Liberty

Liberty's Adapter Security System

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Some key questions that led to the creation of the Adapter Security System.

(1)   Do your clients have conference rooms and presentation applications where people bring their own devices (BYOD) to the event and need to connect to display content?

(2)   Do you find yourself having to replace adapters again and again because they walk away with the presenter?

If you answered yes to either question, then Liberty's Adapter Security System is the product for you. This system uses a couple of security features to prevent theft and make it easy to customize. First the cable itself is locked into the metal clamp with a Torx® Pin drive screw, necessitating a not-so-common tool to detach the cable. We carried that same security screw to the clamps. We designed the clamp to look like the typical ferrite choke you find on VGA cables and it is applied behind the head of the HDMI® cable used in the infrastructure. The clamp is provided with 2 sets of foam rubber inserts to allow you to size the clamp to the HDMI cable in use. The aircraft grade stainless steel wire completes the system, it can be cut by a determined thief, but it will damage most cutters used for copper cabling.

Liberty patented this design and system, US Patent 9,784,338. We expanded the lineup of adapters and added a clamp for Apple® and other dongle type adapters. That Apple clamp can be used to add any other adapter cable that has a cable body with a diameter between 3.5 and 5.5mm. You will find a table at the end of the document listing what we have to offer to make your Keychain complete.

We listen to our customers and their suggestions and feedback. The first changes we've made are slimmer adapters with 4-way eyelets. These new slimmer designs are shipping now. The 4-way eyelet allows you to configure the feed of the security wire. Depending on your application, the wire feed will permit the adapter to lay flat. The slimmer design allows your tablets and smartphones to lay flat on a surface. Unfortunately, we are limited by the requirements of the full-sized HDMI "A" receptacle, so we can't get much thinner on the hard adapters.

We have a solution though for those very thin BYOD products! We address those very thin tablets and smart phones with cable versions of each adapter, commonly called dongles. These have very low profile molded mini connectors on a short flexible cable, permitting both a flat lay and preventing the heavy HDMI infrastructure cable from stressing out the connector. We also revised these to have an overall length of around 5 inches.

Speaking about the connector stress, sometimes these adapters do break. They are designed that way to protect the ports on your client's devices. It is a much better scenario for an inexpensive adapter to break instead of your client's brand-new tablet or PC. We keep a large stock on hand for repair and replacement. These do have a 1000 mating cycle lifespan recommendation. We do not warrant the individual adapters for breakage as the use pattern is as an expendable component. Breakage can be minimized by designing the installation to support the cable and the presentation device in a manner to reduce stress on the connector.

Liberty has a special configuration tool on our website where you can choose the adapters you want on your adapter security configuration. A custom part number will be assigned for you and you can label the product with your company's information for marketing and service purposes. Standard non-custom configurations will start with part numbering sequence "DL-AR*". The configurator is here: https://secure.libertycable.com/configurator/adapter-ring2.0

Don't forget your tools! The Torx™ Pin Drive security screw needs a special tool to open and configure your adapter. Liberty item T10PD is a kitted set of a Torx™ Pin Driver and a 1.5mm Hex wrench. That is all you need to configure your adapter ring. With our changes the 1.5mm hex wrench is no longer needed however for legacy installs we are keeping it together.

Add other adapters! Make it a VGA solution instead of an HDMI solution! We have special small clamps under part number DL-AP2 that will allow you to attach any other dongle to the security ring. All you need is the Torx™ Pin Driver to assemble. They fit any other adapters with the same small cable format and we already have customers who have created a VGA ring of dongles.

The standard adapter is rated for WUXGA/1080P, we do have 4K formats for USB C, DisplayPort and Mini-DisplayPort. The passive HDMI size adapters will support any HDMI signal sent across them, but keep in mind that junctions on high frequency signals do limit lengths on the attached cables.

Some helpful hints in deploying the Adapter Security System:

(1)   The mating cable to a 4K adapter should be kept short, 10 feet or less. HDMI Premium® certified cables will work to 15 feet.

(2)   Adapters work best when they are direct from the source to the display or projector. Ancillary equipment between the two can introduce other variables and that link should be thoroughly tested and vetted before implementation.

(3)   Active Optical Cables are not recommended for use with the 4K or active DisplayPort and Mini-DisplayPort adapters, they need power and so does the adapter. Having 2 power draws on one port can cause system issues.

(4)   Active Copper cables are not recommended as most use the RedMere/Spectra7 technology. This technology is not compatible with the chipset used in 4K adapters and dongles. Ensure you test first before rolling out if using active copper cables.

(5)   The USB C adapters use ALT-DP mode, ensure the source device supports ALT-DP. Not all sources support ALT-DP mode and sometimes only one port on the PC will support ALT-DP mode.

(6)   Smaller format connectors such as mini-DisplayPort, HDMI C and HDMI D are best served with the dongles instead of adapters to prevent stress.

(7)   If you deploy a lot of these, keeps some spares on hand to service the clients. These are consumable units and should be on a preventive maintenance schedule.

Here is a part number listing of the entire Adapter Security System.

ITEM_NBR	DESCRIPTION
Hard Adapters	
ARDPHD	DisplayPort Male to HDMI Female adapter
ARMCHD	Mini "C" HDMI Male to HDMI Female adapter
ARMDHD	Micro "D" HDMI Male to HDMI Female adapter
ARMDPHD	Mini-DisplayPort Male to HDMI Female adapter
ARDP4KHF	DisplayPort Male to HDMI Female adapter 4K (Firmware updateable)
ARMDP4KHF	Mini-DisplayPort Male to HDMI Female adapter 4K (Firmware updateable)
ARUCMHDF	USB "C" male to HDMI Female adapter (Firmware updateable)
Flexible Adapter Cables (Dongles)	
AR-DPM-HDF	DisplayPort Male to HDMI Female Dongle
AR-DVM-HDF	DVI-D Single Link Male to HDMI Female Dongle
AR-MCHM-HDF	Mini "C" HDMI Male to HDMI Female Dongle
AR-MDHM-HDF	Micro "D" HDMI Male to HDMI Female Dongle
AR-MDPM-HDF	Mini-DisplayPort Male to HDMI Female Dongle
AR-SLPT-HDF	SlimPort® (Micro USB) Male to HDMI Female Dongle **(Discontinued, stock is depleting)**
AR-UCM-HDF	USB "C" male to HDMI Female Dongle (Firmware updateable)
AR-DP4K-HDF	DisplayPort Male to HDMI Female Dongle 4K (Firmware updateable)
AR-MDP4K-HDF	Mini-DisplayPort Male to HDMI Female Dongle 4K (Firmware updateable)
Accessories and Tools	
T10PD	Security Adapter Tool Kit with T-10 Pin Driver and 1.5mm Hex Wrench
DL-AP2	Security Adapter Small Clamp to attach other dongles to the Adapter Ring
DL-CL2	Main Security Clamp with hardware, foam inserts and security wire
Apple™ Adapters (A DL-AP2 needed for each one)	
MD826AM/A	Apple™ Lightning Male to HDMI Female Dongle
MUF82AM/A	Apple™ USB "C" to Multimedia HDMI female Dongle
Most Popular Pre-Configured Formats	
DL-ARD	Adapter Ring with DP, Mini-DP, and USB C adapters
DL-ARDD	Adapter Ring with DP, Mini-DP, and USB C dongles
DL-ARDA	Adapter Ring with DP, Mini-DP, USB C, Apple Lightning, Apple USB C dongles
DL-AR2832	Adapter Ring with DP, Mini-DP, and Apple USB C dongles
DL-AR2950	Adapter Ring with DP, Mini-DP, Mini C HDMI adapters and Apple USB C dongle
DL-AR1942	Adapter Ring with DP, Mini-DP, USB C, and Apple Lightning dongles
Need to add a VGA Solution?	
AR-VMU-HDF	VGA+USB to HDMI Female Dongle