

$$M_1 = \begin{pmatrix} e^{-i\delta_1} & 0 \\ 0 & e^{i\delta_1} \end{pmatrix} \begin{pmatrix} 1 & r_{1,2} \\ r_{1,2} & 1 \end{pmatrix}$$

$$\tilde{M} = M_1 \times M_2 \cdots M_n$$