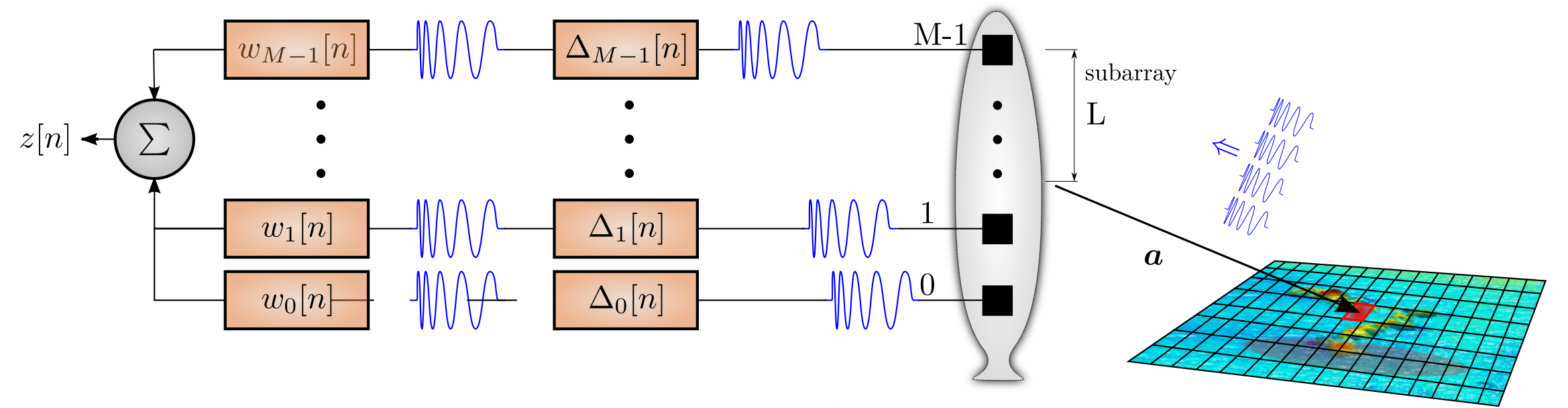

$$z[n] = \boldsymbol{w}^H[n]\boldsymbol{x}[n], \qquad \text{where} \qquad \boldsymbol{w}[n] = \frac{\boldsymbol{R}^{-1}[n]\boldsymbol{a}}{\boldsymbol{a}^H\boldsymbol{R}^{-1}[n]\boldsymbol{a}} \qquad \text{and} \qquad \boldsymbol{R}[n] = E\{\boldsymbol{x}[n]\boldsymbol{x}^H[n]\}$$

3 Computing $z[n]$
O(M)

2 Solving $\boldsymbol{R}^{-1}[n]\boldsymbol{a}$
$\mathbf{O(M^3) \rightarrow O(L^3)}$

1 Estimate $\boldsymbol{R}[n]$
$\mathbf{O(M^2) \rightarrow O(M^3)}$