



VOLATILE & NON-VOLATILE MEMORY USED IN LUMISTAR PRODUCTS

Lumistar uses a few components to store configuration, calibration, and set up information in our products.

None of these memories ever store received information. No PCM data is ever retained in the devices; it is either passed out – or if it is stored, it is archived on a separate media drive.

Below is a list of components which contain memory and their purpose; followed by a table of Lumistar part numbers and the memory components it contains.

VOLATILE MEMORY

SRAM – Used for storage during data processing, and boot up of the product.

DDRAM – Used for storage during data processing, and boot up of the product.

DSP – The Digital Signal Processing chip has 32 kb of internal SRAM memory.

To clear volatile memory, remove power from the device.

NON-VOLATILE MEMORY

PCI – EEPROM with 1 kb of memory used to interface with the PLX PCI bridge chip.

FPGA – 16 kb of internal memory used during the loading of the FPGA except for the LS-35 product has large digital processing and has up to 13.4 Mb of internal memory.

EEPROM – 1 kb of memory used to store set up, calibration, serial number and other information unique to that product.

CPLD – Used for sequential boot up of components in densely populated products.

Clearing non-volatile memory will cause the product to not work. You can clear non-volatile memory by using a very strong magnetic field, but again – NO RECEIVED DATA IS STORED OR RETAINED IN LUMISTAR CARD LEVEL PRODUCTS. No user accessible NVram.

MEDIA

Lumistar Card Level Products do not have any media devices – tape, floppy, or CD-DVD drives, hard drives, USB, memory cards or removable flash drives.

Lumistar does integrate its card level products into computer chassis that do contain floppy, and/or CD-DVD drives, hard drives, USB, memory cards or removable flash drives.

MEMORY USED VS. PRODUCT TYPE

PRODUCT	SRAM	DDRAM	DSP	PCI	FPGA	EEPROM	CPLD
LS-11 Test TX	128 kb		256 kb RAM 8 kb flash		16 kb 1 kb Flash	512 kb	
LS-22 Display	256 kb Per Ch			1 kb	16 kb 1 kb Flash	1 kb	
LS-25/27 Receivers			5 kb RAM 64 kb flash	1 kb	16 kb 1 kb Flash	1 kb	
LS-26 Airborne	32 kb		5 kb RAM 64 kb flash			1 kb	
LS-35 IF RCVR		512 Mb X2		1 kb	Up to 13.4 Mb		32 kb
LS-38/58 IF RCVR	128 kb		5 kb RAM 64 kb flash	1 kb			16 kb
LS-40 Bit Sync			5 kb RAM 64 kb flash		16 kb 256kb Flash	1 kb	
LS-50/55 Decom	4 Mb			1 kb	16 kb 512kb Flash	2 kb	
LS-69 Routing					16 kb 256kb Flash		
LS-70/77 Simulator	4 Mb			1 kb	16 kb 256kb Flash	2 kb	
LS-71 DAC	2 Mb			1 kb	16 kb 512kb Flash	1 kb	

The LS-35 houses two FPGA devices of either SX50 or SX95 style, and the total amount of memory depends upon the card build.

The LS-28 Receiver Series consist of LS-25 or LS-27 RF receiver/down converts with LS-35 IF receivers and usually LS-69 routing cards housed in a variety of chassis.