Computer vision technologies are very attractive for practical applications running on embedded systems. This is primarily because most of embedded systems come with an image acquisition pipeline, and a tremendous amount of progresses on computer vision research has been made for the past few decades. However, to successfully deploy a computer vision algorithm on any existing embedded systems, a vision algorithm needs to satisfy, at least, two criteria with the assumption of reasonably good performance: minimal, manual intervention after deployment and small footprint of consuming computational resources. While these criteria kept in mind, to develop a single, target tracking system, we propose an ensemble of the kernelized correlation filters (KCF), we call EnKCF. This committee of KCFs is specifically designed to address the scale-change and dynamic maneuver of the target over frames. In particular, to guarantee a high-speed, run-time performance, we deploy each of KCFs in turn. We also developed a Bayes filter to minimize any potential drifts between individual KCFs' transitions. Experimental results showed that the performance of ours are, on average, 70.10% for precision at 20 pixels, 53.00% for success rate for OTB100 data, and 54.50% and 40.2% for UAV123 data. These results showed that our method is better than existing ones over 5% on precision on 20 pixels and 10-20% on AUC on average. Moreover our implementation ran at 340 fps for OTB100 and at 416 fps for UAV123 data that is faster than DCF (292 fps) for OTB100 and KCF (292 fps), DCF (457 fps) for UAV123. To increase flexibility of the proposed EnKCF running on various one-chip computer, e.g., one with GPUs, we explored different levels of deep features.