approach usually require larger window to get good quality result. Thus, we had to reduce the computation’s complexity and make it again suitable for real-time implementations. Fig 12 shows block diagrams of our aggregation strategy. Instead of directly aggregates cost of whole support size \( n \times n \), we use a two pass approach that first pass aggregates cost along vertical direction, followed by a pass aggregating cost along horizontal direction. This reduces the arithmetic complexity form \( O(n^2) \) to \( O(2n) \). It is also worth observing that the weight term obtained only using the target image in our weight generation strategy and the correlated blocks shares the same weights under the different disparity hypotheses. Consequently, we omit the weights accumulation operation as well as the normalization operation module. The weight of every pixel is a combination of the similarity and proximity measurements. Thus those two kinds of weights component have to be calculated in each aggregation pass.

Figure 13 shows the implementation of vertical aggregation. The COMP unit measures the dissimilarity between two pixels, which we use truncated absolute differences (TAD) as the cost.