WHAT IS CLAIMED IS:

1. An ophthalmic lens assembly comprising:

a lens configured for placement in at least one of the inside and proximate to a surface of an eye, the lens including an optic zone configurable for at least one of vision correction and vision enhancement, and one or more electronic components for enabling the vision correction and vision enhancement; and

at least one antenna arrangement operatively associated with the one or more electronic components for providing at least one of one or two way communication with the one or more electronic components and power transfer.

2. The ophthalmic lens assembly according to Claim 1, wherein the lens comprises a contact lens.

3. The ophthalmic lens assembly according to Claim 1, wherein the lens comprises an intraocular lens.

4. The ophthalmic lens assembly according to Claim 1, wherein the lens comprises a spectacle lens.

5. The ophthalmic lens assembly according to Claim 1, wherein the at least one antenna arrangement comprises one or more single-turn loop antennas.

6. The ophthalmic lens assembly according to Claim 5, wherein the one or more single-turn loop antennas each comprises a conductive wire coil.

7. The ophthalmic lens assembly according to Claim 5, wherein the one or more single-turn loop antennas each comprise a conductive trace on a circuit board.

8. The ophthalmic lens assembly according to Claim 5, wherein the one or more single-turn loop antennas each comprises a conductive trace directly on the lens.

9. The ophthalmic lens assembly according to Claim 5, wherein the one or more single-turn loop antennas each comprise a conductive trace on a substrate incorporated into a stacked die configuration.

10. The ophthalmic lens assembly according to Claim 1, wherein the at least one antenna arrangement comprises one or more multi-turn loop antennas.

11. The ophthalmic lens assembly according to Claim 10, wherein the one or more multi-turn loop antennas each comprise a conductive wire coil.

12. The ophthalmic lens assembly according to Claim 10, wherein the one or more multi-turn loop antennas each comprise a conductive trace on a circuit board.

13. The ophthalmic lens assembly according to Claim 10, wherein the one or more multi-turn loop antennas each comprise a conductive trace directly on the lens.

14. The ophthalmic lens assembly according to Claim 10, wherein the one or more multi-turn loop antennas each comprise a conductive trace on a substrate incorporated into a stacked die configuration.

15. The ophthalmic lens assembly according to Claim 1, wherein the at least one antennas arrangement comprises one or more spiral antennas.

16. The ophthalmic lens assembly according to Claim 15, wherein the one or more spiral antennas each comprise a conductive wire coil.

17. The ophthalmic lens assembly according to Claim 15, wherein the one or more spiral antennas each comprise a conductive trace on a circuit board.

18. The ophthalmic lens assembly according to Claim 15, wherein the one or more spiral antennas each comprise a conductive trace directly on the lens.

19. The ophthalmic lens assembly according to Claim 15, wherein the one or more spiral antennas each comprise a conductive trace on a substrate incorporated into a stacked die configuration.

20. The ophthalmic lens assembly according to Claim 1, wherein the at least one antenna arrangement comprises one or more tap points.

21. The ophthalmic lens assembly according to Claim 1, wherein the at least one antenna arrangement comprises a fractal design.

22. The ophthalmic lens assembly according to Claim 1, further comprising an insulating layer configured to protect the at least one antenna arrangement.

23. A lens assembly comprising:

a lens, including an optic zone for at least one of image enhancement, image capture and vision correction, and one or more electronic components for enabling image enhancement, image capture and vision correction; and

at least one antenna arrangement operatively associated with the one or more electronic components for providing at least one of one or two way communication with the one or more electronic components and power transfer.

24. A lens assembly comprising:

a lens, including an optic zone for at least one of image enhancement, image capture and vision correction; and

at least one antenna arrangement operative associated with the lens, wherein energization and de-energization of the at least one antenna arrangement causes a mechanical change in the lens.

CLAIMS:

1. An ophthalmic lens assembly comprising:

a lens configured for placement in at least one of the inside and proximate to a surface of an eye, the lens including an optic zone configurable for at least one of vision correction and vision enhancement, and one or more electronic components for enabling the vision correction and vision enhancement; and

at least one antenna arrangement operatively associated with the one or more electronic components for providing at least one of one or two way communication with the one or more electronic components and power transfer wherein the at least one antenna arrangement comprises:

a) one or more single-turn loop antennas wherein the one or more single-turn loop antennas each comprises a conductive

(i) wire coil; and

(ii) trace on a circuit board;

or

b) one or more multi-turn loop antennas; or

c) one or more spiral antennas.

2. The ophthalmic lens assembly according to Claim 1, wherein the lens comprises:

a) a contact lens; or

b) a spectacle lens; or

c) an intraocular lens.

3. The ophthalmic lens assembly according to Claim 1, wherein the one or more single-turn loop antennas each comprises a conductive trace either:

a) directly on the lens; or

b) on a substrate incorporated into a stacked die configuration.

4. The ophthalmic lens assembly according to Claim 1, wherein the one or more

multi-turn loop antennas each comprise:

a) a conductive wire coil; or
b) a conductive trace on a circuit board; or
c) a conductive trace directly on the lens or
d) a conductive trace on a substrate incorporated into a stacked die configuration.

5. The ophthalmic lens assembly according to Claim 1, wherein the one or more spiral antennas each comprise:

a) a conductive wire coil; or
b) a conductive trace on a circuit board; or
c) a conductive trace directly on the lens; or
d) a conductive trace on a substrate incorporated into a stacked die configuration.

6. The ophthalmic lens assembly according to Claim 1, wherein the at least one antenna arrangement comprises one or more tap points.

7. The ophthalmic lens assembly according to Claim 1, wherein the at least one antenna arrangement comprises a fractal design.

8. The ophthalmic lens assembly according to Claim 1, further comprising an insulating layer configured to protect the at least one antenna arrangement.