

## Adding a card to CardPro

To add additional cards to CardPro you need to create a card.ini file in the CardPro install directory (e.g. C:\program files\multipro\card.ini). Only Atmel AVR or MicroChip PIC based card(s) can be added to CardPro.

To add a card you have to make a section called [Card?]. ? is the number of the card.

Although the program contains a few card-configurations itself, the number of the additional cards starts at 0.

A card is not accepted to the program if a required parameter is missing or if a parameter is not valid (E.g. external loader not found).

Please make sure what you are doing. It's hard to ruin your card or the programmer, but it is not impossible. You can use the example card.ini below as a guideline for adding a new card.

### Options AVR based Card

Key	Function	Required
Description	Description of the card	Yes
Controller	AVR	Yes
ControllerName	The controller name	No
AVRFuses	Options are Lock1,Lock2,FSTRT,RCEN	Yes
DeviceCode	See datasheet. Multiple device codes allowed. You may put multiple device codes after each other without separator. E.g. D1D1D1D2D2D2D3D3D3	Yes
FlashSize	The flash program memory size in bytes.	Yes
IntEEPROMSize	The internal EEPROM memory size of the controller in bytes.	Yes
ExtEEPROMSize	The external EEPROM memory size in bytes. The size of the EEPROM can be divided by 16.	Yes
LoaderInProgram	0 or False: external loader, 1 or True : loader in program. Use only the internal loader for a funcard with bigger external EEPROM	No, assumed false.
LoaderNumber	The number of the internal loader. Normally you use an external loader and you don't use this option. Internal loaders: 0: Funcard loader, 1: Jupiter1 loader, 2: Jupiter2 loader, 3: GoldCard/Piccard loader, 4: Piccard2 loader	Only if loader in program is true
LoaderFileName	The name of the external loader. You can use the whole filename with filepath. Filepath is not needed when the loader is in the cardpro path or in the 'loaders' directory (recommended). The loader must be WinPhoenix/SNix compatible.	Only with external loader

## Options PIC based Card

Key	Function	Required
Description	Description of the card	Yes
Controller	PIC	Yes
ControllerName	The controller name	No
PICFuses	See datasheet. Mention all 14bits of the configuration word here. Start with bit0 and end with bit13. Use a , as separator. Use a ! sign to invert a flag (high level active). Please use WDT instead of WDTEN and see other flag-names at the existing cardpro cards for suggested flag names. -,1 and 0 are also valid and will not be shown in cardpro.	Yes
DeviceCode	See programming specifications datasheet. Use the 'Dev' part of the Device ID value. The 'Rev' part (lower 5 bits) is ignored. E.g. for PIC16F877 → 001001101xxxxx becomes 004D (hex). Use DeviceCode 01FF for a PIC device without Device ID code (PIC16C84 for example). Multiple device codes allowed. You may put multiple device codes after each other without separator. E.g. D1D1D2D2	Yes
PICOscillatorModes	Use this option to name the oscillator modes. Only needed when there are 3 FOSC bits (8 modes) or in case the 4 oscillator modes differ from the standard 4 modes. Start at mode0 and end at mode3/mode7. Use , as separator.	No
IntEEPROMSize	The internal EEPROM memory size of the controller in bytes.	Yes
ExtEEPROMSize	The external EEPROM memory size in bytes. The size of the EEPROM can be divided by 16.	Yes
LoaderInProgram	0 or False: external loader, 1 or True: loader in program. Use only the internal loader for a funcard with bigger external EEPROM	No, assumed false.
LoaderNumber	The number of the internal loader. Normally you use an external loader and you don't use this option. Internal loaders: 0: Funcard loader, 1: Jupiter1 loader, 2: Jupiter2 loader, 3: GoldCard/Piccard loader, 4: Piccard2 loader	Only if loader in program is true
LoaderFileName	The name of the external loader. You can use the whole filename with filepath. Filepath is not needed when the loader is in the cardpro path or in the 'loaders' directory (recommended). The loader must be WinPhoenix/SNix compatible.	Only with external loader

## Example Card.ini

### [Card0]

Description=Funcard, AT90S8515 + 24C128  
Controller=AVR  
ControllerName=AT90S8515  
AVRFuses=Lock1,Lock2  
DeviceCode=1E9301  
FlashSize=8192  
IntEEPROMSize=512  
ExtEEPROMSize=16384  
LoaderInProgram=1  
LoaderNumber=0

### [Card1]

Description=Funcard, AT90S8515 + 24C256  
Controller=AVR  
ControllerName=AT90S8515  
AVRFuses=Lock1,Lock2  
DeviceCode=1E9301  
FlashSize=8192  
IntEEPROMSize=512  
ExtEEPROMSize=32768  
LoaderInProgram=1  
LoaderNumber=0

### [Card2]

Description=PICcard, PIC16F628 + 24C64  
Controller=PIC  
ControllerName=PIC16F628  
PICFuses=FOSC0,FOSC1,!WDT,PWRT,FOSC2,!MCLR,!BODEN,!LVP,CPD,-,CP0,CP1,CP0,CP1  
PICOscillatorModes=LP,XT,HS,ExtClk,IntRC I/O,IntRC ClkOut,ER I/O,ER ClkOut  
DeviceCode=003E  
FlashSize=4096  
IntEEPROMSize=128  
ExtEEPROMSize=8192  
LoaderInProgram=False  
LoaderFileName =16f628loader.hex

### [Card3]

Description=PICcard Snix, PIC16F84 + 24C16  
Controller=PIC  
ControllerName=PIC16F84  
PICFuses=FOSC0,FOSC1,!WDT,PWRT,CP,CP,CP,CP,CP,CP,CP,CP,CP,CP  
DeviceCode=01FF002B  
FlashSize=2048  
IntEEPROMSize=64  
ExtEEPROMSize=2048  
LoaderInProgram=False  
LoaderFileName=snix.hex

### [Card4]

Description=PICcard MultiMac, PIC16F84 + 24C16  
Controller=PIC  
ControllerName=PIC16F84  
PICFuses=FOSC0,FOSC1,!WDT,PWRT,CP,CP,CP,CP,CP,CP,CP,CP,CP,CP  
DeviceCode=01FF002B  
FlashSize=2048  
IntEEPROMSize=64  
ExtEEPROMSize=2048  
LoaderInProgram=False  
LoaderFileName=winphoenix.hex