



Security / Surveillance Tutorial

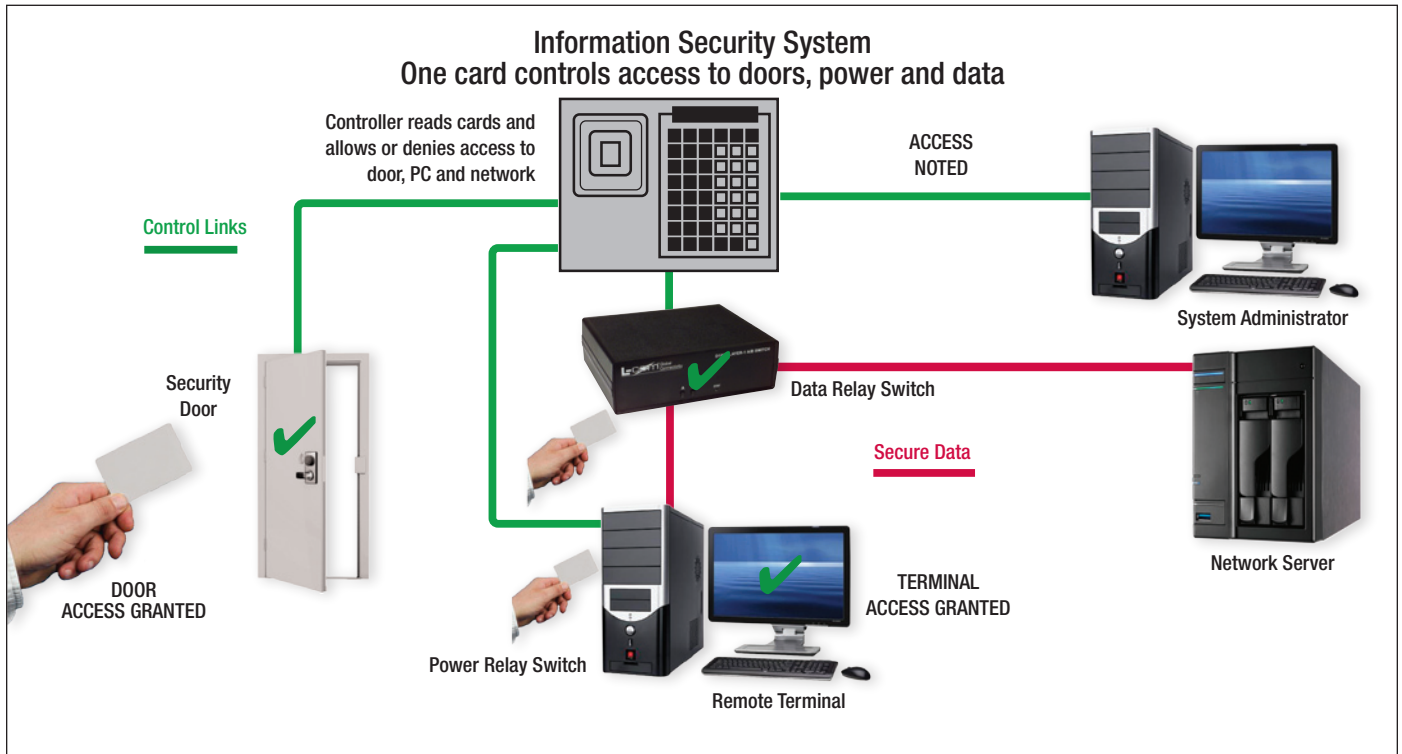
Physical Layer Air Gap Network Switch Overview Air-Gap Network Switches = Secure Hardware Access Control

Unauthorized access to private networks presents the greatest security threat to any organization that deals in sensitive or classified data. Theft of classified information and trade secrets, corruption of data and unauthorized control of automated systems relentlessly challenge security officers and network administrators.

Hardware security centers on the control of the wired and wireless connections at the edges of

networks and systems that tie their elements together. These solutions are air-gap switches that open and close those connections. Whether the switches are controlled manually or automatically, their points of connection to the systems and networks they protect are managed with the absolute assurance of hardware that cannot be breached by unauthorized personnel through the communications channel that passes through the switch.

Hardware security solutions are traditionally applied to the control of physical spaces like buildings, laboratories and data centers. Card and key fob credentials are commonly used to gain access to those spaces. The same credentials can be used to control access to electronic and optical data streams when specialized hardware is integrated with an air gap network switch.



Optional Product Features

Ethernet IP Access/Control



Allows IP access to an Ethernet network for monitoring and control

Serial Access/Control



Allows RS232 serial access for monitoring and control

Latching or Non-Latching



Non-Latching versions provide automatic fail-over to the default port A to C connection state when power fails or is removed

Item #	Description	List Price
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L-com Category 6 A/B Physical Layer Air Gap Network Switch Boxes

L-com's Category 6 A/B Network Switches are a physical layer hardware solution which supports a variety of applications including secure or simple desktop network resource sharing, disaster recovery, network access control, and auto fail-back. These switch boxes feature a unique relay technology that supports the switching mechanism. Additionally, all units incorporate technology that enables these switch boxes to operate independent of data rates, protocol and formats. This allows them to pass 10/100/1000Mbps, 10Gbps, and other future, high speed data rates. Non-latching or latching relay configurations are available. The non-latching units provide automatic fail-over to the default Port A to C connection state when power fails or is removed. Latching relays provide the benefit of maintaining the flow of data between the connected devices even when power is removed. **Note:** The Ethernet models may be controlled via telnet, web browser or SNMP. Ships with a universal 12V DC power supply with four different style country plugs.

L-com Category 6 A/B Physical Layer Air Gap Network Switch Boxes (RJ45 Ports)

LC-SNSW-C6-L	L-com Cat6 A/B Network Switch - Latching	363.40
LC-SNSW-C6	L-com Cat6 A/B Network Switch - Non-Latching	363.40
LC-SNSW-C6-LSC	L-com Cat6 A/B Network Switch with Serial Control - Latching	391.68
LC-SNSW-C6-SC	L-com Cat6 A/B Network Switch with Serial Control - Non-Latching	391.68
LC-SNSW-C6-LEC	L-com Cat6 A/B Network Switch with Ethernet Control - Latching	505.92
LC-SNSW-C6-EC	L-com Cat6 A/B Network Switch with Ethernet Control - Non-Latching	505.92

L-com Fiber Optic A/B Physical Layer Air Gap Network Switch Boxes (Multimode and Single mode)

L-com's fiber optic A/B Network Switches support a variety of switching, or access and control applications all in a compact desktop enclosure. These applications include disaster recovery, air gapped network access control, desktop switching, and secure switching. The fiber optic switch boxes utilize special optical switching mechanisms that redirect the light beams between selected ports. There is no optical-to-electrical-to-optical conversion needed. Because of this, these switches are able to support any data rate, format, or protocol that can be sent over fiber optic cables that are attached to the switch. The multimode fiber switch models support any/all wavelengths from 800 to 1600nm, while the single mode fiber switches support 1310 and 1550nm wavelengths. Non-latching or latching relay configurations are available. The non-latching units provide automatic fail-over to the default Port A to C connection state when power fails or is removed. Latching versions provide the benefit of maintaining the flow of data between the connected devices even when power is removed. **Note:** The Ethernet models may be controlled via telnet, web browser or SNMP. Ships with a universal 12V DC power supply with four different style country plugs.

L-com Multimode Fiber A/B Physical Layer Air Gap Network Switch Boxes (Duplex SC Connectors)

LC-SNSW-FMMSCL	L-com Multimode SC Fiber A/B Switch - Latching	823.62
LC-SNSW-FMMSCL	L-com Multimode SC Fiber A/B Switch - Non-Latching	823.62
LC-SNSW-FMMSCLSC	L-com Multimode SC Fiber A/B Switch with Serial Control - Latching	851.91
LC-SNSW-FMMSCLSC	L-com Multimode SC Fiber A/B Switch with Serial Control - Non-Latching	851.91
LC-SNSW-FMMSCL-LEC	L-com Multimode SC Fiber A/B Switch with Ethernet Control - Latching	961.80
LC-SNSW-FMMSCL-EC	L-com Multimode SC Fiber A/B Switch with Ethernet Control - Non-Latching	961.80

L-com Multimode Fiber A/B Physical Layer Air Gap Network Switch Boxes (Duplex ST Connectors)

LC-SNSW-FMMST-L	L-com Multimode ST Fiber A/B Switch - Latching	823.62
LC-SNSW-FMMST-L	L-com Multimode ST Fiber A/B Switch - Non-Latching	823.62
LC-SNSW-FMMST-LSC	L-com Multimode ST Fiber A/B Switch with Serial Control - Latching	851.91
LC-SNSW-FMMST-LSC	L-com Multimode ST Fiber A/B Switch with Serial Control - Non-Latching	851.91
LC-SNSW-FMMST-L-LEC	L-com Multimode ST Fiber A/B Switch with Ethernet Control - Latching	961.80
LC-SNSW-FMMST-L-EC	L-com Multimode ST Fiber A/B Switch with Ethernet Control - Non-Latching	961.80

L-com Multimode Fiber A/B Physical Layer Air Gap Network Switch Boxes (Duplex LC Connectors)

LC-SNSW-FMMLC-L	L-com Multimode LC Fiber A/B Switch - Latching	1027.08
LC-SNSW-FMMLC-L	L-com Multimode LC Fiber A/B Switch - Non-Latching	1027.08
LC-SNSW-FMMLC-LSC	L-com Multimode LC Fiber A/B Switch with Serial Control - Latching	1054.28
LC-SNSW-FMMLC-LSC	L-com Multimode LC Fiber A/B Switch with Serial Control - Non-Latching	1054.28
LC-SNSW-FMMLC-L-LEC	L-com Multimode LC Fiber A/B Switch with Ethernet Control - Latching	1165.26
LC-SNSW-FMMLC-L-EC	L-com Multimode LC Fiber A/B Switch with Ethernet Control - Non-Latching	1165.26

L-com Single mode Fiber A/B Physical Layer Air Gap Network Switch Boxes (Duplex SC Connectors)

LC-SNSW-FSMSC-L	L-com Single mode SC Fiber A/B Switch - Latching	1284.94
LC-SNSW-FSMSC-L	L-com Single mode SC Fiber A/B Switch - Non-Latching	1284.94
LC-SNSW-FSMSC-LSC	L-com Single mode SC Fiber A/B Switch with Serial Control - Latching	1312.14
LC-SNSW-FSMSC-LSC	L-com Single mode SC Fiber A/B Switch with Serial Control - Non-Latching	1312.14
LC-SNSW-FSMSC-L-LEC	L-com Single mode SC Fiber A/B Switch with Ethernet Control - Latching	1426.38
LC-SNSW-FSMSC-L-EC	L-com Single mode SC Fiber A/B Switch with Ethernet Control - Non-Latching	1426.38

L-com Single mode Fiber A/B Physical Layer Air Gap Network Switch Boxes (Duplex ST Connectors)

LC-SNSW-FSMST-L	L-com Single mode ST Fiber A/B Switch - Latching	1284.94
LC-SNSW-FSMST-L	L-com Single mode ST Fiber A/B Switch - Non-Latching	1284.94
LC-SNSW-FSMST-LSC	L-com Single mode ST Fiber A/B Switch with Serial Control - Latching	1312.14
LC-SNSW-FSMST-LSC	L-com Single mode ST Fiber A/B Switch with Serial Control - Non-Latching	1312.14
LC-SNSW-FSMST-L-LEC	L-com Single mode ST Fiber A/B Switch with Ethernet Control - Latching	1426.38
LC-SNSW-FSMST-L-EC	L-com Single mode ST Fiber A/B Switch with Ethernet Control - Non-Latching	1426.38

L-com Single mode Fiber A/B Physical Layer Air Gap Network Switch Boxes (Duplex LC Connectors)

LC-SNSW-FSMLC-L	L-com Single mode LC Fiber A/B Switch - Latching	1487.31
LC-SNSW-FSMLC-L	L-com Single mode LC Fiber A/B Switch - Non-Latching	1487.31
LC-SNSW-FSMLC-LSC	L-com Single mode LC Fiber A/B Switch with Serial Control - Latching	1514.51
LC-SNSW-FSMLC-LSC	L-com Single mode LC Fiber A/B Switch with Serial Control - Non-Latching	1514.51
LC-SNSW-FSMLC-L-LEC	L-com Single mode LC Fiber A/B Switch with Ethernet Control - Latching	1625.49
LC-SNSW-FSMLC-L-EC	L-com Single mode LC Fiber A/B Switch with Ethernet Control - Non-Latching	1625.49

