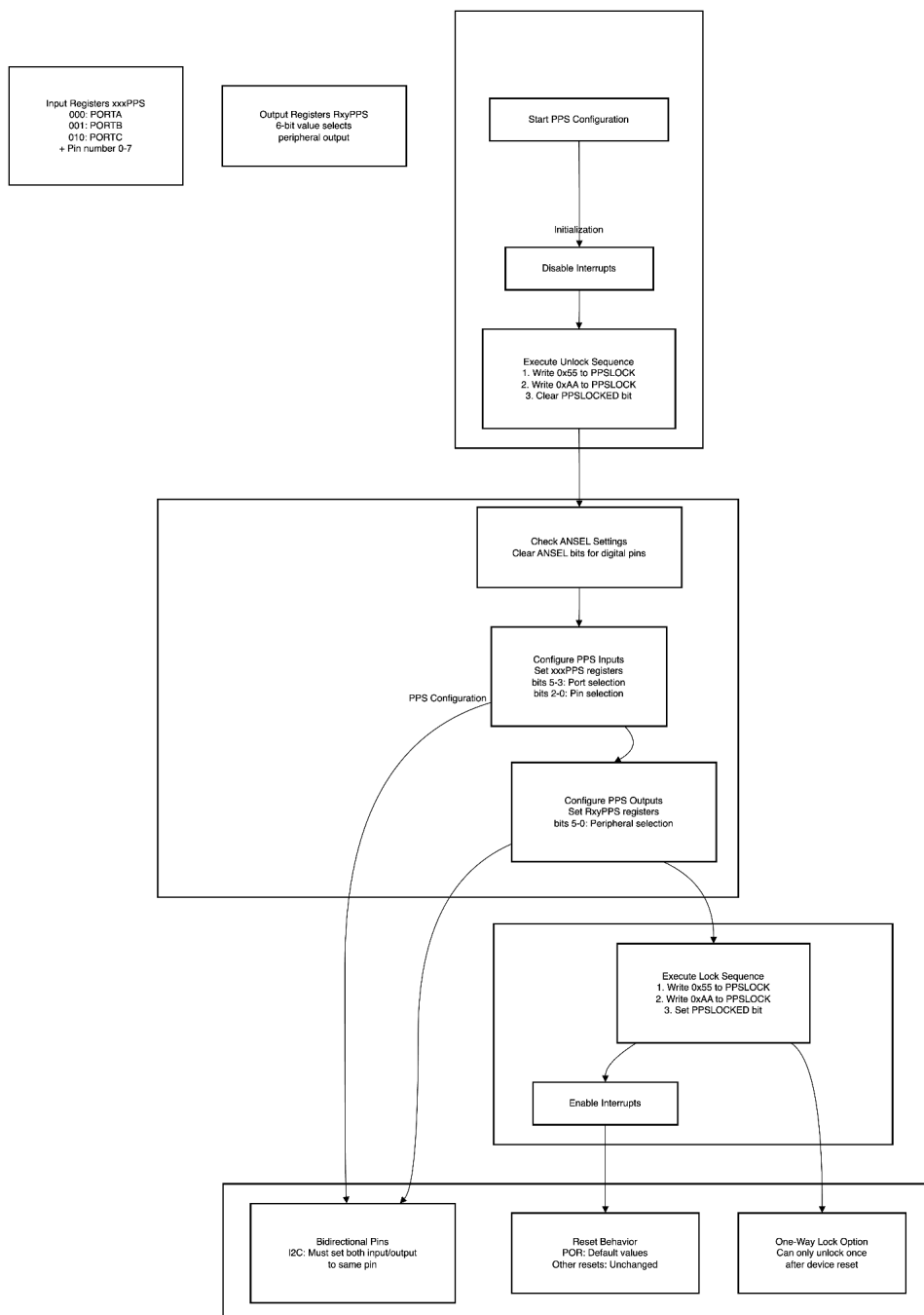# PIC18F26K83 Peripheral Pin Select Implementation Guide

Overview

The Peripheral Pin Select (PPS) module enables flexible mapping of digital peripherals to different pins on the PIC18F26K83. This guide explains how to implement PPS functionality effectively in your applications.

Implementation Flowchart

[Figure 1: PPS Implementation Flowchart]

The flowchart above illustrates the complete PPS configuration process. As shown in the diagram, the process begins with initialization safety measures before moving through the configuration and protection phases.

Understanding the Design

The PPS architecture uses a multiplexer-based approach where inputs and outputs operate independently, much like the routing system depicted in the flowchart's central section. This independence proves invaluable when optimizing board layouts or making pin assignment changes during development.

Key Implementation Concepts

Following the flow shown in the diagram's configuration section, input registers (xxxPPS) determine which pin connects to a peripheral's input, while output registers (RxyPPS) control which peripheral signal gets routed to a specific pin. The register formats shown in the bottom section of the flowchart provide the specific bit patterns needed for configuration.

Configuration States

As highlighted in the diagram's special considerations box, the module maintains your pin assignments during sleep mode. However, a Power-on Reset (POR) returns all settings to their defaults, providing a clean slate when needed.

Special Considerations

The bidirectional pins section of the flowchart emphasizes an important point: when working with peripherals like I²C, ensure both input and output configurations point to the same physical pin. Additionally, as shown in the initialization phase, pins with analog capabilities need their ANSEL bits cleared before digital configuration.