Wearable computer

**Wearable computers** are digital devices that are worn on the body. This type of **wearable technology** has been used in **behavioral modeling**, health monitoring systems, information technologies and media development. Wearable computers are especially useful for applications that require computational support while the user's hands, voice, eyes, arms or attention are actively engaged with the physical environment.

"Wearable computing" is an active topic of research, with areas of study including user **interface** design, **augmented reality**, **pattern recognition**, use of wearables for specific applications or **disabilities**, **electronic textiles** and **fashion design**. Many issues are common to the wearables, **mobile computing**, **ambient intelligence** and **ubiquitous computing** research **communities**, including power management and heat dissipation, software architectures, **wireless** and **personal area networks**.

One of the main features of a wearable computer is consistency. There is a constant **interaction** between the computer and user, i.e. there is no need to turn the device on or off. Another feature is the ability to multi-task. It is not necessary to stop what you are doing to use the device; it is augmented into all other actions. These devices can be incorporated by the user to act like a **prosthetic**. It can therefore be an extension of the user’s mind and/or body.

The **International Symposium on Wearable Computers** is the longest-running academic conference on the subject of wearable computers.

Wristwatch computer

A **wristwatch computer** is a **wearable computer** that fits like a wristwatch. It may offer features similar to a **PDA**, **palmtop** or **tablet computer**. Similar terms which refer to the same concept are **wrist computer**, **computer watch**, **wrist-top**, **wrist PDA** and **Wrist Worn PC (WWPC)**.

Such devices may include features such an **accelerometer**, **thermometer**, **altimeter**, **barometer**, **compass**, **chronograph**, **dive computer**, **calculator**, **cell phone**, **GPS**, **graphical display**, **speaker**, **scheduler**, **watch**, etc. It may communicate with a **wireless headset**, **heads-up display**, **insulin pump**, **microphone**, **modem**, or other external device.

Any **computer** has a data processor, memory, input and output. It may collect information from internal or external sensors. It may control, or retrieve data from, other instruments or computers. It may support wireless technologies like **Bluetooth**, **WiFi**, and **GPS**.
However, it is possible a "wristwatch computer" may just serve as a front end for a remote system, as in the case of watches utilizing cellular technology or WiFi.

Zypad WL1500 wearable wrist computer

Eurotech has introduced the ZypadWL1500, a wearable wrist computer that is based on the Marvell PXA320 processor with 128MB mobile SDRAM and 128MB mobile Flash. The platform includes a wide range of built-in wireless resources including WiFi, Bluetooth (or optional substitute Zigbee), GSM/GPRS/CMDA/EDGE, UMTS, HSDPA radio module support (optional, exclusive of each other) with integrated antenna, and GPS.

User interfaces includes a 3.5” TFT resistive touchscreen display at QVGA (320 x 240) resolution, micro SD card slot, user accessible SIM card slot, separate USB host and device ports, integrated speaker and mike as well as audio in/out jacks and a 12-key keypad. Options include a factory installed barcode reader.

While Windows CE 6.0 is preinstalled, the PXA320 is already a subject of research by the OpenPXA hacking project. The Eurotech site also makes reference elsewhere to their support for Linux 2.6, and has a dedicated Linux support page.

While we couldn’t find a price for this unit, its wireless capabilities and apparent Linux compatibility give it high hackability potential.

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Sony Nextep – A Wrist Computer in 2020 [PICS]

At this point it doesn’t seem at all incredible to wear a PC around your wrist, specially with the current technology developments. However, Hiromi Kiriki created a concept that totally blew our mind, the Sony NextepComputer, that can be worn on the wrist, detached and turned into a brilliant PC, as you can see in the following pictures.
Just like tablet computers, new types of computers like these will allow us to conveniently and easily take our computers wherever we go, rather than being stuck with a desktop at home, and a big laptop to haul around while you’re on the go.