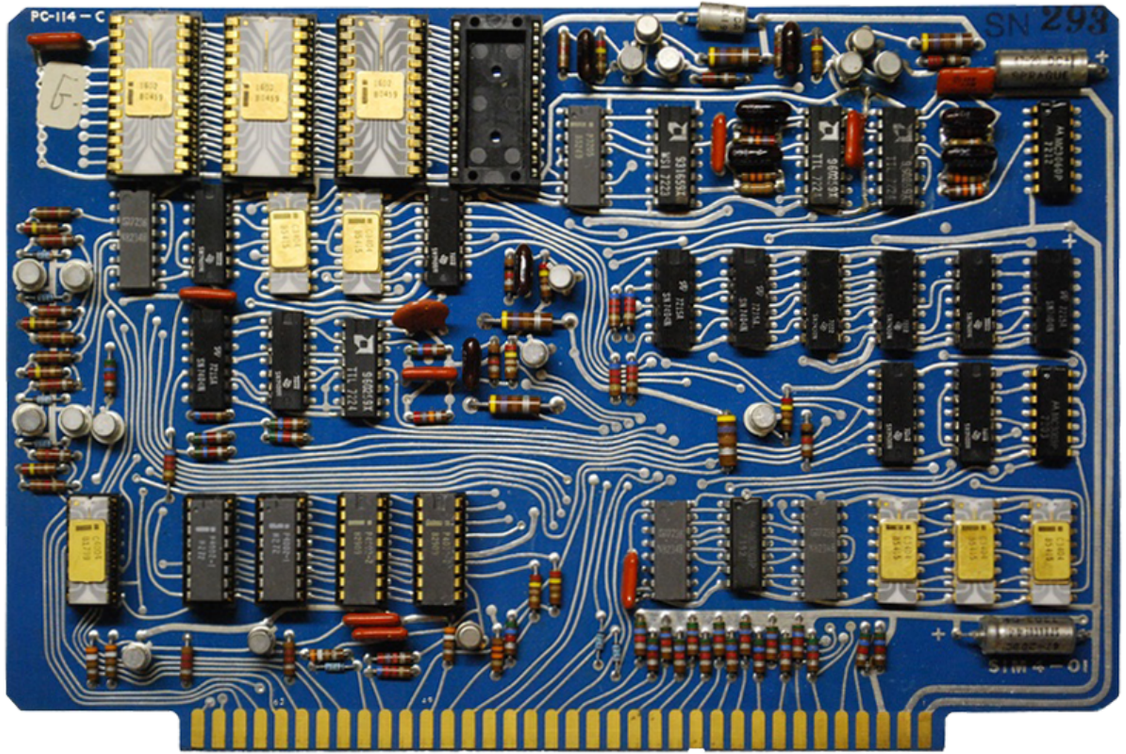
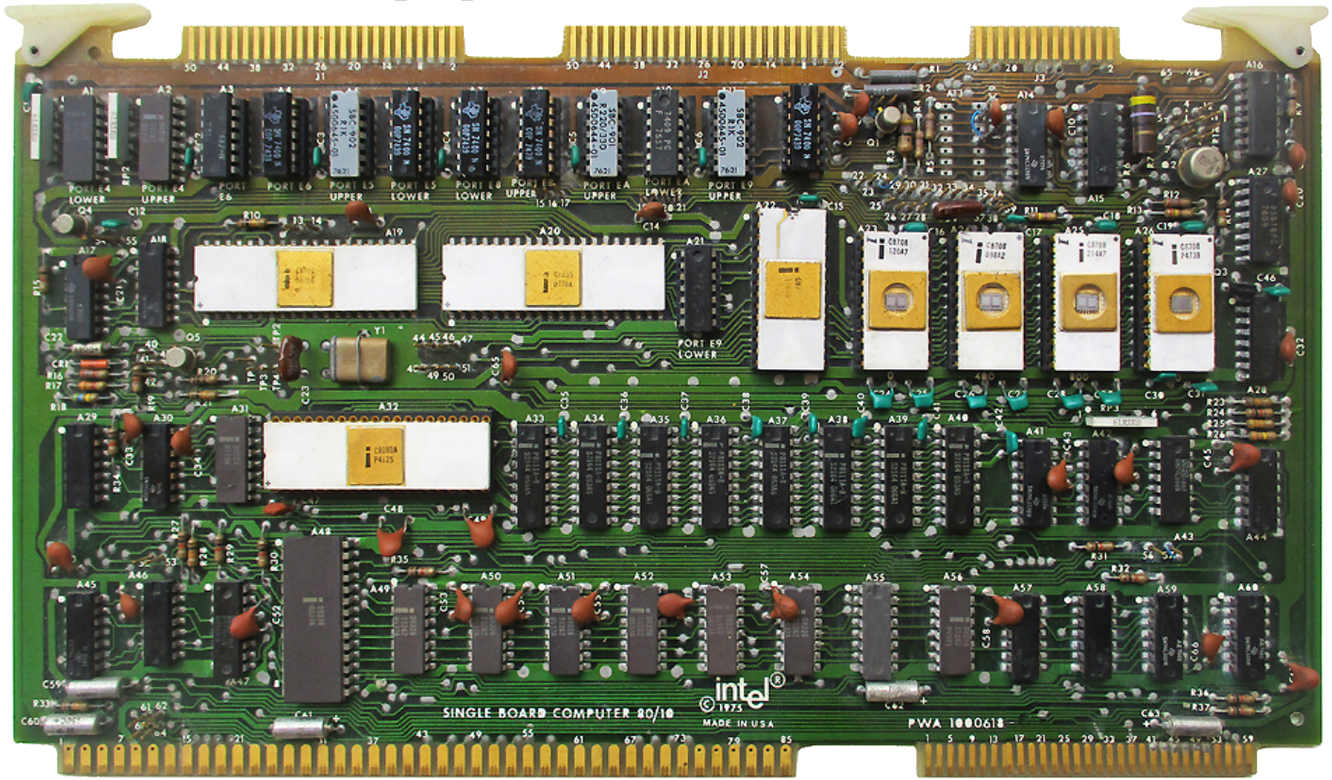
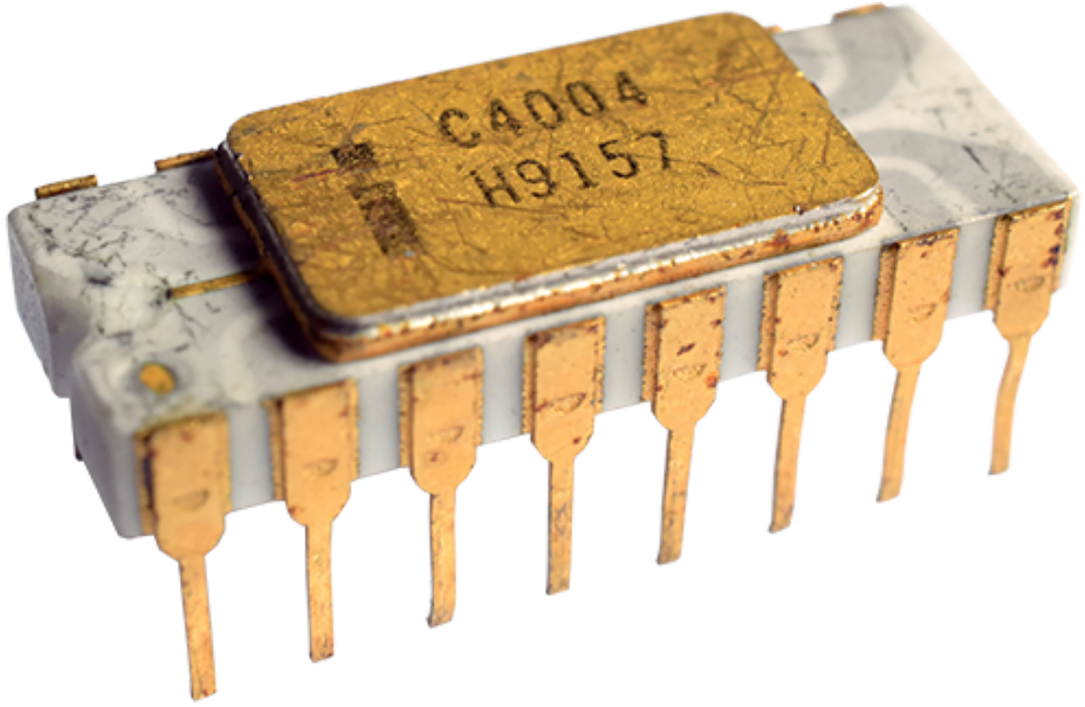
(a) MCS-4



(b) iSBC-80/10



(a) Intel 4004



(b) Intel 8048

Narodziny Mikroprocesorów

Wczesny rozwój techniki µP

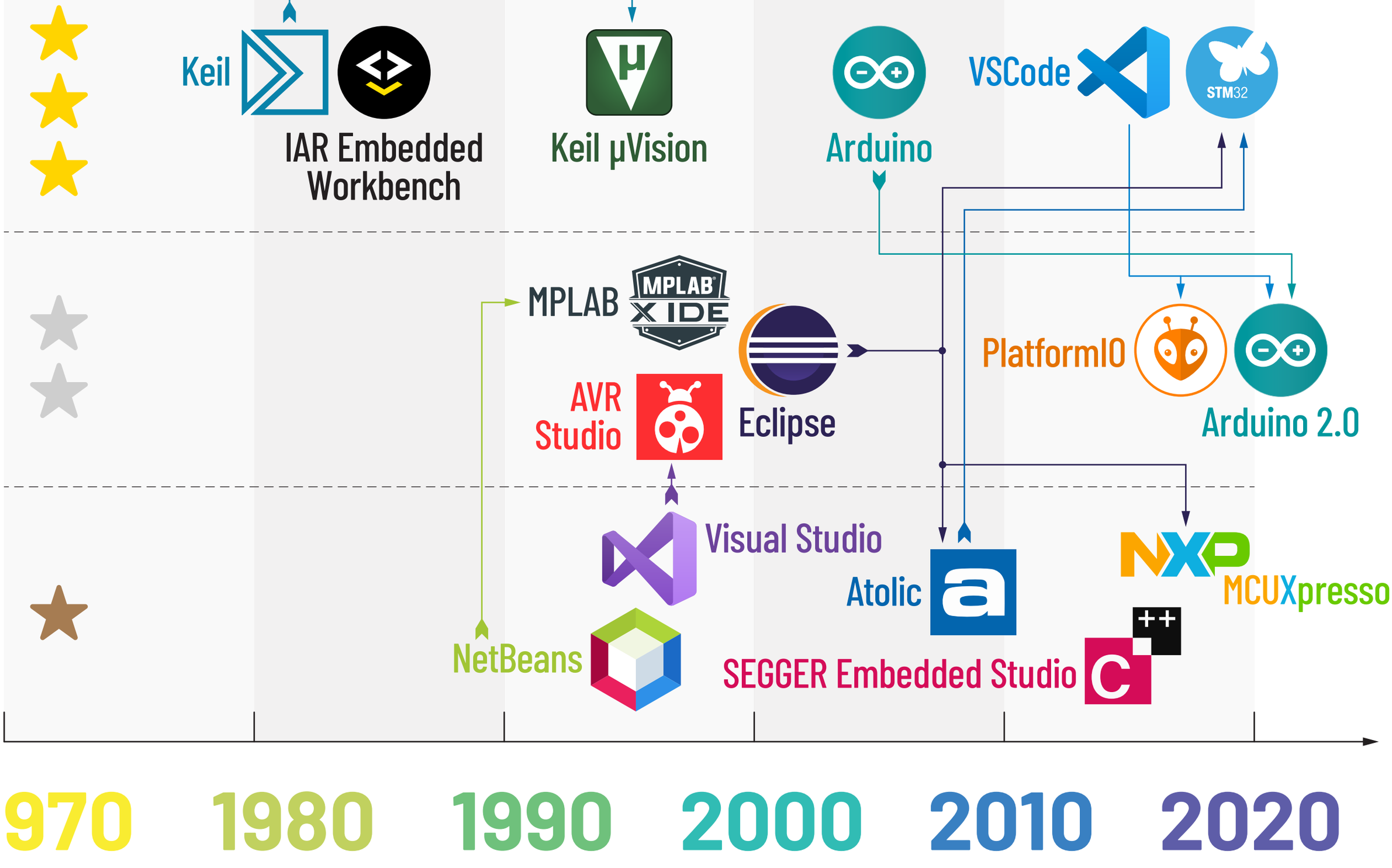
Początki język C oraz IDE

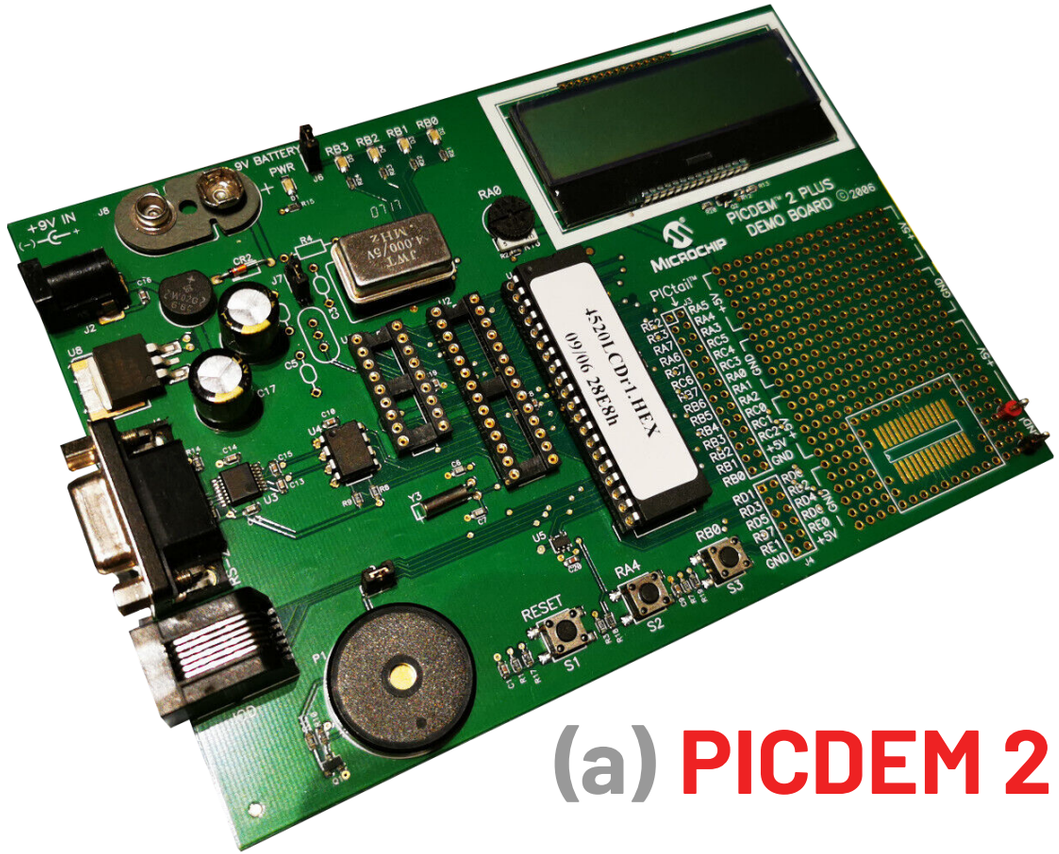
Dalszy rozwój MPU

Minimalizm i otwarte standardy

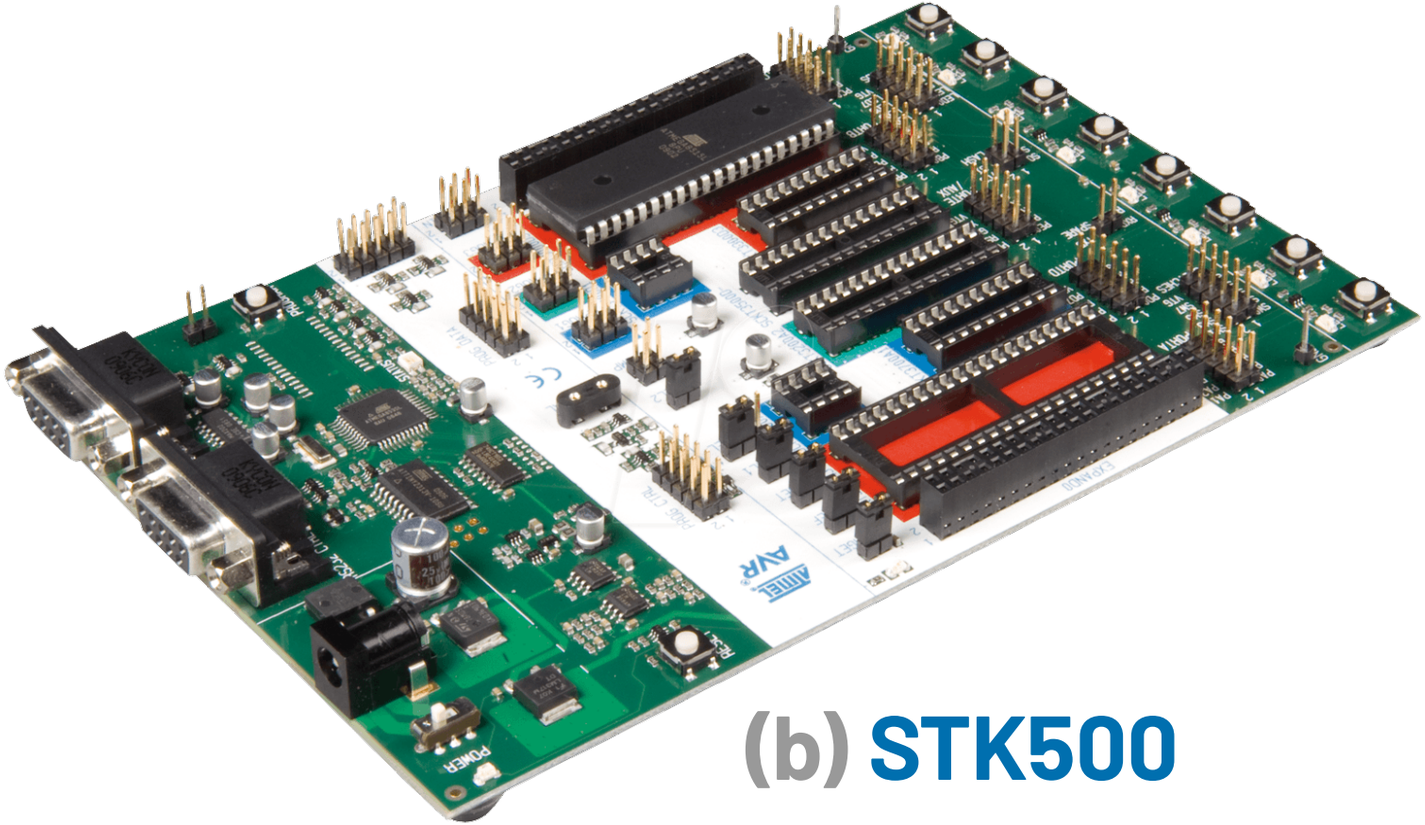
Układy SoC

1970 1980 1990 2000 2010 2020

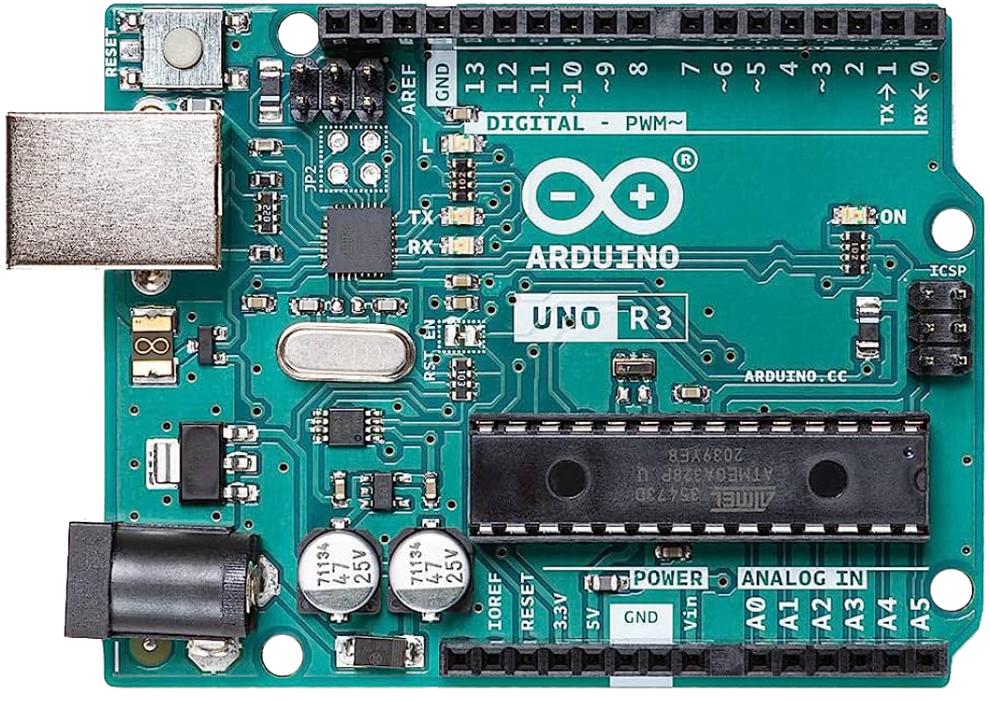

Keil
IAR Embedded Workbench
Keil µVision
Arduino
VSCode
STM32
MPLAB
MPLAB XIDE
AVR Studio
Eclipse
PlatformIO
Arduino 2.0
Visual Studio
Atolic
NXP
MCUXpresso
NetBeans
SEGGER Embedded Studio
1970
1980
1990
2000
2010
2020



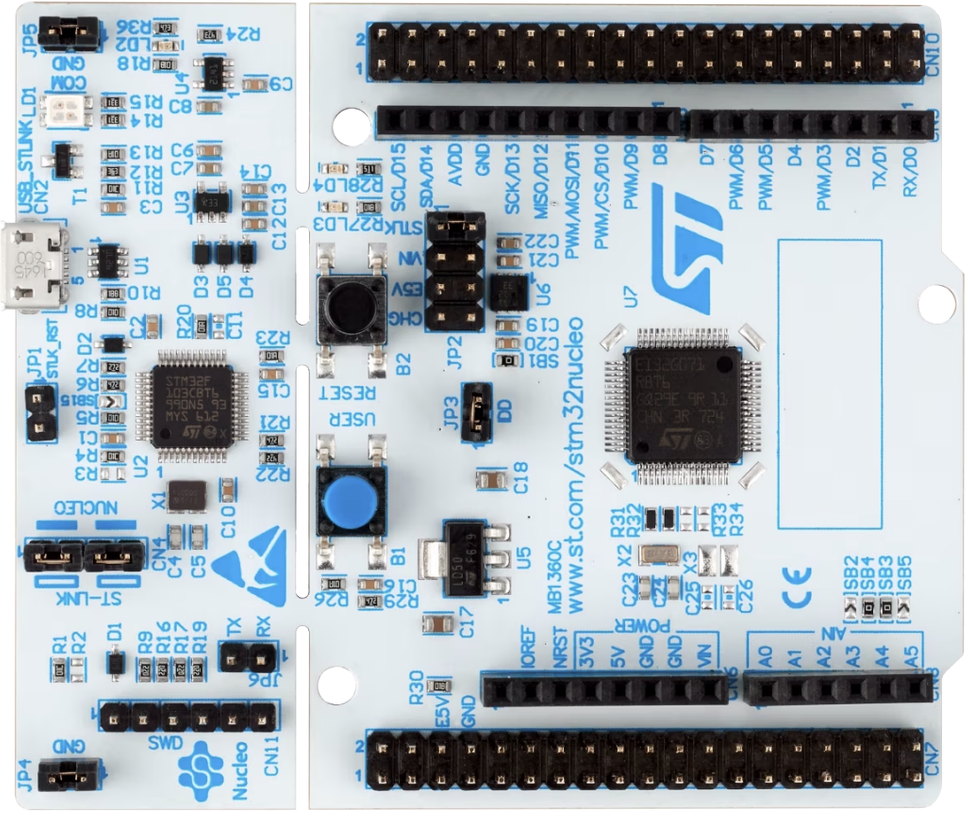
(a) **PICDEM 2**



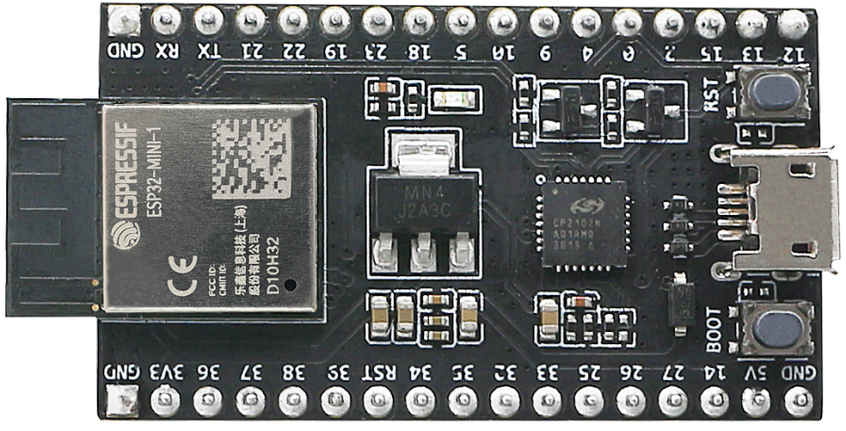
(b) **STK500**



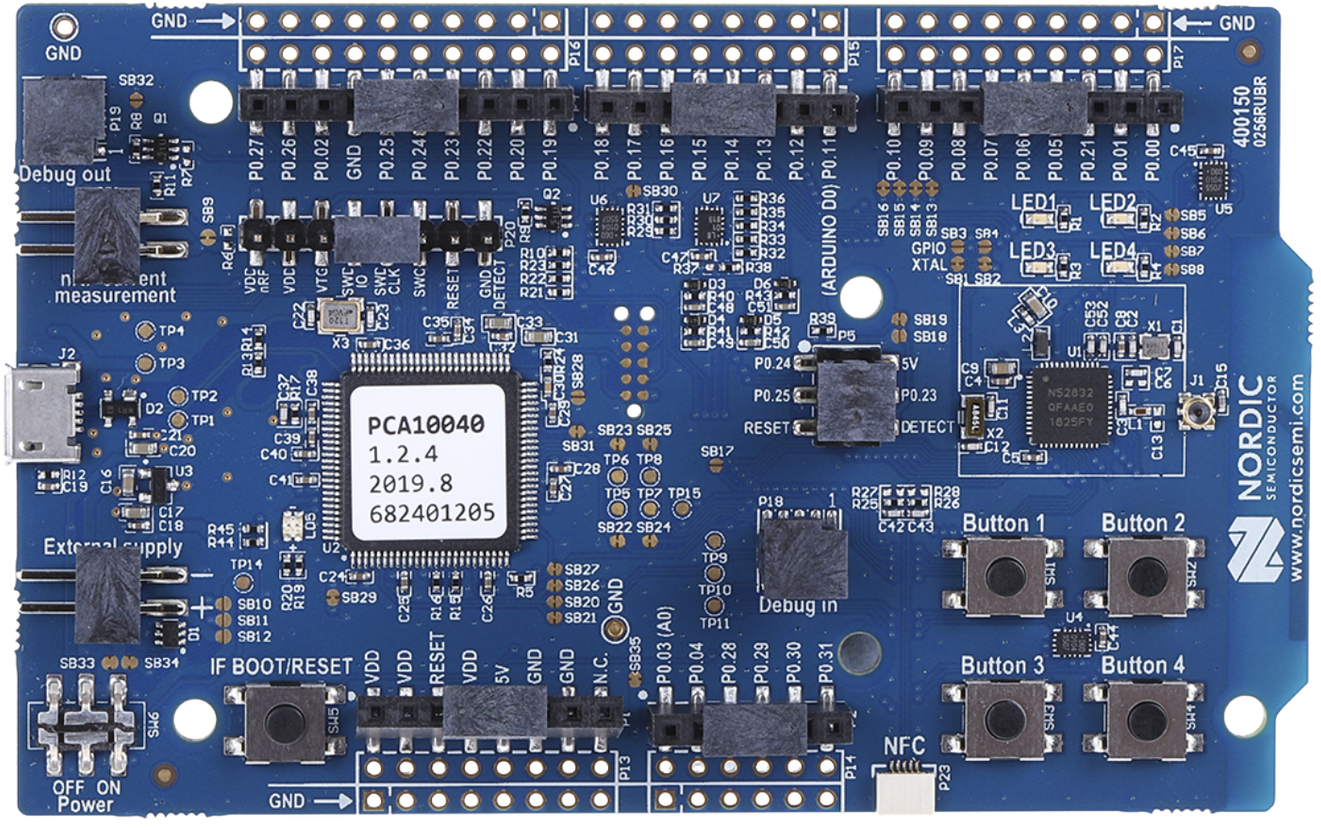
(a) **Arduino Uno**



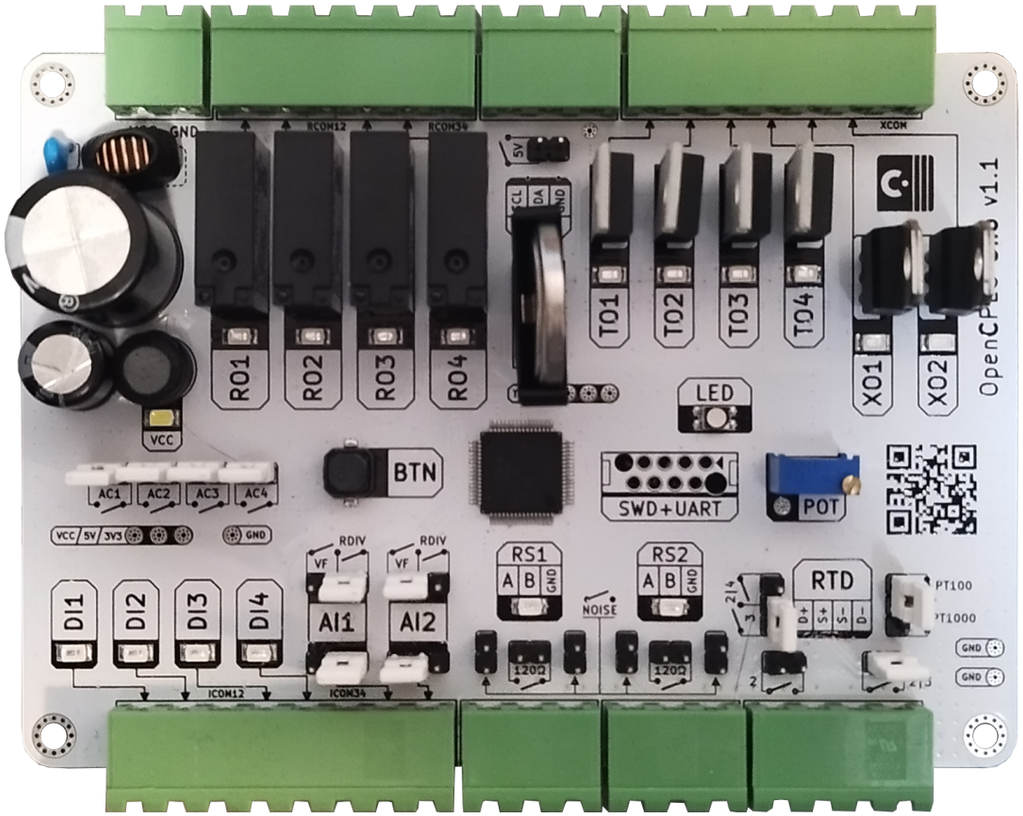
(b) **Nucleo** STM32G0



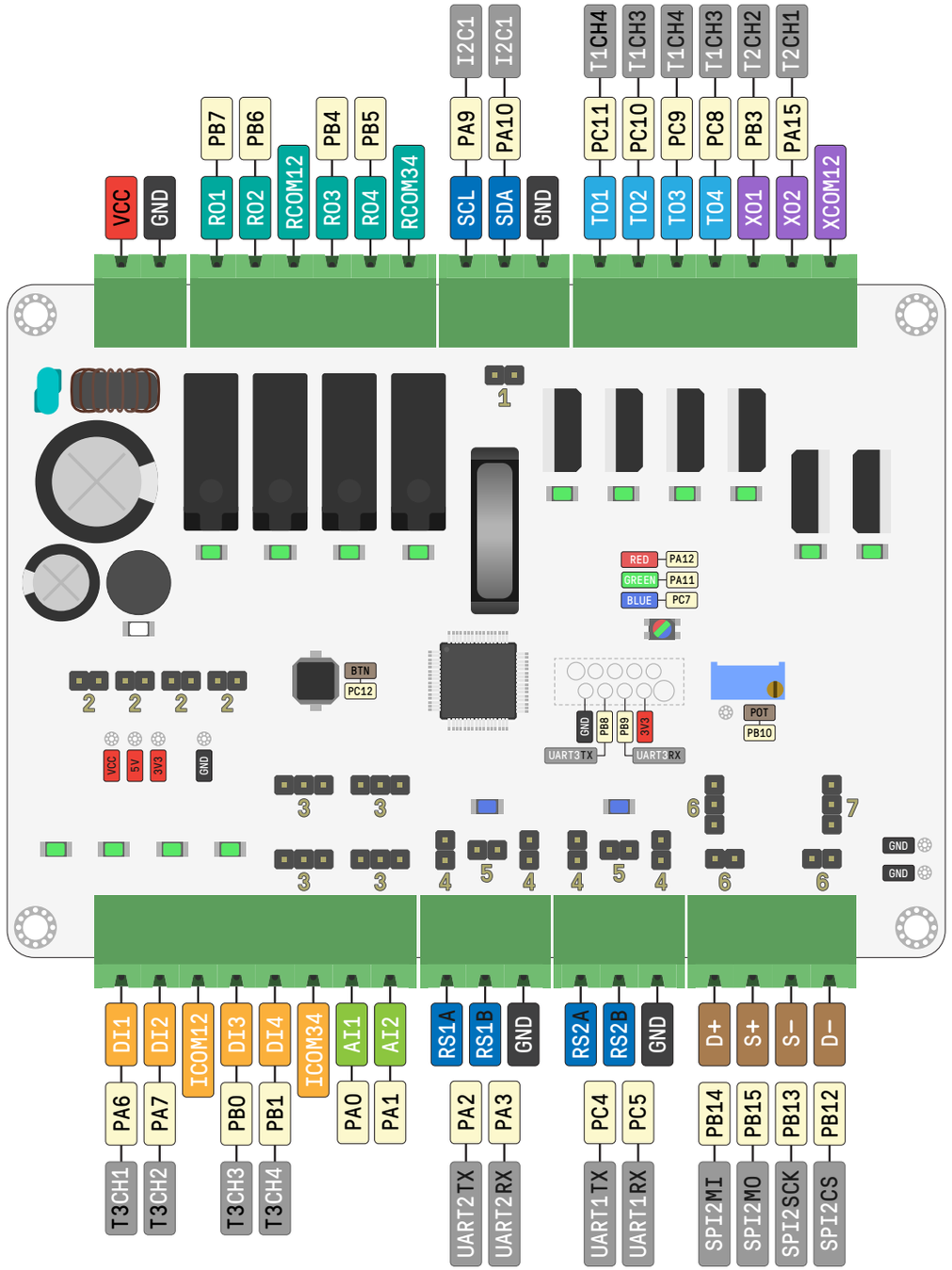
(a) **ESP32**



(b) Nordic **nRF52**



OpenCPLC Uno



- RO Wyjścia przekaźnikowe
- TO Wyjścia tranzystorowe
- XO Wyjścia triakowe
- DI Wejścia cyfrowe
- AO Wyjścia analogowe
- AI Wejścia analogowe
- Interfejsy komunikacyjne
- Sonda RTD *(PT100/PT1000)*
- Wyprowadzenie/Nóżka STM32
- Układ peryferyjny STM32
- 1 **5V** na linii SCL *(zasilanie 1-wire)*
- 2 Tryb AC dla wejść cyfrowych
- 3 Wtórnik napięciowy **0-10V** / Dzielnik Prąd **0-20mA** Napięcie **0-10V**
- 4 Redukcja zakłóceń RS485
- 5 Terminator **120Ω** RS485
- 6 2-Wire 3-Wire 4-Wire
- 7 PT100 PT1000