land pattern on the top side of the adapter. The test interface can be provided with "pga" style machine screw pins, or come ready to wire wrap with 1/2" by .025" square pins.

### 0.8mm QFP Surface Mount Adapters

Lead Count	Panel Type	Part number
32	T4	160-8320-08
44	T4	160-8351-08
64	T4	160-8463-04
80	T4	160-8559-05
128	T1	160-8705-10

If you need to be able to insert and extract your device an adapter with a true test and burn-in socket is the correct choice for your requirement. The high cycle counts along with the quality of materials makes these adapters the workhorse of our industry. If you purchased a ZIF socket with the intention of plugging it directly to your prototyping card and found out it has a staggered footprint, no problem, chances are that we have a board for that socket, and we can configure the adapter so the socket just plugs in.

### CHOOSING AN ADAPTER

Selecting which adapter will work for you has been our specialty for over 15 years now. We will earn your confidence with our understanding of each designer's special environment.

## QFP Prototyping Adapter Types

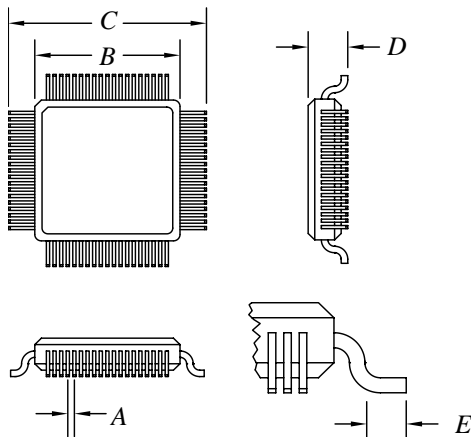
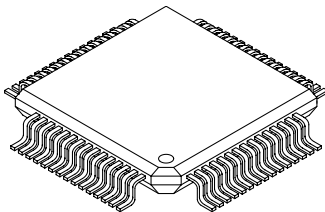
### IC PACKAGING

Many times our customers will call us and want help determining exactly which IC type or package variety they have. In some cases packaging can vary from one manufacturing plant to the next and can cause opens, shorts and the inability to gain good consistent access across all signals being tested.

In working with these IC Packages daily you begin to see several critical dimensions that determine what type and exactly which adapter will work for you. In looking at the diagrams pay special attention to the items listed below.

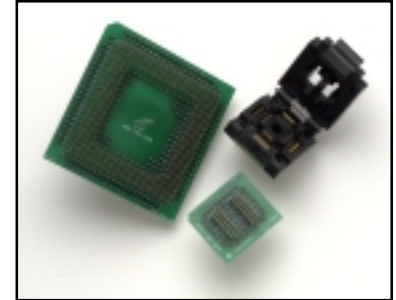
A. Lead spacing or "Pitch", B. Package width, C. Tip - Tip measurement, D. Package thickness, E. Foot length

### Typical PQFP, QFP, TQFP



### 0.4mm QFP Surface Mount Adapters

Lead Count	Socket	Panel Type	Part number
120	?	T4	160-8670-80
128	Enplass	T3	160-8690-60
176		T4	160-8891-70



Adapters with or without sockets

### 0.5mm QFP ZIF Socket Adapters

Lead Count	Socket	Panel Type	Part number
32	IC51	T4	160-8301-70
48		T3	160-8370-50
64	IC51	T1	160-8454-20
80	IC51	T4	160-8538-70
100	IC51	T1	160-8613-10
100	IC51	T3	160-8614-60
128	Enplass	T4	160-8700-70
144	yamaichi	T3	160-8754-60
160	yamaichi	T3	160-8830-00
176	yamaichi	T3	160-8895-50
208	yamaichi	T3	160-8957-50
208	yamaichi	T4	160-8957-70
240	Enplass	T3	160-9014-50
304	yamaichi	T4	160-9063-70

### 0.65mm QFP ZIF Socket Adapters

Lead Count	Socket	Panel Type	Part number
52	Nepenthe	T3	160-8370-60
64	yamaichi	T4	160-8457-70
80	yamaichi	T4	160-8549-70
100/R	Enplass	T4	160-8627-80
112	yamaichi	T4	160-8652-70
144	?	?	?
160	yamaichi	T4	160-8833-70

### 0.8mm QFP ZIF Socket Adapters

Lead Count	Socket	Panel Type	Part number
32	yamaichi	T3	160-8320-50
44	?	T1 T4	160-8350-20 160-8350-80
64	yamaichi	T3 T4	160-8462-60 160-8463-80
80/R	Enplass	T4	160-8552-70
120	?	T4	160-8683-70
128	yamaichi	T3	160-8704-10

### QUICK ORDER GUIDE: DETERMINE

- Acquire IC package mechanical specifications
- Determine interface pin and panel type from page 56.
- Determine the IC socket information from IC socket section on page 46-51.
- Note extra requirements, i.e. size and height restrictions





Adapters for SOIC I.C. packages

## ADAPTERS TYPES

- SURFACE MOUNT ADAPTERS
- LIDDED CLAMSHELL SOCKET ADAPTERS
- OPEN-TOP SOCKET ADAPTERS
- AUTO-EJECT SOCKET ADAPTERS

## SOIC Prototyping Adapters

Whether your breadboarding a controller for a new video game, developing cellular phone technology, or completing a school project the proliferation of the SOIC package type means you will sooner or later run into the need for an adapter that will convert this IC form factor to a .100 mil breadboard.

Our SOIC prototype adapters consist of .100" pin grid array signals of the D.U.T. (device under test), mapped out for ease of use, then has either a surface mount land pattern, or one of several socket options for you to insert the device.

### ADAPTER VARIATIONS

These categories vary mainly based on how the device interfaces with the adapter. SMT versions, the D.U.T. solders directly to the adapter. Socketable versions, for the D.U.T., we offer a vast array of socket options, open-top, lidded ZIF, and some SMT options as well. With our broad selection of adapters off the shelf we can solve the majority of interconnection problems from stock. In the case your package type is new or not standard we can provide custom solutions within-in 2-3 weeks.

### CHOOSING AN ADAPTER

Adapters.com staff is very confident we will get you the correct adapter the first time, time and time again. We know the questions to ask and are familiar with all the industry standards and more importantly we know when IC's don't conform to standards. We've seen it all, so don't worry we are here for you be happy.

### 1.27mm SOIC Surface mount Adapters

Lead Count	Body Width	Panel Type	Part number
8	3.8	T1	160-9213-00
14	3.2	T4	160-9230-80
16	3.8	T1	160-9245-00
16	7.6	T1	160-9244-00
20	7.6	T1	160-9258-05
24	7.5	T1	160-9260-10
28	7.5	T1	160-9288-05
32	7.1	T4	160-9233-08
44	13.3	T4	160-9442-08

### 0.65mmSSOP Surface Mount Adapters

Lead Count	Body	Panel Type	Part number
20	5.2	T1	160-9252-05
24	5.3	T1	160-9265-08
28	5.3	T4	160-9282-00
32	6.1	T4	160-9321-70
38	6.1	T4	160-9371-80

### 0.5mm TSOP Surface Mount Adapters

Lead Count	Body	Panel Type	Part number
32	18.4	T4	160-9323-08
40	18.4	T4	160-9379-03
48	18.4	T4	160-9465-08

## SOIC Prototyping Adapters

SOIC packaging comes in a wide variety of shapes, sizes, patterns and styles. We at Adapters.com have the knowledge to break it all down into terms that you understand and will allow you to move forward with your development. It is always help full that we improve your understanding of some basic IC packaging principles.

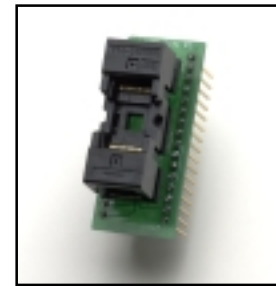
### IC PACKAGING

SOIC packaging comes in many form factors. Names like SOP, SSOP, PSOP, MSOP, TSOP, and TSSOP are all derivatives of the original SOIC concept. Adapters.com staff was there in the beginning and are still providing solutions to your ever changing development environment. Please note the critical dimensions illustrated and shown below.

A. Lead spacing, B. Package width  
C. Tip-Tip measurement, D. Package thickness

### 1.27mm SOIC Zif Socket Adapters

Lead Count	Body (mm)	Panel type	Part number
8	3.9	T4	130-4854-01
	5.3		130-4858-01
14	3.9	T4	130-4877-00
	5.3		130-4882-01
	7.8		130-4882-06
16	3.9	T4	130-4901-01
	5.3		130-4907-01
	7.8		130-4913-06
18	3.9	T4	130-4931-06
	5.3		130-4936-06
20	3.9	T4	130-4956-01
	5.3		130-4960-06
	7.8		130-4962-01
24	7.8	T4	130-4983-06
	8.4		130-4985-01
28	7.8	T4	130-5008-06
	8.4		130-5010-01
32	11.4	T4	130-5040-06
40	11.4	T4	130-5065-06
44	13.3	T4	130-5090-06



ZIF socket adapters for all SOIC derivatives

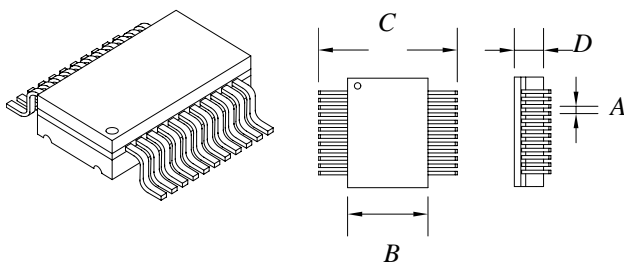
### SSOP Zif Socket Adapters

Lead Count	Body (mm) & pitch	Panel type	Part number
8	3.0, 0.65	T4	130-4861-00
20	4.4, 0.65	T4	130-5693-06
	5.3, 0.65		130-5694-06
24	3.9, 0.65	T4	130-5304-06
28	5.3, 0.65	T4	130-5331-05
54	6.1, 0.8	T4	160-9521-00
64	6.1, 0.5	T4	160-9600-00

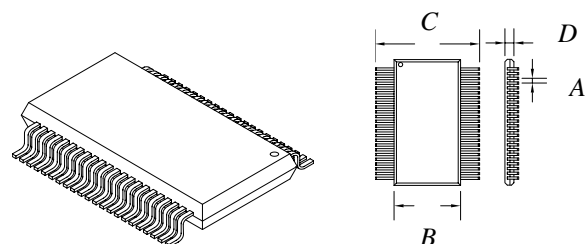
### TSOP Zif Socket Adapters

Lead Count	Body	Panel Type	Part number
32	18.4	T4	160-9323-08
40	18.4	T4	160-9379-03
48	18.4	T4	160-9465-08

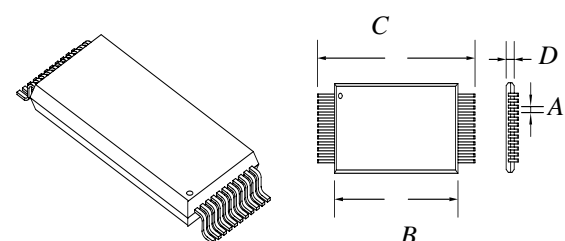
### Typical SOIC IC packaging



### TSOP type-II, MSOP, QSOP, PSOP, TSSOP



### TSOP type-I



### QUICK ORDER GUIDE: DETERMINE

- Acquire IC package mechanical specifications
- Determine interface pin and panel type from page 56.
- Determine the IC socket information from IC socket section on page 46-51.
- Extra Requirements, ground planes