

# CARMEN<sup>®</sup> neural network controllers

for CARMEN<sup>®</sup> based IT systems



The CARMEN<sup>®</sup> Neural Network Controllers contain a special code, which cooperates tightly with the CARMEN<sup>®</sup> ANPR engine during the automatic number plate recognition process.

All CARMEN<sup>®</sup> Neural Network Controllers run a special neural network code of the license plate recognition process.

The main parts of the license plate recognition process run on the CPU of the PC, but some functions of the code are outsourced to the microcontroller, so the presence of the CARMEN<sup>®</sup> Neural Network Controller is indispensable while image processing.

Different types of Neural Network Controllers available:

- CARMEN FXMC USB
- CARMEN FXMC Internal USB
- CARMEN FXMC Express Card
- CARMEN FXMC PCIe
- CARMEN FXMC PCI
- CARMEN FXMC PC104+
- FXVD4

See detailed information on CARMEN<sup>®</sup> Neural Network Controllers on the next page.



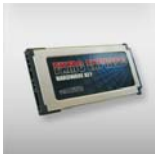
#### **CARMEN® FXMC USB Neural Network Controller**

The CARMEN® FXMC USB Neural Network Controller (NNC) is a non-transparent neural network controller that can be connected to the USB port of a computer. With using this device, there is no need to any free PCI slots, neither to any PC104+ layers. The operating system has to support USB though. When using CARMEN® FXMC USB - excepting the image capturing process - you can have the same possibilities and features as with the FXVD4mc\_s grabber card, and moreover you have the chance to use your own video capture card.



#### **CARMEN® FXMC Internal USB Neural Network Controller**

Internal device, which can be connected directly to the motherboard through the 4 pin vertical USB connector (Samtec SSM-102). Ideal for system integrator companies as being an internal device, it protects the hardware key from being stolen or damage physically. This neural network controller is available for CARMEN® FreeFlow, CARMEN® Parking Digital (license plate recognition application) and CARMEN® ACCR (container code recognition application) license.



#### **CARMEN® FXMC Express Card Neural Network Controller**

The CARMEN® FXMC Express Neural Network Controller has an ExpressCard 34 interface. The controller can be inserted into a free ExpressCard (34/54) slot available in most today notebook models. This version is ideal for mobile devices since most of the neural network controller card is fully or largely hidden within the PC housing. In this case the neural network controller is safe and there is less risk to steal or harm the unit. The high speed ExpressCard connector provides real fast response time. The device allows usage of CARMEN® ANPR (license plate recognition) on Windows and Linux platform.



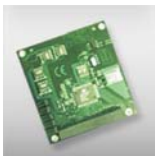
#### **CARMEN® FXMC PCIe Neural Network Controller**

The CARMEN® FXMC PCIe Neural Network Controller has a PCIe x1 interface, so that the controller can be inserted into a free PCIe slot of a PC. The high speed PCIe interface provides real fast response time. With using this device, besides the Windows operating systems you can use CARMEN® ANPR (license plate recognition). This neural network controller is available with single CARMEN® FreeFlow License or with Dual (Core2) license.



#### **CARMEN® FXMC PCI Neural Network Controller**

The CARMEN® FXMC PCI Neural Network Controller has a PCI interface, so that the controller can be inserted into a free PCI slot of a PC. The high speed PCI connector provides real fast response time. With using this device, besides the Windows and Linux operating systems you can use CARMEN ANPR. When using CARMEN® FXMC PCI - excepting the image capturing process - you can have the same possibilities and features as with the CARMEN® FXVD4mc\_s PCI grabber card, and moreover you have the chance to use your own video capture card.



#### **CARMEN® FXMC PC104+ Neural Network Controller**

The CARMEN® FXMC PC104+ Neural Network Controller has a PC104+ interface, so that the controller can be added to a PC104+ layer of a PC104+ format computer. The high speed PC104+ interface also provides real fast response time. With using this device, besides the Windows and Linux® operating systems you can use CARMEN® ANPR (license plate recognition). When using CARMEN® FXMC PC104+ (excepting the image capturing process) you can have the same possibilities and features as with the CARMEN® FXVD4mc\_s PC104+ grabber card, and moreover you have the chance to use your own video capture card.



#### **FXVD4 Neural Network Controller**

FXVD4mc\_s is a high quality 4-channels video capture card specially developed for the CARMEN® ANPR (license plate recognition) and ACCR (container code recognition) system. It is based on the Bt878 video capture chip whose state-of-the-art architecture provides high quality images. The services of the chip are supported by additional on-card hardware modules allowing the card to achieve outstanding high performance. The card is developed to handle both PAL and NTSC analogue composite video signals, received through any of the four BNC input connectors.