

eEnabled Solutions for Memory Cards and USB Sticks

Cyber secure, streamlined alternative to physical media distribution for data loading

- Secure
- Reliable
- Plug and Play
- Operational flexibility
- Streamline data load processes, reducing total costs

Description

Physical media usage is time-consuming manual work, relying on media with no inherent security controls. MBS provides solutions to overcome these issues related to physical media usage, through innovative MBS memory card emulator products and a Card Read/Writer, all of which interface the mini PDL- Pad to LRUs which are normally loaded with physical media (PCMCIA, CF, USB).

LRU data, stored on the software management system FLS-Desk, can be automatically transferred via Ethernet, Cellular, or Wi-Fi worldwide, to the mini PDL-Pad and stored in its internal repository, from where it can be loaded into LRUs under software control. After loading, the information is transferred back to the FLS-Desk where the load status of each aircraft is maintained.

Introduction of additional security, via Boeing UANSOG and ARINC 645-1/667-3, impacts the airlines ability to use physical media to load LRUs that do not have signature checking capability. By using the memory card emulator products in conjunction with an A645-1 compliant mini PDL-Pad digital signatures can be validated prior to connecting the emulator to the target LRU ensure the authenticity and integrity of the media.

For memory cards needing to remain on the aircraft during flight, stored data can be downloaded with the Card Read/Writer and automatically sent to the FLS-Desk. The card will be formatted and can be replaced into the aircraft. When an update is required, the content can be selected using the mini PDL-Pad, changes made to the card and the card retained in the aircraft.

This proven approach provides a complete end to end system to manage the acquisition, distribution, loading and monitoring of databases and FLS and eliminate, or significantly reduce, unreliable physical media from the data loading process

MBS Emulators

Features:

- 64MB PCMCIA Linear Memory Emulation
- 2GB PCMCIA ATA and Compact Flash Emulation
- 32GB USB Emulation
- Verification of emulator contents prior to connecting to LRU
- Type II PCMCIA Interface (Linear Memory/ATA Emulator)
- CF Spec 4.1 Compliant Interface (CF Emulator)





- USB 2.0 Compliant Interface (USB Emulator)
- Ability to load terrain databases to LRUs such as EGPWS MKV, MKV-A, T2CAS and T3CAS
- Ideal backup system for eEnabled aircraft (USB Emulator)

Benefits:

- Increased security and control
- Reduced media processing and administration efforts
- Flexibility through instant availability of media worldwide via synchronization of the mini PDL-Pad
- Streamlining data loading processes
- Remote monitoring of aircraft updates and configuration, previously not possible with physical media data loading
- All physical media and field loadable software distribution monitoring in **one** system
- Eliminates reliance on legacy memory cards
- Emulator contents are verified at load time to avoid potential mistakes
- Single Emulator to Support PCMCIA ATA and Compact Flash
- The USB Emulator is a standard feature of the mini PDL-Pad

MBS CF/PCMCIA ATA Card Read/Writer

Features:

- Type II PCMCIA Interface
- CF Spec 4.1 Compliant Interface via provided adapter
- Verification of card contents
- Download data from PCMCIA ATA and CF remaining on the aircraft e.g. WQAR
- Update of PCMCIA ATA and CF cards remaining on the aircraft e.g. IPRAM
- Update the Rockwell Collins HDD-2000 for data loading the MAT-2000 on B777

Benefits:

- Increased security and control
- Removal of back office task of duplicating multiple memory card copies
- Reduce administration required to securely transport memory cards
- Electronic distribution of relevant data, removing slow physical media distribution
- Ability to monitor and administer data updates through the FLS-Desk
- Immediate worldwide access to the collected data, via the FLS-Desk
- Access to WQAR data in case of loss of aircraft wireless connectivity

Memory Card Emulator Family and Read/Writer Card Ordering Information

Part Number	Description
AE-PCMCIA-LM	PCMCIA Linear Memory Emulator Interfaces to the mini PDL-Pad Data Loader for emulating PCMCIA Linear Flash Cards
AE-PCMCIA-CF-ATA	PCMCIA ATA/Compact Flash Emulator Interfaces to the mini PDL-Pad Data Loader for emulating PCMCIA ATA Cards and Compact Flash Cards
AE-CF-ATA-RW	Card Read/Writer for PCMCIA ATA/Compact Flash remaining on the aircraft during flight

MBS Electronic Systems GmbH & Co. KG Friedrichshafener Straße 3 D- 82205 Gilching Tel.: +49 (0) 8105/7756900 info@mbs-electronics.com www.mbs-electronics.com



