

User equipment and terminals  
**With great power comes great responsibility**

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## 1. Power Supply

## 2. Power Management

### 2.1 Wii U

The Wii U transformer has a maximum output voltage of 15V and a maximum output current of 5A, so this console consumes  $15 \cdot 5 = 75W$  while under full load. In Figure 1



Figure 1: Wii U without external case



Figure 2: Wii U Multi Chip Module

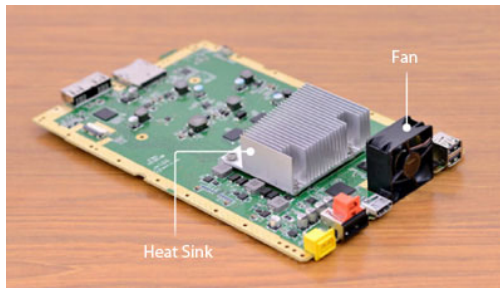


Figure 3: Fan and heat sink position



Figure 4: Wii U air flow demonstration

is shown the console without its external case. The first thing we note is that the bigger components inside the Wii U are the optical drive, a single heat sink used to cool down the entire console and two fans to allow the air to pass through the console.

Analysing the position of the fan and of the heat sink, we note that the heat sink is over the main source of heat (the CPU and GPU) and it is close to the fan rotated in a way that the air can pass through it, as shown in Figure 4.

Removing the heat sink we see another thermal compound that cover both CPU and GPU. These two are put close each other maybe to reduce the latency and power consumption.

## 2.2 GamePad

The GamePad transformer has a maximum output voltage of 4.75V and a maximum output current of 1.6A, so this console consumes  $4.75 \cdot 1.6 = 7.6W$  while under full load.

## References