P_{00}	P_{01}	P_{20}	P_{30}
P_{10}	P_{11}	P_{12}	P_{13}
P_{20}	P_{21}	P_{22}	P_{23}
P_{30}	P_{31}	P_{32}	P_{33}

For $M = rowCount = N$

$$\mathbf{A} = \begin{bmatrix} A_{00} & \cdots & A_{0N} \\ \vdots & \ddots & \vdots \\ A_{M0} & \cdots & A_{MN} \end{bmatrix}$$

For $m = \lceil rowCount/p \rceil = n$

$$\mathbf{A} = \begin{bmatrix} \begin{bmatrix} A_{0,0} & \cdots & A_{0,n-1} \\ \vdots & \ddots & \vdots \\ A_{m-1,0} & \cdots & A_{m-1,n-1} \end{bmatrix} & \cdots & \begin{bmatrix} A_{0,n(p-1)} & \cdots & A_{0,np-1} \\ \vdots & \ddots & \vdots \\ A_{m-1,n(p-1)} & \cdots & A_{m-1,np-1} \end{bmatrix} \\ \vdots & \ddots & \vdots \\ \begin{bmatrix} A_{m(p-1),0} & \cdots & A_{m(p-1),n-1} \\ \vdots & \ddots & \vdots \\ A_{mp-1,0} & \cdots & A_{mp-1,n-1} \end{bmatrix} & \cdots & \begin{bmatrix} A_{m(p-1),n(p-1)} & \cdots & A_{m(p-1),np-1} \\ \vdots & \ddots & \vdots \\ A_{mp-1,n(p-1)} & \cdots & A_{mp-1,np-1} \end{bmatrix} \end{bmatrix}$$

$$\mathbf{P} = \begin{bmatrix} P_{0,0} & \cdots & P_{0,p-1} \\ \vdots & \ddots & \vdots \\ P_{p-1,0} & \cdots & P_{p-1,p-1} \end{bmatrix}$$