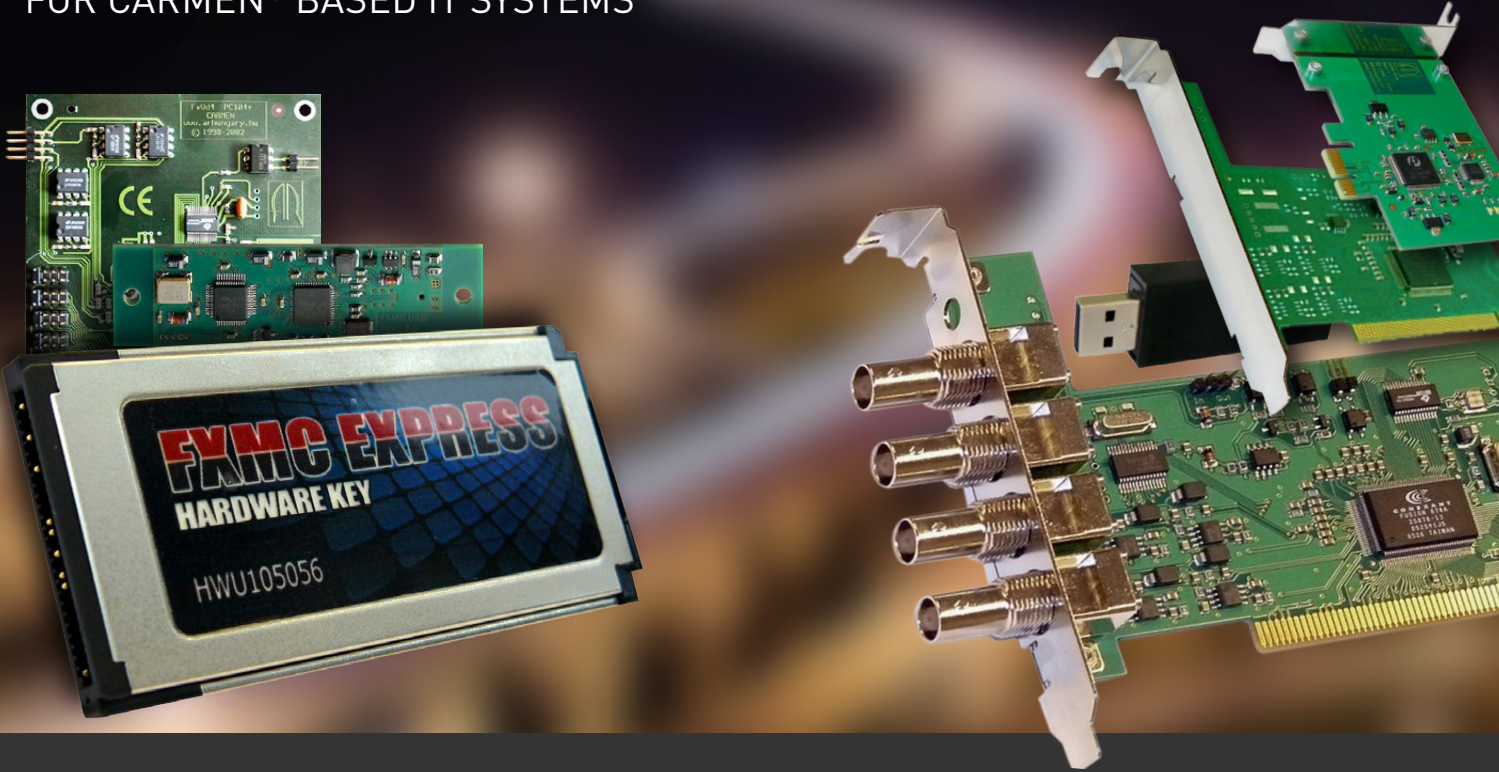


CARMEN® NEURAL NETWORK CONTROLLERS

FOR CARMEN® BASED IT SYSTEMS



SOFTWARE COMPONENTS

The Neural Network Controllers contain a special code that tightly cooperates with the ANPR engine during the automatic number plate recognition process. All Neural Network Controllers run a special neural network code of the license plate recognition process. The main parts of the license plate recognition run on the CPU of the PC, but some functions of the code are outsourced to the microcontroller. That requires the presence of the Neural Network Controller during image processing.

CARMEN® FXMC USB NEURAL NETWORK CONTROLLER

Neural Network Controller (NNC) is a non-transparent neural network controller that connects to the USB port of a computer. When using this device, there is no need for free PCI slots or PC104+ layers, only operating system USB support. With CARMEN® FXMC USB – excepting the image capturing process – users have the same options and features as with the FXVD4mc_s grabber card but with the availability to use their own video capture card.

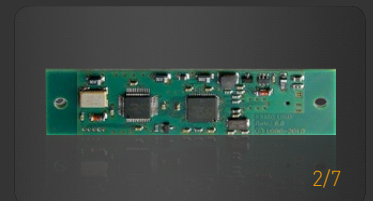
Interface	USB 2.0
Processor	50 MHz
Supported operating systems	Windows or Linux
System requirements	Free USB 2.0 port
Power consumption	Approx. 85 mA
Size	68.0 mm × 19.0 mm × 9.0 mm



CARMEN® FXMC INTERNAL USB NEURAL NETWORK CONTROLLER

An internal device that directly connects to the motherboard through the 4 pin vertical USB connector (Samtec SSM-102). Since installed internally, it is ideal for system integrators, as the hardware key is protected from theft or physical damage. This neural network controller is available for CARMEN® FreeFlow, CARMEN® Parking Digital (license plate recognition applications) and CARMEN® ACCR (container code recognition application) licenses.

Interface	USB 2.0 (connector: 2-row 4 pin socket)
Processor	50 MHz
Supported operating systems	Windows or Linux
System requirements	Free USB 2.0 port
Power consumption	Approx. 85 mA
Size	75.0 mm × 20.0 mm × 10.5 mm

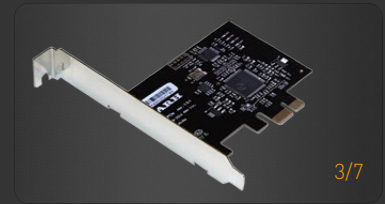


CARMEN® NEURAL NETWORK CONTROLLERS

CARMEN® FXMC PCIE NEURAL NETWORK CONTROLLER

The CARMEN® FXMC PCIe Neural Network Controller has a PCIe x1 interface to be inserted into a free PCIe slot of a PC. The high speed PCIe interface provides exceptionally fast response time. This Neural Network Controller is available with Single, Dual (2-core), or Quad (4-core) FreeFlow Licenses.

Interface	PCIe X1
Supported operating systems	Windows or Linux
System requirements	Free PCIe slot x1 (or higher)
Power consumption	Approx. 300 mA
Size	87.0 mm × 6.07 mm



3/7

CARMEN® FXMC EXPRESS CARD NEURAL NETWORK CONTROLLER (EOL*)

The CARMEN® FXMC Express Neural Network Controller has an ExpressCard 34 interface for the PC's 34/54 slot. This version is ideal for mobile devices since most of the neural network controller card is fully or largely hidden within the PC housing. With this the neural network controller is safe from theft or damage. The high speed ExpressCard connector also provides exceptionally fast response time when using CARMEN® ANPR (license plate recognition) on Windows and Linux platforms.

Interface	Express card 34 (54 compatible)
Supported operating systems	Windows or Linux
System requirements	Free Express card slot
Input voltage	3.3 V
Size	75.0 mm × 34.0 mm × 5.0 mm

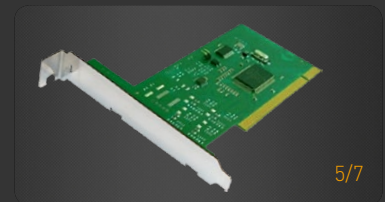


4/7

CARMEN® FXMC PCI NEURAL NETWORK CONTROLLER (EOL*)

The CARMEN® FXMC PCI Neural Network Controller has a PCI interface to be inserted into a free PCI slot of a PC for great response time. When using CARMEN® FXMC PCI – excepting the image capturing process – users have the same options and features as with the CARMEN® FXVD4mc_s PCI grabber card but in Windows and Linux operating systems and with the availability to use their own video capture card.

Interface	PCI 2.1
Processor	75 MHz
Supported operating systems	Windows or Linux
System requirements	Free PCI slot with bus mastering support
Power consumption	Approx. 450 mA
Size	97.0 mm × 120.0 mm

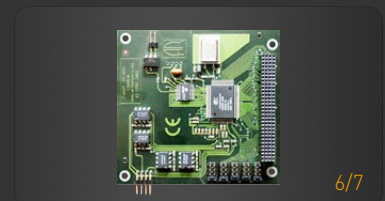


5/7

CARMEN® FXMC PC104+ NEURAL NETWORK CONTROLLER (EOL*)

The CARMEN® FXMC PC104+ Neural Network Controller has a PC104+ interface, so that the controller can be added to that layer and computer format for a fast response time. When using CARMEN® FXMC PC104+ – excepting the image capturing process – users have the same options and features as with the CARMEN® FXVD4mc_s PC104+ grabber card but in Windows and Linux operating systems and with the availability to use their own video capture card.

Interface	PC104+
Processor	75 MHz
Supported operating systems	Windows or Linux
System requirements	Free PC104+ layer
Power consumption	Approx. 450 mA
Size	95.88 mm × 90.17 mm

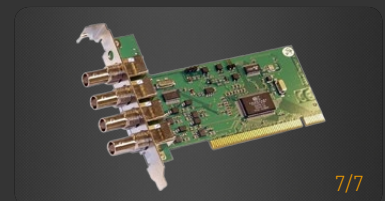


6/7

CARMEN® FXVD4 PCI NEURAL NETWORK CONTROLLER (EOL*)

FXVD4mc_s is a high quality 4-channels video capture card specifically 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 analog composite video signals received through any of the four BNC input connectors.

Interface	PCI 2.1
Processor	75 MHz
Supported operating systems	Windows or Linux
System requirements	Free PCI slot with bus mastering support
Power consumption	Approx. 450 mA
Size	97.0 mm × 120.0 mm



7/7

*end of life



ADDRESS: ALKOTAS UTCA 41, H-1123 BUDAPEST, HUNGARY, EU
 PHONE: +36 1 201 9650 • FAX: +36 1 201 9651
 WWW.ARH.HU • EMAIL: SENDINFO@ARH.HU

Technical specifications are subject to change without prior notice. This document does not constitute an offer.