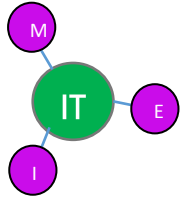




Ressources « DATASHEET du PIC18F25K80 »

Robot "SUIDETCOL"

CONCEPTION DETAILLEE : EXPERIMENTATION FONCTIONS du produit



## PIC18F66K80 Family Data Sheet

28/40/44/64-Pin, Enhanced Flash  
Microcontrollers, with ECAN™  
and nanoWatt XLP Technology



# PIC18F66K80 FAMILY

## 28/40/44/64-Pin, Enhanced Flash Microcontrollers with ECAN™ and nanoWatt XLP Technology

### Power-Managed Modes:

- Run: CPU on, Peripherals on
- Idle: CPU off, Peripherals on
- Sleep: CPU off, Peripherals off
- Two-Speed Oscillator Start-up
- Fail-Safe Clock Monitor (FSCM)
- Power-Saving Peripheral Module Disable (PMD)
- Ultra Low-Power Wake-up
- Fast Wake-up, 1  $\mu$ s, Typical
- Low-Power WDT, 300 nA, Typical
- Run mode Currents Down to Very Low 3.8  $\mu$ A, Typical
- Idle mode Currents Down to Very Low 880 nA, Typical
- Sleep mode Current Down to Very Low 13 nA, Typical

### ECAN Bus Module Features:

- Conforms to CAN 2.0B Active Specification
- Three Operating modes:
  - Legacy mode (full backward compatibility with existing PIC18CXX8/FXX8 CAN modules)
  - Enhanced mode
  - FIFO mode or programmable TX/RX buffers
- Message Bit Rates up to 1 Mbps
- DeviceNet™ Data Byte Filter Support
- Six Programmable Receive/Transmit Buffers
- Three Dedicated Transmit Buffers with Prioritization
- Two Dedicated Receive Buffers

### ECAN Bus Module Features (Continued):

- 16 Full, 29-Bit Acceptance Filters with Dynamic Association
- Three Full, 29-Bit Acceptance Masks
- Automatic Remote Frame Handling
- Advanced Error Management Features

### Special Microcontroller Features:

- Operating Voltage Range: 1.8V to 5.5V
- On-Chip 3.3V Regulator
- Operating Speed up to 64 MHz
- Up to 64 Kbytes On-Chip Flash Program Memory:
  - 10,000 erase/write cycle, typical
  - 20 years minimum retention, typical
- 1,024 Bytes of Data EEPROM:
  - 100,000 Erase/write cycle data EEPROM memory, typical
- 3.6 Kbytes of General Purpose Registers (SRAM)
- Three Internal Oscillators: LF-INTOSC (31 KHz), MF-INTOSC (500 kHz) and HF-INTOSC (16 MHz)
- Self-Programmable under Software Control
- Priority Levels for Interrupts
- 8 x 8 Single-Cycle Hardware Multiplier
- Extended Watchdog Timer (WDT):
  - Programmable period from 4 ms to 4,194s
- In-Circuit Serial Programming™ (ICSP™) via Two Pins
- In-Circuit Debug via Two Pins
- Programmable BOR
- Programmable LVD

TABLE 1: DEVICE COMPARISON

| Device       | Program Memory | Data Memory (Bytes) | Data EE (Bytes) | Pins  | IO | CTMU | 12-Bit A/D Channels | CCP/ ECCP | Timers 8-Bit/16-Bit | EUSART | Comparators | ECAN™ | MSSP | BOR/MV/LVD | DSM |
|--------------|----------------|---------------------|-----------------|-------|----|------|---------------------|-----------|---------------------|--------|-------------|-------|------|------------|-----|
| PIC18F25K80  | 32 Kbytes      | 3,648               | 1,024           | 28    | 24 | 1    | 8-ch                | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18LF25K80 | 32 Kbytes      | 3,648               | 1,024           | 28    | 24 | 1    | 8-ch                | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18F26K80  | 64 Kbytes      | 3,648               | 1,024           | 28    | 24 | 1    | 8-ch                | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18LF26K80 | 64 Kbytes      | 3,648               | 1,024           | 28    | 24 | 1    | 8-ch                | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18F45K80  | 32 Kbytes      | 3,648               | 1,024           | 40/44 | 35 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18LF45K80 | 32 Kbytes      | 3,648               | 1,024           | 40/44 | 35 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18F46K80  | 64 Kbytes      | 3,648               | 1,024           | 40/44 | 35 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18LF46K80 | 64 Kbytes      | 3,648               | 1,024           | 40/44 | 35 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | No  |
| PIC18F65K80  | 32 Kbytes      | 3,648               | 1,024           | 64    | 54 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | Yes |
| PIC18LF65K80 | 32 Kbytes      | 3,648               | 1,024           | 64    | 54 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | Yes |
| PIC18F66K80  | 64 Kbytes      | 3,648               | 1,024           | 64    | 54 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | Yes |
| PIC18LF66K80 | 64 Kbytes      | 3,648               | 1,024           | 64    | 54 | 1    | 11-ch               | 4/1       | 2/3                 | 2      | 2           | 1     | 1    | Yes        | Yes |



# PIC18F66K80 FAMILY

## Peripheral Highlights:

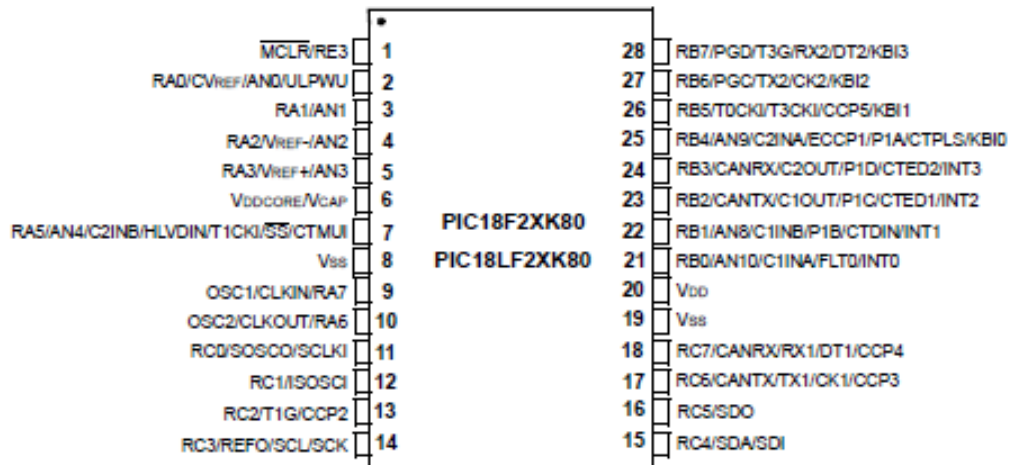
- Five CCP/ECCP modules:
  - Four Capture/Compare/PWM (CCP) modules
  - One Enhanced Capture/Compare/PWM (ECCP) module
- Five 8/16-Bit Timer/Counter modules:
  - Timer0: 8/16-bit timer/counter with 8-bit programmable prescaler
  - Timer1, 3: 16-bit timer/counter
  - Timer2, 4: 8-bit timer/counter
- Two Analog Comparators
- Configurable Reference Clock Output
- Charge Time Measurement Unit (CTMU):
  - Capacitance measurement
  - Time measurement with 1 ns typical resolution
  - Integrated voltage reference
- High-Current Sink/Source 25 mA/25 mA (PORTB and PORTC)
- Up to Four External Interrupts
- One Master Synchronous Serial Port (MSSP) module:
  - 3/4-wire SPI (supports all four SPI modes)
  - I<sup>2</sup>C™ Master and Slave modes
- Two Enhanced Addressable USART modules:
  - LIN/J2602 support
  - Auto-Baud Detect (ABD)
- 12-Bit A/D Converter with up to 11 Channels:
  - Auto-acquisition and Sleep operation
  - Differential Input mode of operation
- Data Signal Modulator module:
  - Select modulator and carrier sources from various module outputs
- Integrated Voltage Reference



# PIC18F66K80 FAMILY

## Pin Diagrams (Continued)

### 28-Pin SSOP/SPDIP/SOIC



### 40-Pin PDIP

