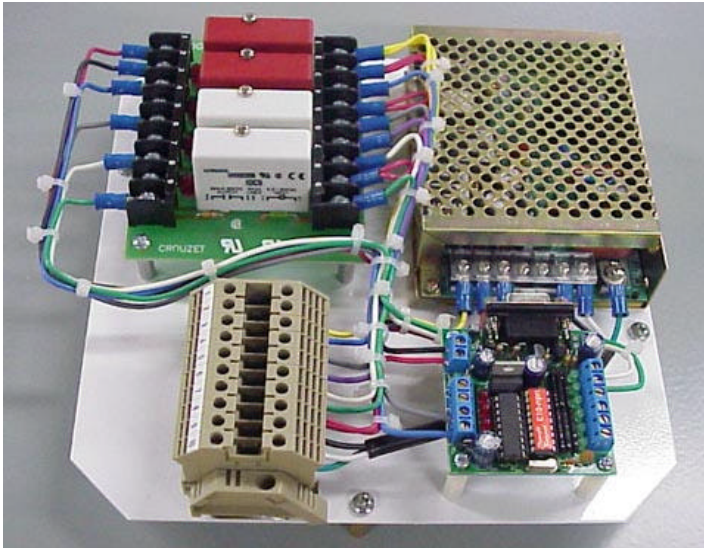
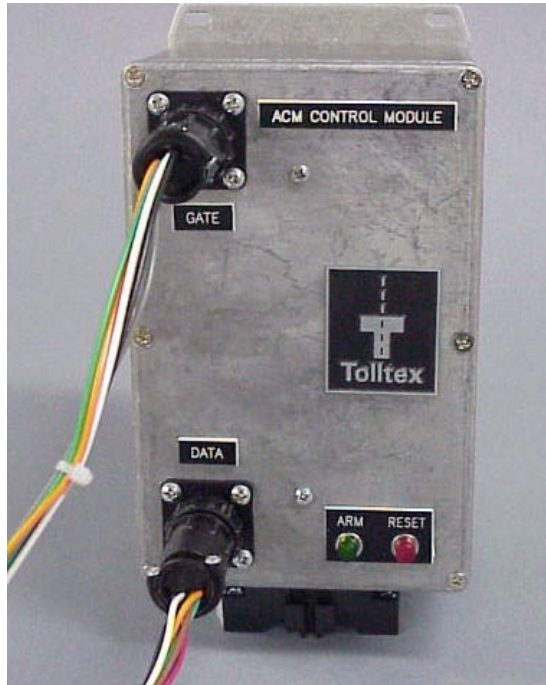
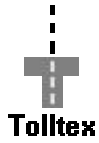


Automatic Gate Controller



PLC Component

In a joint development project with the Florida Department of Transportation (FDOT), Tolltex and FDOT staff designed a specialized controller to manage operations of existing automatic gates. The design was based on a PLC-based gate controller that Tolltex developed for FDOT in 1996 to process multiple payment signals and control gate operations. An "ACM Control Module" designed by FDOT was added to provide additional controls needed for the application. Tolltex is manufacturing both units. The PLC component is shown on the left outside of its metal enclosure.



The ACM Control Module is shown on the left in its die-cast enclosure. Quick disconnect cabling connections allow for easy maintenance and each connection is keyed differently to ensure the correct attachment of the cables. LEDs on the front of the module indicate the status of payment and exit loop activation's.

ACM Control Module

Summary

The two components needed to be mounted inside of existing Automatic Coin Machine cabinets. This restricted the size due to the limited amount of space. The solution was to functionally separate the control methods that were needed into two physical components. Therefore, the amount of available space for each component was a technical challenge that was met with the design.

The basic operation of the gate controller is that it receives signals from the coin machine as well as ETC payment signals. The controller sorts these signals out and controls the Up/Down movement of the automatic gates that are used in each lane.

The initial prototypes were built in early 2001 and tested by FDOT staff. Following the tests, an additional 12 were provided. In total, approximately 140 lanes will be equipped with the gate controllers.