Guidelines for One Card Laundry Card Readers

I. Laundry Reader Hardware (Refer to image 1.1) -
Each laundry facility will include the following:
Laundry Reader Model: LC3000
- Each LC3000 supports up to 60 machines (stacked units count as 2 machines)

Laundry Center Multiplexer LCM20
- Each LCM20 supports 20 wired machines. The first LCM20 is installed in the LC3000. The second and third LCM20s require a LE3/PSENCL
- If the room consists of up to 20 machines a LCM must be purchased.

MUX power supply/enclosure LE3/PSENCL
- These are required for a 2\textsuperscript{nd} and 3\textsuperscript{rd} LCM20s. A 2\textsuperscript{nd} LCM20 is required if the LC3000 is controlling more than 20 machines, and a 3\textsuperscript{rd} LCM20 is required if the LC3000 is controlling more than 40 machines.

Laundry Center Interfaces  LCI30X0-
Maytag LCI3010
  - All Maytag commercial ‘card’ ready machines are supported by the LCI3010. A LCI3010 is required for each single machine or for a complete stacked unit (both top and bottom unit supported by a single LCI3010).

Speed Queen LCI3020
  - Only Speed Queen Netmaster and MDC models are supported by the LCI3020. A LCI3020 is required for each single unit. Two LCI3020s are required for a stacked unit.

Whirlpool LCI3030
  - Only Whirlpool Advantech models are supported by the LCI3030. A LCI3030 is required for each single unit. Two LCI3030s are required for a stacked unit.

* LCM20, LC3000, LE3/PSENCL, LCI3010, LCI3020, LCI3030 are proprietary equipment provided by Blackboard Inc. *

II. Supporting Software -
All one card readers and equipment use proprietary software and computer system, which has already been purchased. One Card Office will be responsible for the system parameters and programming the software to support any new blackboard reader hardware devices. Service fees will be accessed to any office or department that elects to use components of the Blackboard System.

III. Support Commercial Washers/Dryers –
The LC3000 supports 3 types of interfaces. These machines are supported by the Laundry Vendor.
The 3 types are as follows.
1. Maytag
2. Speed Queen
3. Whirlpool
IV. Electrical Wiring Specifications -
The LCM3000 Series Reader requires 120 VAC @ 60 Hz. Connect only to a 15A maximum branch circuit. The LCM20 also requires 120VAC @ 60Hz. AC power require that ½” conduit, or using the ½” knock out to accept romex connectors.

IV. Communication Wiring Specifications -
Taking into considerations the communications availability either RS-485 or 10/100 Base T will be used. The wiring distance limitations are RS-485 communications is 4000 feet per LC3000 to communications closet. The wiring distance limitations for 10/100 Base-T communications is 300 feet from network switch port. For communications to the communication closet from the LC3000 it should be CAT-5e, or CAT-6 cable (Following the Network infrastructure guidelines). The communications between the LC3000 and the LCM20 must be Belden 8723, 5502UE cable or equivalent. The communications between the LC3000/LCM20 and the machines must be Belden 8723, 5502UE or equivalent not exceeding 400 feet max.

The homeruns from the LC3000 and the LCM20s must be concealed above a ceiling, wall, or in conduit keeping the room aesthetically appealing. Behind each machine the wire must be concealed in a junction box. From the junction box to the machine the Belden cable must be run through a flex wall conduit. These connections will be terminated by the Laundry vendor. The flex wall conduit will be wrapped and tied if not being used by a machine so that it keeps the room aesthetically appealing.

V. Mounting Specifications –
If doing new construction the LC3000 can be mounted flush to the wall with the wiring behind the wall. On old construction these can be surface-mounted utilizing conduit mounted to the exterior of the wall. When flush mounting route wires through the 3”x3” cutout in the enclosure. (Refer to Image 1.2) With surface mounting remove the knockouts on the top or bottom. When mounting the LCM20 it must be in an accessible area for maintenance purposes and relational to the laundry machines that it controls.
- **LC3000:** 9.6" H x 7.92" W x 3.3" D, 7.6 lbs
- **LE3/PSENCL:** 9.6" H x 7.92" W x 3.3" D, 7.6 lbs

![Diagram of Mount and ACMAIN Mounts]