



## “M5” Grade Mark Reader Retrofit

A new Lucidyne M5 GMR System Retrofit is being offered to existing Lucidyne Grade Mark Reader customers. Your GMR was designed in the mid 1980s and has been modified several times in order to keep it current. While this legacy GMR has been a very successful and stable workhorse, the new M5 retrofit offers better service, reduced cost of ownership, and enhanced system performance.

The M5 design retains all the existing functions of our legacy line of GMRs but features some brand new technologies. The new M5 platform offers **significant improvements** over the current machine in the areas of color detection, lighting, and its communication interface. The retrofit is a complete replacement of your current system, but since there are over 600 GMRs in operation, Lucidyne is able to make this offer at a price that is significantly below the price of a new system. The value of the M5 enhancements plus the reduced cost of ownership far outweigh the benefits of retaining the legacy equipment.

### Solid-State Lighting

The new M5 GMR uses solid-state lighting to provide a lifetime of about 10,000 hours. However, since Lucidyne GMRs use a patented strobe technique, the lamps are only on for a fraction of a second for each flash, **extending the lamp life to 20 years and beyond!** This means that bulb replacement becomes a thing of the past.

### Enhanced Color Recognition

The new M5 GMR platform uses a new color digital camera along with imaging software that together provide large advances in color recognition. It can identify **ten** or more colors at any one time. Increased camera resolution now allows graders to write smaller characters and the symbol recognition capabilities are improved to be more forgiving of poor penmanship.

### Ethernet Interface

The addition of Ethernet to the M5 provides for high-speed communication with the GMR system computer and opens up the opportunity for future connections to the mill's trimmer/sorter PLC and automated grading systems. Most importantly, this capability enhances Lucidyne's ability to provide remote monitoring and diagnostic support for the new system if the mill has a high-speed Internet connection in the control room. This means that Lucidyne can connect to your system and monitor its health in near real-time speed, significantly improving the response time of troubleshooting and diagnostic functions.

## Reduced Life Cycle Cost

The M5 not only eliminates the need to regularly replace bulbs, but it also utilizes newer, more compact components. You will discover a noticeable reduction in the number of components. Consequently, the number of spare parts has been cut in half.

## New Software

New GMR software provides a state-of-the-art interface. Screens have been rearranged to be more intuitive, resulting in **less operator training**. The new LCD monitors provide color images in the control room and on the line.

Here is what you can expect to receive with your order for an M5 system retrofit (please refer to the system layout on page 3):

- a) New GMR head complete with lighting and optics
- b) New control electronics back panel for easy installation within your existing enclosure
- c) New system computers
- d) New user interface software
- e) New 19" LCD flat screen color monitors
- f) Ethernet interface for communication with the system computer, the Internet, and automated grading systems such as Lucidyne's *GradeScan*<sup>®</sup>

Lucidyne is phasing out its legacy GMR systems in favor of the significant benefits offered by the new M5 platform. The legacy models will continue to be supported for the foreseeable future, however; moving to the new M5 will ensure that Lucidyne will be able to support its customers far into the future since the legacy components have become more difficult to find and more costly to procure.

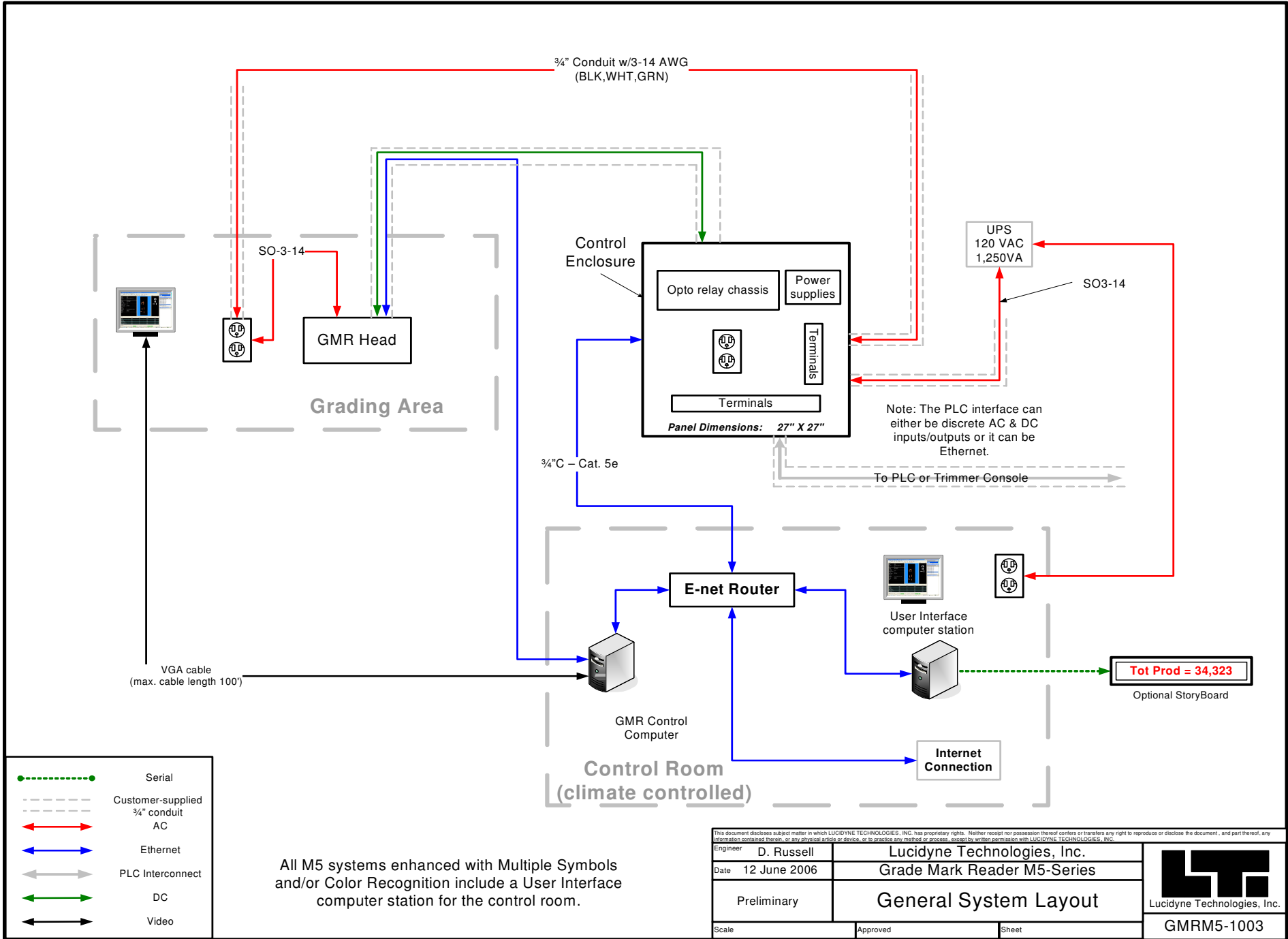
System benefits include:

1. Eliminated cost for replacement bulbs and maintenance
2. Minimal spares – new technology and components
3. Enhanced color and character recognition
4. Near real-time remote diagnostics support from Lucidyne

Our recommendation is that your GMR be retrofitted to the new M5 platform by our customer service department.

This retrofit is now available for all GMR models.

The M5 retrofit system is warranted for 1 year and provides the same reliability you have come to expect with Lucidyne's legacy GMR systems. Please contact our customer service department at (541) 753-5111 or email at [billt@lucidyne.com](mailto:billt@lucidyne.com) for details and to schedule delivery.



## **Retrofit your existing GMR to an M5 and watch your savings grow:**

- ❑ Eliminate the recurring cost of flash bulbs
- ❑ 50% reduction in required spares
- ❑ Significant improvements in color recognition – now track the performance of 10+ graders
- ❑ Enhanced character recognition reduces reject rates
- ❑ High-speed Internet connection – a Lucidyne technician can be on-line with your system for lightning-fast diagnostic support
- ❑ Grader performance feedback on a highly-visible, easy-to-read flat panel color monitor
- ❑ “Push of a button” software upgrades
- ❑ Accurate and reliable system reports and GGD presentation, enhanced by a comprehensive and user-friendly color recognition package
- ❑ New head enclosure is 100% “finger-safe” -- high voltage flash bulbs replaced with solid state lightning array