



# Product Bulletin

## 8 Bit Prototyping Breadboard for PC/104

PB7549

PROTO-8

### FEATURES

- Easy access to all J1/P1 PC/104 signals
- Control decoding logic is contained in reprogrammable logic
- Large prototyping area available with or without solderless breadboard
- On board buffering of critical signals
- Mounting holes provided for optional J2/P2 connector allows access to 16 bit signals

### APPLICATIONS

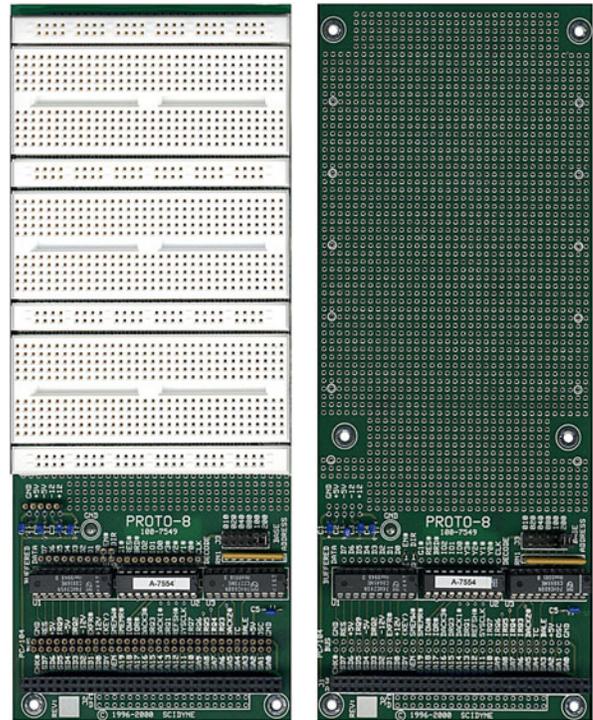
- PC/104 hardware/software co-design
- Education and training
- Rapid product development
- Create custom PC/104 modules

### PRODUCT DESCRIPTION

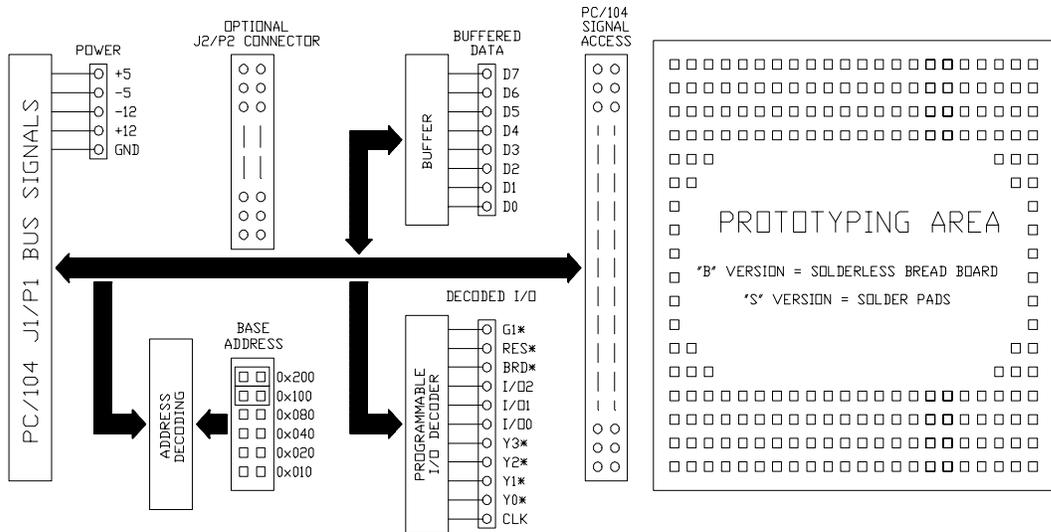
The PROTO-8 is an extended length eight bit prototyping card for use with the industry standard PC/104 bus architecture. The large breadboarding area is ideal for evaluating circuitry prior to committing to actual printed circuit board etch. It can also be used to construct permanent designs where only a few articles will be built. The PROTO-8 is available in two versions. The “B” version comes with a solderless breadboarding area which allows rapid construction and rearrangement of the user circuitry. Access to all J1/P1 PC/104 signals are simplified by means of connectors which accept 20-28AWG solid wire. Once the circuits have been proven, they can be disassembled and the PROTO-8 reused on the next design. The “S” version provides a grid of over 2000 solder pads on .1" centers and is intended for permanent construction. Both versions feature on board circuitry for buffering the data lines, address decoding and providing decoded I/O control logic. The control logic is in the form of a socketed GAL which can be reprogrammed by the user for optimizing the PROTO-8 in specific applications.

### BENEFITS

Although choices for PC/104 products abound, there is a frequent need to design custom circuitry for which no off the shelf solution exists. The PROTO-8 is ideal for this purpose. Circuitry can be constructed, debugged and changed without having to incur the costs and time delays associated with producing a printed circuit board. Users who frequently need to evaluate new circuits destined for the PC/104 bus will find the “B” version particularly useful. The solderless breadboarding area can be used over and over again. Once a circuit is debugged and the component placement determined, it can easily be transferred to the “S” version for a permanent and durable form. The on board decoding logic and data buffers eliminate the need to continuously rebuild the interface logic common to all PC/104 module designs. Having the decoding logic in a simple GAL makes customizing the PROTO-8 for any particular application as easy as reprogramming a chip. Other programmable devices such as PEELS can also be used when implementing more complex decoding logic.



# Simplified Block Diagram



## SPECIFICATIONS

- Prototyping area:** “B” Version: Solderless breadboard. 8 distribution strips, 3 terminal boards. Socket strips for access to all PC/104 signals, decoding and power. Accepts 20-28AWG solid wire and component leads.
- “S” Version: Solder pads. 2000+ pads, .036"dia. Holes on .1" centers.
- Addressing:** 16 consecutive I/O bytes. Base address jumper selectable between 0 and 1008 decimal, (0 to 0x3f0 hexadecimal).
- I/O decoding:** NOTE: This default configuration can be changed by reprogramming GAL  
2 I/O Write strobes, 2 I/O Read strobes. Each strobe occupies four consecutive I/O address spaces. Uses socketed GAL16V8. Pinout compatible with PEEL18CV8, EP310 and other 20 lead DIP devices.
- Power Requirement:** +5vdc @ 25ma typical (User circuitry exempt).
- Dimensions:** 3.60"W x 9.00"L. Marks provided so that PCB can be cut to standard PC/104 length.
- Environmental:** Operating temperature: -40°C to 85°C  
Non-condensing relative humidity: 5% to 95%
- Ordering Information:**
- 100-7549-B, PROTO-8 with solderless breadboard
  - 100-7549-S, PROTO-8 with solder pads
  - 100-7578, P8-16, Optional 16-bit access adapter (J2/P2 connector is required)
  - 108-0051, Additional blank GAL16V8 for custom applications
  - 104-0002, Optional J2/P2 stack-through connector for 16 bit compatibility

