ICSP programmer for PIC microcontroller

Programming a big DIP (through hole) chip is easy. Pop it into a socketed programmer, burn, and return to the application circuit. Test and repeat.   
  
Things get more difficult with smaller (surface mount) chips. There are no standard sockets for QFN, SSOP, QFP, or even the large SOIC .300 packages. There are really expensive ($100s) clips that can attach to, and program, these chips. A different clip is needed for each chip type and pin count you use.   
  
There is an alternative. It’s called ICSP.   
ICSP means 'in circuit serial programmer'. It is a way of programming a PIC while it is still attached to the application circuit. No more chip swapping.   
  
Why ICSP?   
1. There are no programming sockets for small package chips. Clips are expensive.   
2. It’s a pain to move chips in & out of the programmer during development. Impossible for surface mount parts.