The Plant Industry Division is looking to purchase a Real-Time PCR System with the following required specifications. This system will be used for high-throughput molecular biology applications, including gene expression analysis, genotyping, pathogen detection, and nucleic acid quantification.

Minimum Required Specifications:

1. **Format Options:**
   - Must support both 96-well (0.1 mL and 0.2 mL) and 384-well plate formats.
   - Motorized drawer for plate loading from the front.
2. **Thermal Block Features:**
   - Must include a 6-zone temperature control system (VeriFlex™ or equivalent) for precise thermal cycling.
   - Capable of running Fast protocols with complete 40-cycle runs in ≤30 minutes (96-well format).
   - Maximum block ramp rate of ≥6.5°C/sec.
3. **Optical Detection:**
   - Must have a white LED light source with ≥5 coupled or 6 decoupled excitation/emission filter sets.
   - Optical system should allow ≥21 fluorescent dye combinations for multiplexing.
   - Support for common dyes such as FAM™, VIC™, SYBR™ Green I, NED™, ROX™, Cy®5, etc.
4. **Software and Connectivity:**
   - Standalone touchscreen interface (≥8.5”) for protocol design, run initiation, and data viewing.
   - Must function independently of a connected computer.
   - Onboard storage of ≥10 GB with network upload/download capability.
   - Compatibility with PC and Mac systems; remote access, monitoring, and cloud integration features preferred.
   - Software must support 21 CFR Part 11 compliance.
5. **Data Analysis Tools:**
   - Must include desktop and cloud-based software for:
     - Absolute and relative quantification
     - SNP genotyping
     - Melt curve analysis
     - Multi-plate analysis (≥500 plates batch processing)
6. **Physical and Power Requirements:**
   - Dimensions must not exceed 30" x 20" x 18" (W x D x H).
   - Must operate on 100–240 V without modification.
   - Heated lid with programmable temperature (50–110°C).
7. **Support and Service:**
   - Bid must include a **limited warranty of at least one (1) year** from installation or 15 months from shipping date, whichever is sooner.
   - The warranty should cover parts and labor.
   - Bidder must offer optional post-warranty service contracts with next-business-day on-site service.

- Basic training or orientation for lab staff must be included.
- Access to technical support and performance verification (IQ/OQ/IPV) services must be available.