



**10503 Timberwood Circle
Suite 120
Louisville, KY 40223-5318**

**Voice: 502.423.7225
Fax: 502.425.7064
Web: www.lumitron-ir.com**

The *.MCM format is the format that the Lumitron Raid Array exports (Note: the data is not scan converted when copied off the Raid Array).

Below is a portion of a header file, which describes the data structure for the MCM format files. Structure packed on 1 byte boundaries.

```
typedef struct _McmHeader {
    DWORD markerA; // Frame marker = 0xA55A5AA5
    DWORD markerB; // Frame marker = 0xA55A5AA5
    BYTE sensorID; // ID of sensor (Typically not used)
    WORD imageX; // Horizontal pixels
    WORD imageY; // Vertical pixels
    BYTE storageBPP; // Number of bits used for file pixel storage (Typically 16)
    BYTE actualBPP; // Number of bits used for pixel usage (Either 12 or 14)
    BYTE time_0_lsb; // Bits 7 - 4 => Status, Bits 3 - 0 => Days Hundreds
    WORD time_1; // Bits 15 - 12 => Days Tens, Bits 11 - 8 => Days Units
    // Bits 7 - 4 => Hours Tens, Bits 3 - 0 => Hours Units
    WORD time_2; // Bits 15 - 12 => Min Tens, Bits 11 - 8 => Min Units
    // Bits 7 - 4 => Sec Tens, Bits 3 - 0 => Sec Units
    WORD time_3; // Bits 15 - 12 => 10e-1 sec, Bits 11 - 8 => 10e-2 sec
    // Bits 7 - 4 => 10e-3 sec, Bits 3 - 0 => 10e-4 sec
    WORD time_4; // Bits 15 - 8 => SVS-2000 Mode Index
    // Bits 7 - 0 => Not Defined
    DWORD frameNum; // Current frame number
    char fill[4]; // To be filled with 0xFF
} McmHeader;
```

The structure is then followed by a frame of raw (non-scan converted) image data. This is repeated for each recorded frame of data.

The frame size can be computed from the imageX and imageY data members.

The time_4 data member can also be checked to determine if a mode switch occurred and therefore possibly the frame size as well.

The file structure will be as follows:

```
(1) McmHeader
(2) Frame 1 Data
(3) McmHeader
(4) Frame 2 Data
(5) McmHeader
(6) Frame 3 Data
. . .
. . .
. . .
(n-1) McmHeader
(n) Frame x Data
```

Lumitron has developed a utility (FPD Conversion Utility) to take as inputs the SVS-2000 raw image file (*.FPD) or a MCM file directly off the RAID array, a vector (*.VCT) or pixel replaced vector (*.RVT) and output a scan converted display image file (*.MCM).