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# Connecting PC keyboard to microcontroller

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## **Introduction**

PC-compatible keyboards are today readily available and cheap (and sitting on almost any workbench, especially those belonging to engineers and technicians). The most popular model is the MF2 (multi-functional type version 2), developed for AT and PS/2 computers. This type of keyboard has become some sort of an industry standard. The keyboard by itself contains a microcontroller, generating appropriate codes any time the user presses or releases a key and taking care of communications with computer (host computer) according to appropriate protocol. The host computer usually includes a special communications processor, which takes care of the keyboard and doesn't put any additional load on the main processor. New PC Motherboards feature a communications processor, integrated into the motherboard's chipset. Such a keyboard will be used as an input device for our microcontroller systems.

## **Short preview: communications between keyboard and the PC**

Communication between the PC and the keyboard is a complex, bilateral serial transfer, synchronized by a clock signal, originating from the microcontroller in the