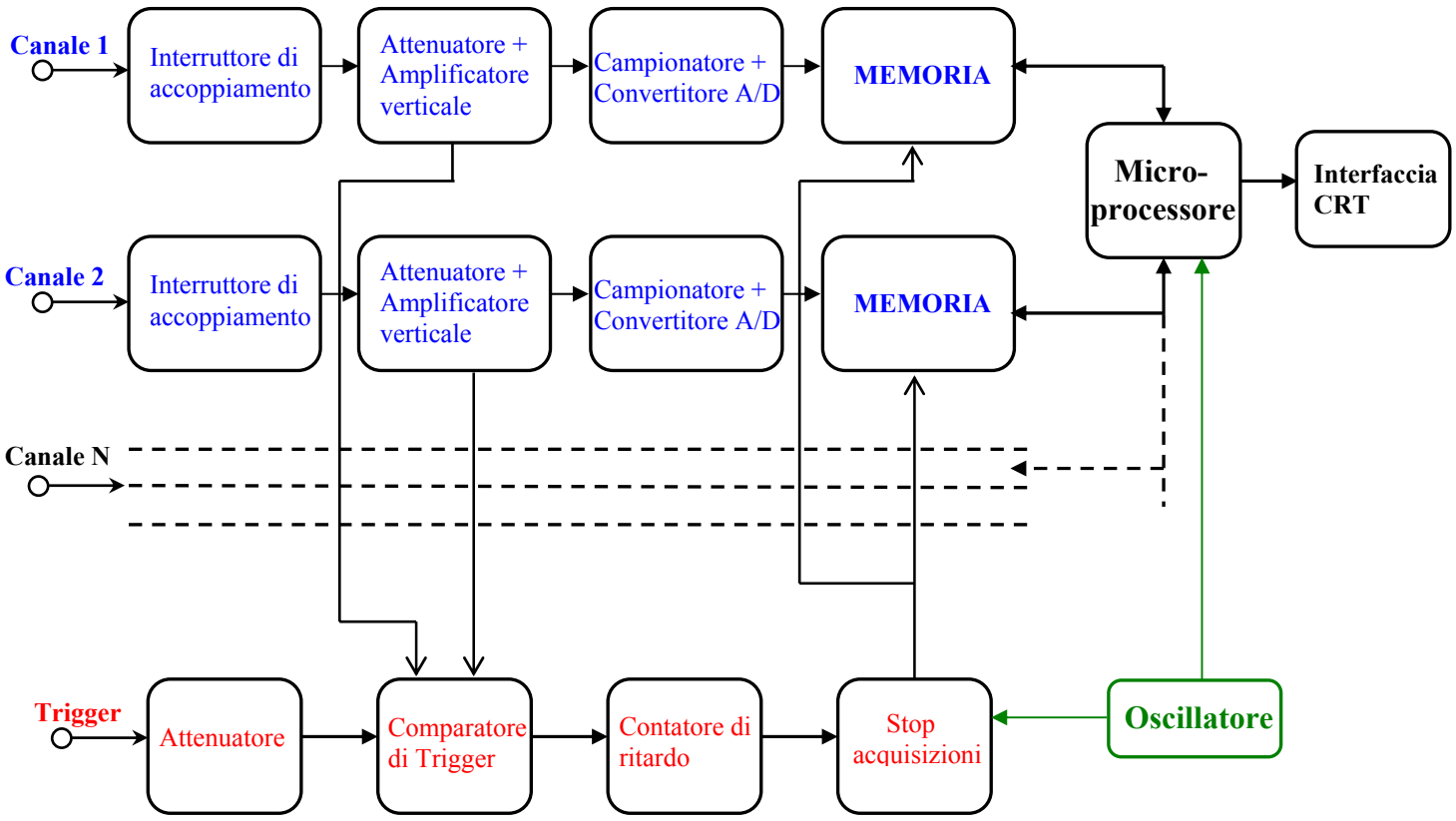
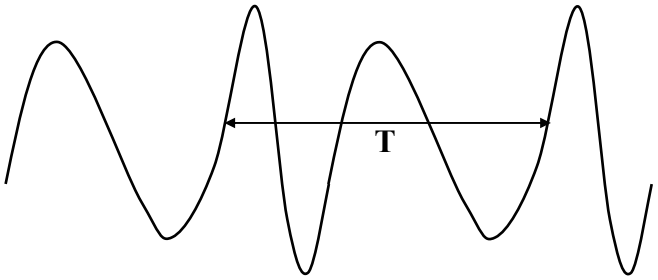
SCHEMA A BLOCCHI DI UN OSCILLOSCOPIO DIGITALE

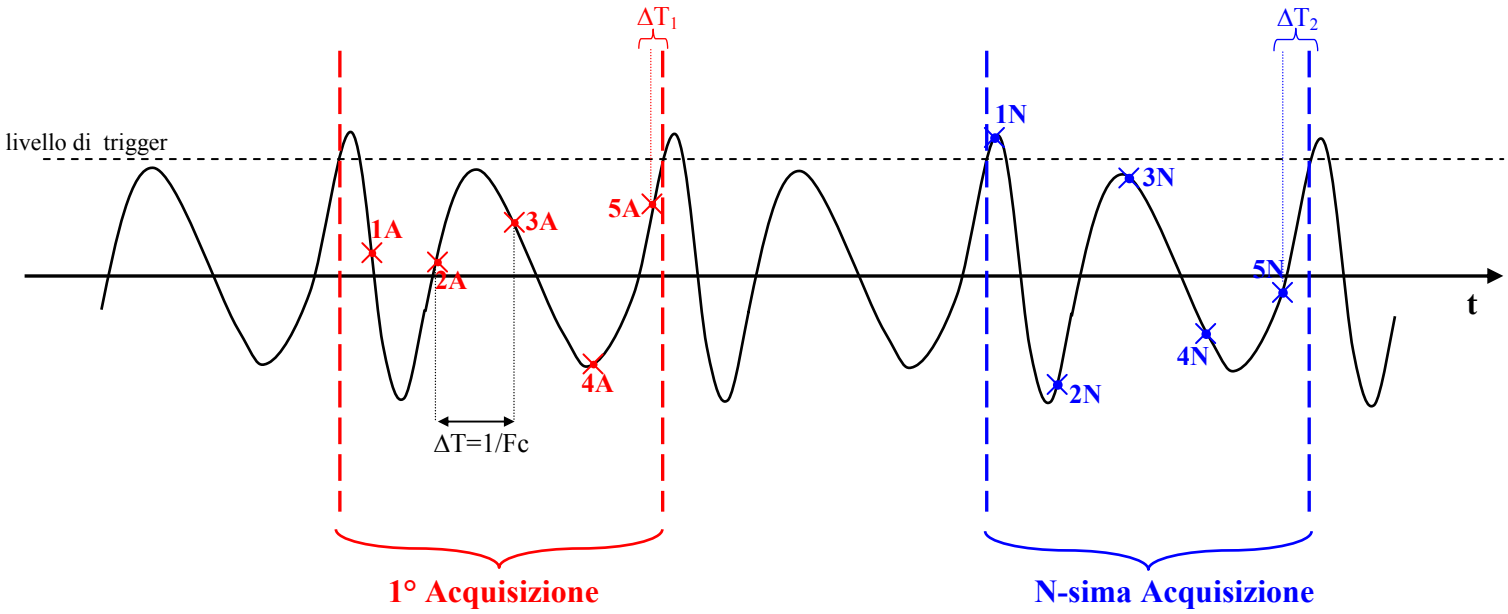


Campionamento Tempo Equivalente

Hp:

1- Segnale di ingresso periodico
2- Ritardo di Trigger =0

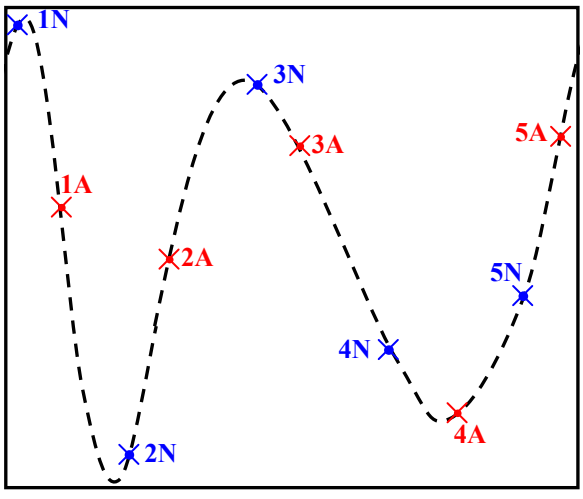




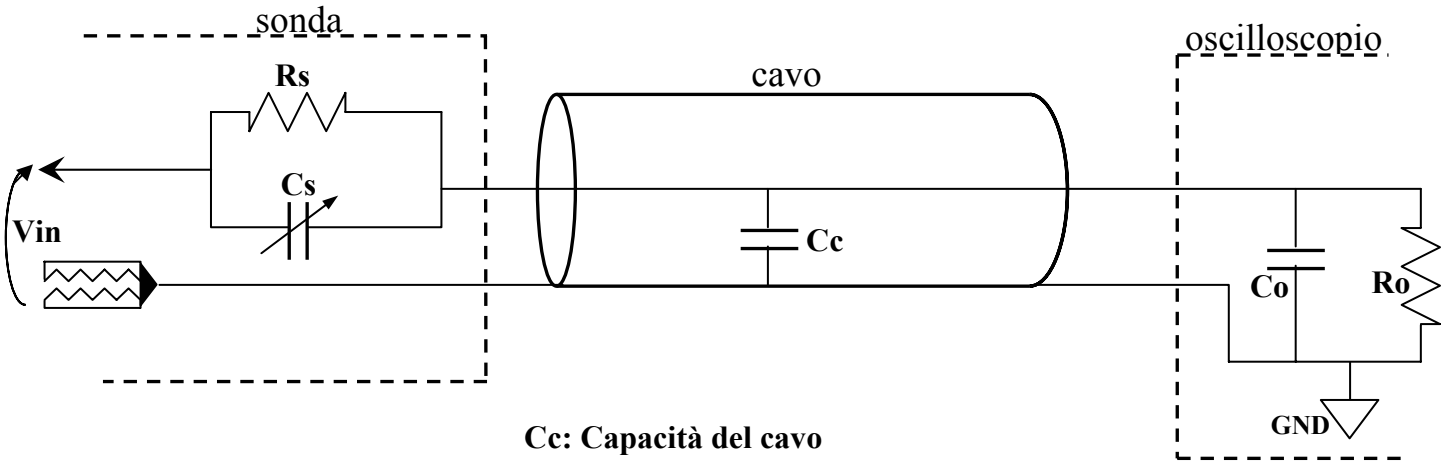
1° Acquisizione

N-sima Acquisizione

$\Delta T_1 \neq \Delta T_2$



Sonda compensata



Cc: Capacità del cavo

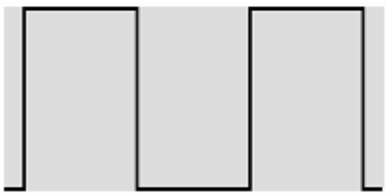
Rs: Resistenza della sonda

Cs: Capacità di compensazione della sonda

Co: Capacità di ingresso dell'oscilloscopio

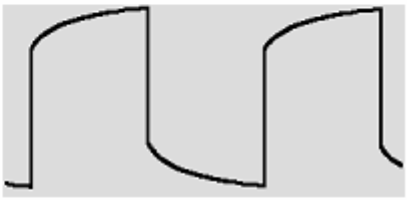
Ro: Resistenza di ingresso dell'oscilloscopio

Compensazione



Perfetta compensazione

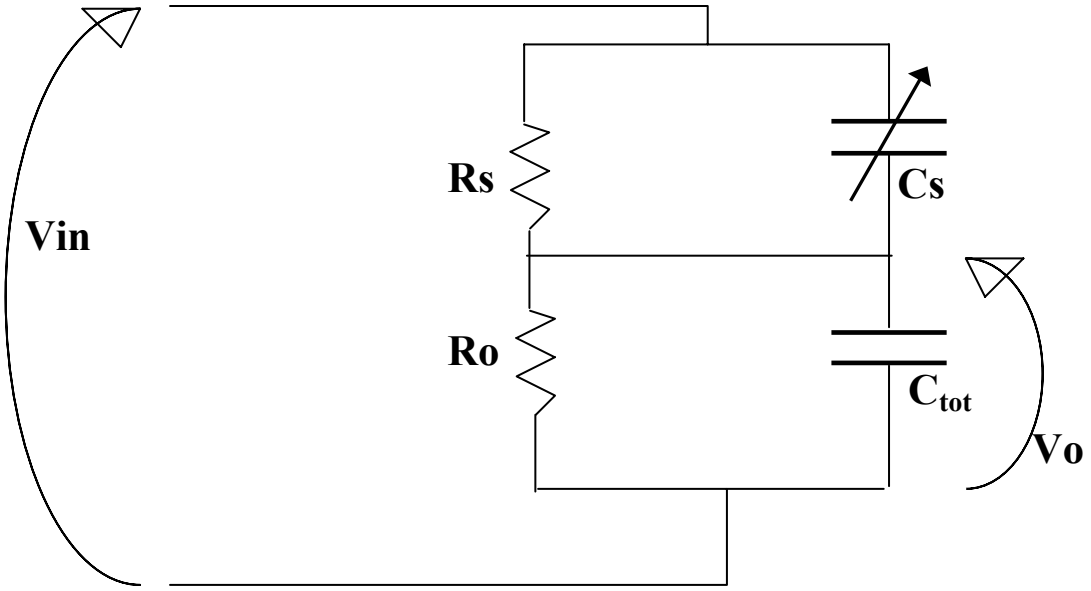
Sovra-compensazione



Sotto-compensazione

CALCOLO DEL PARTITORE COMPENSATO

$C_{tot}=C_C+C_O$



$$Vo = Vin \frac{\frac{Ro}{1+j\omega RoCtot}}{\frac{Ro}{1+j\omega RoCtot}+\frac{Rs}{1+j\omega RsCs}}$$

$$\Downarrow$$

$$\frac{Vo}{Vin} = \frac{Ro}{Ro + Rs\left(\frac{1+j\omega RoCtot}{1+j\omega RsCs}\right)}$$

se **RsCs=RoCtot** $\Downarrow$

$$\frac{Vo}{Vin} = \frac{Ro}{Rs+Ro} \quad \forall\, \omega$$