CLAIMS

1. A virtual reality (VR) device, comprising:

a housing that includes i) two openings each hosting a camera lens and ii) a nose groove, wherein the two openings correspond to relative positions of eyes of a virtual reality device user; and

a corresponding plurality of cameras uniformly distributed around each of the two camera lenses for capturing one or more eye physiological characteristics of a VR device user by capturing images of the eyes of the virtual reality device user from multiple directions, wherein the two camera lenses are macro lenses for focusing the cameras on the eyes of the virtual reality device user when capturing the one or more eye physiological characteristics.

2. The VR device of claim 1, wherein the one or more eye physiological characteristics include iris characteristics or eyeprint characteristics.

3. The VR device of claim 1, further comprising one or more light emitting diode (LED) light sources for providing light compensation to the one or more cameras.

4. The VR device of claim 3, wherein the one or more LED light sources and the one or more cameras have a one-to-one correspondence.

5. The VR device of claim 3, wherein the one or more cameras are infrared cameras and the one or more LED light sources are infrared LED light sources.

6. The VR device of claim 3, wherein the corresponding plurality of cameras are RGB cameras and the one or more LED light sources are RGB LED light sources.

8. The VR device of claim 1, further comprising a data interface including at least a universal serial bus (USB) port or a wireless chip.

9. The VR device of claim 1, further comprising a light sensor for sensing the brightness of the light incident on the camera lens.

10. A virtual reality (VR) system, comprising:

a housing of a VR device, wherein the housing includes i) two openings each hosting a camera lens and ii) a nose groove, wherein the two openings correspond to relative positions of eyes of a virtual reality device user; and

a corresponding plurality of cameras uniformly distributed around each of the two camera lenses for capturing one or more eye physiological characteristics of a VR device user by capturing images of the eyes of the virtual reality device user from multiple directions, wherein the two camera lenses are macro lenses for focusing the cameras on the eyes of the virtual reality device user when capturing the one or more eye physiological characteristics.

11. The VR system of claim 10, wherein the one or more eye physiological characteristics include iris characteristics or eyeprint characteristics.

12. The VR system of claim 10, further comprising one or more light emitting diode (LED) light sources for providing light compensation to the one or more cameras.

13. The VR system of claim 12, wherein the one or more LED light sources and the one or more cameras have a one-to-one correspondence.

14. The VR system of claim 12, wherein the one or more cameras are infrared cameras and the one or more LED light sources are infrared LED light sources.

15. The VR system of claim 12, wherein the corresponding plurality of cameras are RGB cameras and the one or more LED light sources are RGB LED light sources.

17. The VR system of claim 10, further comprising a data interface including at least a universal serial bus (USB) port or a wireless chip.

18. The VR system of claim 10, further comprising a light sensor for sensing the brightness of the light incident on the camera lens.