



Model: μPAC-7186EX-SM



Model: μPAC-7186EXD-SM

# μPAC-7186EX-SM/ μPAC-7186EXD-SM

## Internet Embedded Controller

The μPAC-7186EX-SM is a palm-size programmable automation controller that with Ethernet, RS-232, RS-485 communication. ICPDAS provide easy-to-use software development tool kits (Xserver, VxComm, Modbus libraries). Users can use them to easily integrate serial devices to have Ethernet/Internet communication ability and through the standard Modbus protocol to communicate with SCADA software (Indusoft, ISaGARF, DasyLab, Trace Mode, Citect, iFix, etc.).

For the hardware, it also supports an I/O expansion bus. The I/O expansion bus can be used to implement various I/O functions such as D/I, D/O, A/D, D/A, Timer/Counter, UART, flash memory, battery backup SRAM, ASIC key & other I/O functions. Nearly all kinds of I/O functions can be implemented by this bus but the bus can support only one board. There are more than 50 boards available for μPAC-7186EX-SM, you can choose one of them to expand hardware features.

## Specifications

CPU	
CPU	80186, 80MHz or compatible
SRAM	640K Bytes
Flash	512K Bytes; Erase unit is one sector (64K bytes); 100,000 erase/write cycles.
EEPROM	16K bytes Data retention: 40 years; 1,000,000 erase/write cycles.
NVRAM	31 Bytes (battery backup, data valid up to 10 year)
RTC (Real Time Clock)	Year-2000 compliance; seconds, minutes, hours, date of the month; month, year, valid up from 1980 to 2079
64-bit Hardware Serial Number	Yes
Build-in Watchdog Timer	Yes
Communication Interface	
COM1	RS-232 (TXD, RXD, CTS, RTS and GND); Non-isolation
COM2	RS-485 (D2+, D2-; self-tuner ASIC inside); Non-isolation
Ethernet Port	10/100Base-TX Ethernet Controller (Auto-negotiating, Auto_MDIX, LED indicator)
COM Port Formats	
Data bit	7, 8
Parity	Even, Odd, None
Stop bit	1
LED Display	
5-Digit 7 Segment LED Display	Yes (for μPAC-7186EXD-SM only)
System LED Indicator	Yes
Hardware Expansion	
I/O expansion bus	Yes
User defined I/O pins	14 pins
Dimensions	
μPAC-7186EX(D)-SM	123mm x 72mm x 33mm
Operating Environment	
Operating Temperature	-25°C to +75°C
Storage Temperature	-40°C to +80°C
Relative Humidity	5% to 95% Non-condensing
Power	
Protection	Power reverse polarity protection
Frame Ground for ESD Protection	Yes
Required Supply Voltage	+10 to +30VDC (non-regulated)
Power consumption	2.0W for μPAC-7186EX-SM 3.0W for μPAC-7186EXD-SM

## Ordering Information

μPAC-7186EX-SM CR	Palm size programmable automation controller (RoHS)
μPAC-7186EXD-SM CR	μPAC-7186EX with seven segment display (RoHS)

## Accessories

PWR-24/110	Wall-plug power Adapter / 110VAC, 60Hz, 4.8W
PWR-24/220F	Wall-plug power Adapter / 220VAC, 50Hz, 2.4W
PWR-24/230	1.05 Amp. DIN-Rail Mounting Power supply
I/O Expansion Board Selection Guide	All I/O expansion boards which are applicable to the μPAC-7186EX module