

* Integrator



$$\begin{aligned} i(t) &= \frac{v_i(t)}{R} \\ -i(t) &= C \frac{dv_o(t)}{dt} \end{aligned} \quad \left. \vphantom{\begin{aligned} i(t) &= \frac{v_i(t)}{R} \\ -i(t) &= C \frac{dv_o(t)}{dt} \end{aligned}} \right\}$$

$$i(t) = -C \frac{dv_o(t)}{dt} = \frac{v_i(t)}{R}$$



$$\int dv_o(t) = -\int \frac{1}{RC} v_i(t) dt$$

$$* \frac{1}{RC} = 1$$

$$R = 100 \text{ K}\Omega$$

$$C = 10 \text{ }\mu\text{F}$$

$$v_o(t) = -\frac{1}{RC} \int v_i(t) dt$$

$$v_o(0) = V_D$$

* Tambah kat inverter.

