Certificate of Volatility

Model Number: EMD2002SE-DP-R

Product Name: Emerald SE DisplayPort Receiver Dual Head

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

Statement of Volatility:
The Emerald SE DisplayPort Dual Head Receiver 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

Type: DDR3 System Memory
Size: 1 GB
The system memory is loaded with the program code from FLASH memory during power-up and is used for normal program execution. It is volatile and does not actively retain its contents when power is removed.

Type: FPGA Internal Memory
Size: Configuration Memory
The FPGA contains internal volatile memory used to store FPGA configuration data. This memory does not retain its contents when power is removed.

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Non-Volatile Memory
Main Firmware Storage
This memory stores firmware used to control the functionality of the unit, including FPGA programming code. It is non-volatile and retains its contents when power is removed.
Type: FLASH
Size: 4 Gbit
The firmware is field-upgradable via the Ethernet connection using Boxilla Manager or via USB through an Emerald Receiver OSD. User-accessible configuration data may be cleared by performing a factory reset.

Device Identification Memory
This memory contains device-specific manufacturing information. It is programmed during manufacturing and contains no user data.
Type: Serial PROM
Size: 2 Kbit

Video Configuration Memory
This memory contains DisplayPort video IC configuration information for Video Head 1.
Type: SPI Flash
Size: 2 Mbit
This memory is programmed during manufacturing and contains no user data.

Video Configuration Memory
This memory contains DisplayPort video IC configuration information for Video Head 2.
Type: SPI Flash
Size: 2 Mbit
This memory is programmed during manufacturing and contains no user data.

Power Management Circuitry
The power management circuitry contains configuration registers used for device operation. These registers are factory programmed and do not contain user data.

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