

TEXTILE MOTHERBOARD WITH MODULAR AND INTERCHANGEABLE DESIGN TO MONITOR, INFORM AND CONTROL

ABSTRACT

5 The present invention concerns a textile motherboard (TMB) employable in garments, tablecloths, gowns, etc. that incorporates at least a central processing unit (CPU) or a peripheral or a combination thereof, with the intention of monitoring, informing, or controlling parameters of interest. The garments may be utilized or worn by users (human or not). The textile of the garment is utilized as substrate to conform the TMB. The TMB may exhibit multiple-layer structures and VIAs (Vertical Interconnect Accesses). The routings of the TMB are conformed of textile material capable of transmitting signals between CPU and a means to register information or between the CPU and the combination of peripherals. Layers, routings, and VIAs may be incorporated into the TMB by using known textile manipulation techniques
10 such as: knitting, weaving, stamping, perforating, or they may also be printed on the textiles. Every component is modular and interchangeable and connects to the TMB utilizing textile connectors such as snaps, hooks, or similar elements. TMB, CPU, and peripherals are washable. CPU and peripherals may be mounted on textile boards, as well as on rigid or flexible PCBs (printed circuit boards), utilizing discrete
15 electronic and photonic elements. The CPU includes a microcontroller, a microprocessor, or a comparable element. The peripherals include photonic transducers or electronic transducers or combinations thereof such as: capacitive, pulse, humidity, temperature, accelerometers, and gyroscopes sensors. The peripherals also include screens, modules for serial communications, radiofrequency
20 (including Zigbee technology, Bluetooth, etc.) and Wi-Fi, as well as similar elements.
25

[Figure. 5]