

* Matrix Keterkendalian [P]

Controllability Matrix [P]

$$[P] = \begin{bmatrix} B & AB & A^2B & \dots & A^{n-1}B \\ \hline [n \times m] & [n \times m] & \dots & [n \times m] \end{bmatrix}$$

$[n \times mn]$

$$\dot{x} = Ax + Bu$$

$\begin{matrix} [n \times n] & [n \times m] \end{matrix}$

Kendalian

Jika $m > 1$ (multi-input), maka matrix P bukan matrix bujur sangkar, dan =

Kendalian sepenuhnya terkontrol
(completely controllable) jika $\text{rank}(P) = n$
atau matrix P merupakan matrix
yang "full-rank"