Certificate of Volatility

Model Number: EMD2000SE-DP-T

Product Name: Emerald SE DisplayPort Transmitter

Authorized Manufacturer: Black Box Corporation
2701 Dallas Pkwy
Plano , TX 75093
USA
877-877-2269

Statement of Volatility:
The Emerald SE DisplayPort Single Head Transmitter comprises an applications processor with integrated USB and Ethernet peripherals, FLASH memory, DDR3 memory, power management integrated circuits, an FPGA, USB transceivers, and an Ethernet transceiver. The unit contains both volatile and non-volatile memory components. Volatile memory loses its contents when power is removed, while non-volatile memory retains its contents after power removal.

Volatile Memory

This memory is used during normal system operation and does not actively retain its contents when power is removed from the unit.

Type: Processor L1 Instruction Cache
Size: 32 KB

Type: Processor L1 Data Cache
Size: 32 KB

Type: On-Chip Memory (OCM)
Size: 256 KB

Type: Processor Unified L2 Cache
Size: 512 KB
These memory elements are used during normal processor operation and system bootup. They are volatile and do not actively retain their contents when the unit is powered off.

System Memory
Type: DDR3 SDRAM
Size: 1 GB

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The system memory is used for normal processor operations. During startup, firmware is loaded from FLASH memory into DDR3 memory and executed from there. This memory is volatile and does not actively retain its contents when power is removed.

FPGA Internal Memory
Type: FPGA Configuration Memory
The FPGA primarily manages video and audio functions within the unit. It contains internal volatile memory used to store FPGA configuration data during operation. This memory does not retain its contents when power is removed.

Non-Volatile Memory

Serial PROM
T**Type:** Serial PROM
Size: 2 Kbit
This memory contains device identification and manufacturing information. It is factory programmed, contains no user data, and retains its contents when power is removed.

Main Firmware Storage
Type: FLASH Memory
Size: 4 Gbit
This memory stores the operating firmware required for system functionality, including FPGA programming code. It is non-volatile and retains its contents when power is removed. The FLASH memory supports field firmware upgrades through the Ethernet connection using Boxilla Manager and through USB connections via an Emerald Receiver OSD. The memory may contain user configuration and access-related information, and user-configurable data may be cleared by performing a factory reset.

Video Configuration Memory
Type: SPI Flash
Size: 2 Mbit
This memory stores configuration information for the DisplayPort Video IC. It is factory programmed, contains no user data, and is non-volatile.

Authorized signature D. Shamir
David Shamir, Vice President Product Management
Date: September 25,2026
Place: Plano, TX, USA