

What is Claimed:

1. A metal transaction card comprising:
at least one metal layer;
a biometric sensor;
5 one or more payment interface components configured to interface with
a card reader;
a secure element configured to exchange information with the card
reader pursuant to processing a financial transaction; and
at least one logic component connected to the biometric sensor and
10 configured to compare information detected by the biometric sensor to stored
information and to enable processing of the financial transaction only upon a
detected match between the detected and stored information.
2. The metal transaction card of claim 1, wherein one or more the
biometric sensor, the one or more payment interface components, the secure element,
15 and the at least one logic component are disposed on an inlay.
3. The metal transaction card of claim 2, further comprising at least
one non-metal layer disposed between a first surface of the inlay layer and the metal
layer.
4. The metal transaction card of claims 2 or 3, further comprising at
20 least one other layer assembled on a second surface of the inlay layer.
5. The transaction card of claim 1, wherein the one or more payment
interface components comprises a set of physical contacts configured to interface with
a card reader and accessible from a surface of the card.
6. The transaction card of claim 1, wherein the one or more payment
25 interface components comprises one or more antennae configured for contactless
communication with a card reader.
7. The transaction card of claim 1, wherein the one or more
antennae is configured for contactless communication with a card reader in the nature
of short-range wireless interconnection.
- 30 8. The transaction card of claim 1, wherein the one or more payment
interface components comprises a dual interface chip comprising a set of physical
contacts configured to interface with a card reader and accessible from a surface of the
card, one or more antennae configured for contactless communication with a card
reader, and the secure element in a single integrated payment module.
- 35 9. The transaction card of claim 5, wherein the at least one logic
component further comprises the secure element connected to the set of physical
contacts.

10. The transaction card of claim 9, wherein the at least one logic component comprises the secure element, a microprocessor configured to compare information detected by the biometric sensor to stored information, computer memory for storing the stored information, and one or more antennae configured for contactless communication with a card reader in a single integrated secure processing module.

11. The transaction card of any one of the foregoing claims, further comprising at least one opening in the metal layer.

12. The transaction card of claim 11, wherein the one or more payment interface components configured to interface with a card reader comprises contacts accessible through the at least one opening.

13. The transaction card of claims 11 or 12, wherein the biometric sensor is accessible through the at least one opening.

14. The transaction card of any one of the foregoing claims, wherein the biometric sensor is a fingerprint sensor.

15. The transaction card of any one of the foregoing claims, wherein the biometric sensor comprises an image capture device.

16. The transaction card of claim 1, wherein the biometric sensor is configured to detect a change in reflected radiation corresponding to biometric user information.

20. The transaction card of claim 16, wherein the biometric sensor is an ultrasonic fingerprint sensor.

18. The transaction card of claims 16 or 17, wherein the biometric sensor is not visible from an outer surface of the card.

25. The transaction card of claim 18, further comprising visible indicia on an outer surface of the card aligned with the biometric sensor to signify a lateral location of the sensor relative to a periphery of the card.

20. A method for making a transaction card, the method comprising the steps of:

- (a) providing at least one metal layer;
- (b) providing an inlay layer comprising a biometric sensor, one or more payment interface components configured to interface with a card reader; a secure element configured to exchange information with the card reader pursuant to processing a financial transaction; and at least one logic component connected to the biometric sensor and configured to compare information detected by the biometric sensor to stored information and to enable processing of the financial transaction only upon a detected match between the detected and stored information;

(c) assembling the card with the biometric sensor and the one or more payment interface components in communication with the inlay and configured to obtain transaction information and biometric information originating from a location on or above the metal layer.

5 21. The method of claim 20, further comprising the steps of:

(d) providing at least one non-metal layer;

(e) providing at least one other layer;

(f) disposing the at least one non-metal layer between a first surface of the inlay layer and the at least one metal layer and disposing the at least one
10 other layer on a second surface of the inlay layer.

22. The method of claims 20 or 21, further comprising creating one or more openings in the metal layer.

23. The method of claim 22, wherein the one or more payment interface components comprises a set of physical contacts configured to interface with
15 a card reader and accessible from a surface of a finished card, and creating at least one opening in the metal layer aligned with the set of physical contacts .

24. The method of claim 23, comprising at least one non-conductive adhesive layer in contact with an underside of the at least one metal layer, wherein the non-conductive adhesive fills a peripheral gap between the opening in the metal layer
20 and the one or more payment interface components, including the set of physical contacts, in a finished card, said non-conductive adhesive operable to isolate the one or more payment interface components from the metal layer electrically, magnetically, or a combination thereof.

25. The method of claim 22, comprising creating at least one opening
25 in the metal layer aligned with the biometric sensor.

26. The method of claim 25, comprising at least one non-conductive adhesive layer in contact with an underside of the at least one metal layer, wherein the non-conductive adhesive fills a peripheral gap between the opening in the metal layer
30 and the biometric sensor in a finished card, said non-conductive adhesive operable to isolate the biometric sensor from the metal layer electrically, magnetically, or a combination thereof.

27. The method of claim 23, comprising creating at least one opening in the metal layer aligned with the biometric sensor.

28. The method of claim 27, comprising at least one non-conductive
35 adhesive layer in contact with an underside of the at least one metal layer, wherein the non-conductive adhesive fills a first peripheral gap between a first opening in the metal layer, including the set of physical contacts, and a second peripheral gap between a

second opening in the metal layer and the biometric sensor in a finished card, said non-conductive adhesive operable to isolate the one or more payment interface components and the biometric sensor from the metal layer electrically, magnetically, or a combination thereof.

5 29. The method of any one of claims 20-28, wherein the step of assembling the card comprises a hot lamination step.

 29. The method of any one of claims 20-29, wherein the step of assembling the card comprises a cold lamination step.

10 30. A method for making a transaction card, the method comprising the steps of:

 (a) providing at least one metal layer;

 (b) creating a plurality of openings in the metal layer, and a plurality of grooves in the metal layer connecting respective openings;

15 (c) inserting in respective openings of the plurality of openings each of a plurality of electronic components, the plurality of electronic components comprising:

 a biometric sensor configured to obtain biometric information originating from a location on or above the metal layer,
 one or more payment interface components configured to
20 interface with a card reader and configured to obtain transaction information originating from a location on or above the metal layer,

 a secure element configured to exchange information with the card reader pursuant to processing a financial transaction, and
25 at least one logic component configured to communicate with the biometric sensor and to compare information detected by the biometric sensor to stored information and to enable processing of the financial transaction only upon a detected match between the detected and stored information;

30 (d) creating electrical connections among predetermined inputs and outputs of the electronic components, the electrical connections comprising metallic traces disposed in the plurality of grooves.