

# Tiny : 20 kB/s

ca. 3min 20sec to read RAM (4 MB)

What rate for each of the 128 signals allowed?

Assumptions:

- equal rate for all 4 signals per input
- 1 message = 8 byte
  - 7 bit: signal number
  - 1 bit: signal state
  - 40 bit time tag (40MHz : 3 days)
  - 16 bit free

$$\begin{aligned}\text{Rate (channel)} &= 20 * 1024 / (8 * 128) \\ &= 20 \text{ Hz}\end{aligned}$$

Assumptions are conservative: Not all signals will appear at equal rate:

- overflow warning
- busy
- ready
- out of synch

(encoded : busy + ready = error,  
all 1 = disconnected)

