Can I buy a keyboard which is out of stock?

Assume that it is possible to purchase a physical product which is out of stock. Define P as the set of all physical copies of a product p located in stock at a vendor, and define p as a physical non-null copy of product p which belong to P. For a purchase to happen and be carried through with, a physical product unit p must be shipped from a vendor to the buyer, meaning p must be sourced from P and removed from P. By the definition of out of stock, P must be the null set. This forms a contradiction to the initial assumption: to purchase a physical product which is out of stock, there must be p sourced from and removed from a null set, which is not possible.

Thus by proof by contradiction and the concept of excluded middle, it is impossible to purchase a product which is out of stock. Since the set of sold physical keyboards K is a subset of set of physical products P, this proof applies to purchasing a keyboard which is out of stock; therefore, it is not possible to purchase a keyboard which is out of stock.