**Real-Time Data Acquisition and Control System for the PLS Storage Ring**[*], J.W. LEE, J.C. YUN, D.H. JUNG, S.S. CHANG, S.C. WON, PAL POSTECH - Computer control system for the PLDS storage ring, which is under normal operation now, is made of operator interface section and real-time data acquisition and control section. Operator interface section consists of workstations and X-terminals providing operator with graphical tools for machine operation. Real-time data acquisition and control system section consists of field computer systems interconnected through networks providing both direct control and monitor function for field devices and front-end processing function for operator interface section. This paper describes the real-time data acquisition and control section. Overall system architecture is presented and hardware features are described. The various software schemes used for data acquisition and networking are described in great detail. The control issues and problems occurred during machine operation and the future plan for system upgrade are also discussed here.