What is claimed is:

1. A storage system comprising:

a memory resource component structured to persistently store a sensitive dataset;

a controller including a telephonic receiver and being coupled to the memory resource component, the controller being structured to physically switch the memory resource component between an unconnected state and a connected state, wherein in the unconnected state, the memory resource component is not physically connected to a data network by way of an air gap to prevent unauthorized access to the memory resource component, and wherein in the connected state, the memory resource component is physically connected to the data network by closing the air gap;

wherein in response to receiving a telephone call via the telephonic receiver on a phone number that is associated with the memory resource component, the controller implements an authentication process to (i) physically switch the memory resource component from the unconnected state to the connected state by mechanically closing the air gap, and (ii) maintain the memory resource component in the connected state for a given duration; and

wherein the controller enables at least one of a read or write operation while the memory resource component is in the connected state for the given duration.

2. The storage system of claim 1, wherein the given duration coincides with at least one of (i) a length of the telephone call, (ii) a predetermined duration, or (iii) an occurrence of a predetermined start and ending event.

3. The storage system of claim 1, wherein memory resource component is

dedicated for at least one of a user or an account number.

4. The storage system of claim 1, wherein the memory resource component includes a collection of memory cells, each memory cell having a physical characteristic of persistently maintaining an assigned bit state without electrical input.

5. The storage system of claim 1, wherein the controller causes the memory resource component to remain in the connected state based at least in part on a length of the telephone call.

6. The storage system of claim 1, wherein the controller implements the authentication process by implementing a security policy using information received with the telephone call, and wherein the controller provides an electrical input to the memory resource component in response to the controller implementing the security policy to authorize the telephone call.

7. The storage system of claim 6, wherein the controller implements the security policy by authenticating a source of the telephone call.

8. The storage system of claim 6, wherein the information received with the telephone call includes credential input provided by a caller.

9. The storage system of claim 1, wherein the controller physically switches the memory resource component from the unconnected state to the connected state in response to receiving input data corresponding to a personal identification number (PIN) via the telephone call.

10. The storage system of claim 1, wherein the telephonic receiver comprises a digital or analog telephone interface.

11. A method for operating a storage system, the method comprising:

receiving, via a telephonic receiver of the storage system, an incoming telephone call from a caller;

selecting a memory resource component from an array of memory components based at least in part on the incoming telephone call; and

in response to receiving the incoming telephone call, implementing an authentication process to physically switch the memory resource component from an unconnected state to a connected state, wherein in the unconnected state, the memory resource component is not physically connected to a data network by way of an air gap to prevent unauthorized access to the memory resource component, and wherein in the connected state, the memory resource component is physically connected to the data network by mechanically closing the air gap;

wherein when the memory resource component is physically switched to the connected state based at least in part on receiving the incoming telephone call, the memory resource component is accessible over the data network to the caller.

12. The method of claim 11, further comprising:

authenticating the caller of the incoming telephone call; and

upon authenticating the caller, providing access to the memory resource component for a given duration.

13. The method of claim 12, wherein authenticating the caller includes using caller information provided with the incoming telephone call to authenticate the

caller.

14. The method of claim 11, further comprising:

maintaining the memory resource component in the connected state for a duration that is based on a length of the incoming telephone call.

15. The method of claim 11, further comprising:

maintaining the memory resource component in the connected state for a duration that is predetermined.

16. The method of claim 11, further comprising:

maintaining the memory resource component in the connected state for a duration that is based on a predetermined start and ending event.

17. The method of claim 11, wherein physically switching the memory resource component from the unconnected state to the connected state is performed in response to receiving input data corresponding to a personal identification number (PIN) via the telephone call.

18. The method of claim 11, wherein the incoming telephone call is received via a digital or analog telephone interface of the telephonic receiver.