Claimed method for calibrating an optical-digital projection system falls within the scope of means for configuring projection systems or projection-type viewing devices. The first embodiment of the claimed technical solution involves determining the calibration of an optical-digital projection system based on points projected onto the dome surface that are visible within a specified section of the dome surface. The second embodiment is aimed at calibrating an optical-digital projection system, which assumes that the target point cannot be determined directly because it is located in the blind zone of the digital projection system's projection or on the equator of the digital projection system's projection and is partially or completely outside the dome surface. The technical result achieved by the proposed invention is a reduction in the time required to calibrate the optical-digital projection system compared to the closest prior art. An additional technical result is a reduction in distortions and an increase in alignment accuracy during image projection. Another advantage of the claimed technical solution is the improvement in calibration accuracy, which is achieved by increasing the number of recognized control points.