

## Product Datasheet

### NK8231 CEI interface for a single subsystem

NK8000  
MP4.30

The NK8231 CEI interface for a single subsystem is used to connect a local or distributed intrusion detection system to MM2000 Management Stations. It provides a first level of centralisation, and acts as a secure communication partner for the NS8210 Network Driver of the FEP station for MM2000.

- **Allows the connection of a single Siemens or 3<sup>rd</sup> party intrusion detection subsystem to NK8000 networks**
- **Conversion of native subsystem application protocols to CEI 79-6**
- **Best suited for distributed systems or geographical networks where a single subsystem has to be connected to a remote management system (such as bank applications: centralisation of security systems of branches)**
- **Dial-up system available for MM2000 systems as backup connection**
- **Based on the LAN standards TCP/IP and Ethernet**

## Benefits

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The NK8231 MP4.30 is based on the NK823x hardware compliant with RoHS Regulations.

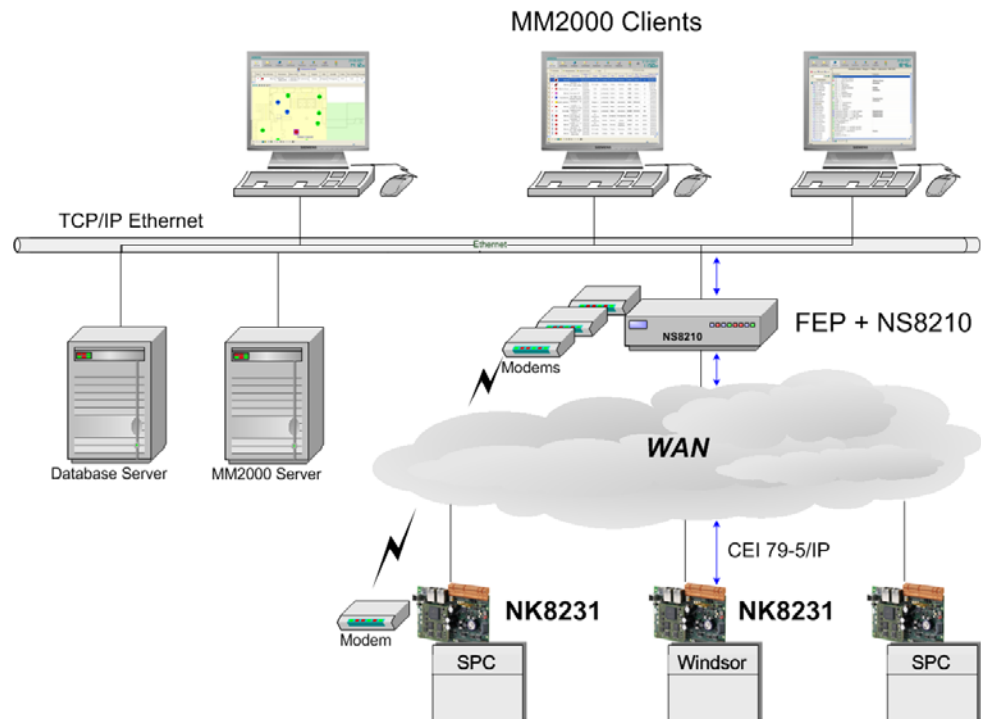
The NK8231 is an economical solution for the integration of single intrusion detection subsystems into the MM2000 Management Stations. It is best suited for bank applications where security systems of multiple branches need to be centralised.

## Connectivity

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The following NK8231 connectivity options are available:

- Connection to a single host (MM2000 via FEP station<sup>1</sup>)



Connectivity example for a distributed system

### Upstream connectivity:

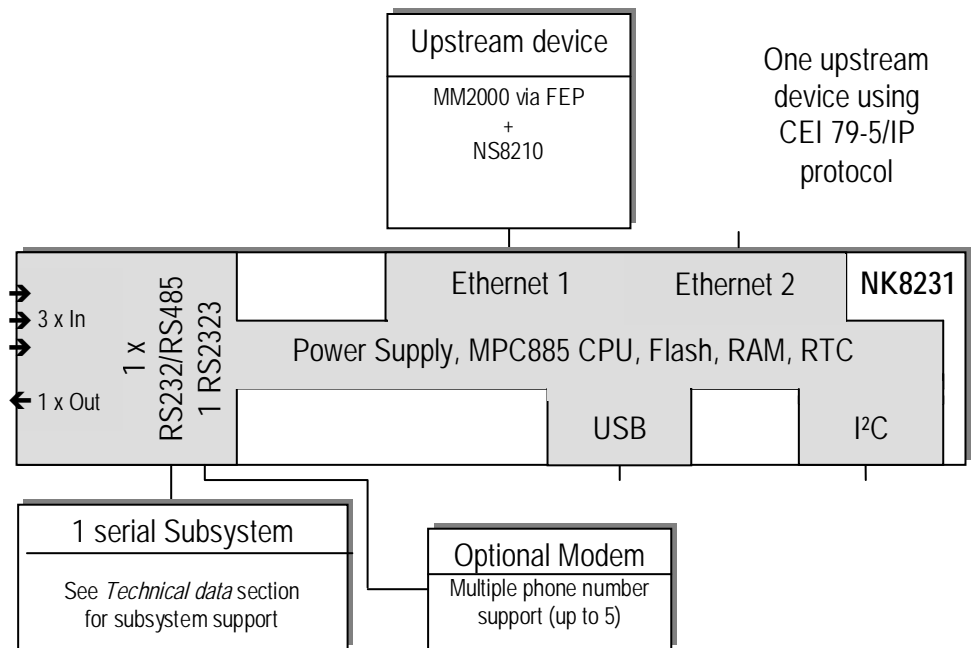
- Via CEI 79-5/IP on Ethernet and/or PSTN
  - Single host only
  - Encryption (option)
  - Dial-up connectivity via modem for wide area extension systems
  - FEP station equipped with NS8210 Network driver

### Downstream connectivity:

- 1 serial connection supporting an intrusion detection system

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<sup>1</sup> MM2000 is a Management Station product that is only available in the Italian market.



The NK8231 employs an MPC885 PowerPC CPU and is composed of:

- Base board with power supply, CPU module, and basic configuration of interfaces

The Base board is equipped with:

- Power supply
- 2 serial interfaces (2 RS232 or 1 RS485 and 1 RS232)
- Dual Ethernet 10/100Base-T interface (*Ethernet 2 not currently used*)
- MPC885 PowerPC CPU module with:
  - 64MB RAM
  - 32MB Flash EPROM disk
  - Real Time Clock (RTC)
  - LINUX Operating System
- Diagnostic LEDs
- 3 digital inputs<sup>2</sup>; 1 relay output (*Not yet supported by MM2000*)
- USB port (*not currently used*)

<sup>2</sup> May optionally be used for acquiring power supply supervision signals.

## Configuration

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**Hardware configurations** The NK8231 is currently available in one hardware configuration:

**NK8231.2**

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- 1 Ethernet line for remote host(s)
  - 2 serial lines for a single subsystem / modem
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**Further options:**

**NK8021**

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- Analog modem for public switched telephone network (PSTN)
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## Parameterisation

The NK8000 configuration is part of the Composer tool environment. To perform the SW-configuration for NK8231, a WW8000 Composer license is required.

- See the *WW8000 Composer Datasheet* (STEP #A6V10062403) for licensing details.  
To learn how to obtain this document, see the *DMS8000 Documentation Resource Information and Glossary Guide* (STEP #A6V10089056).

## Mounting solutions for NK8231

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If mounted on the NKA8011-A1 mounting plate, the NK8231 can be installed in a control unit housing using card holders.



NKA8011-A1 mounting plate for NK8231

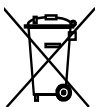
## Connectivity NK8231 CEI interface

<b>Management Systems</b>	Ethernet	– 1 remote management station: MM2000 via FEP station (using CEI 79-5 / 79-6 protocol supporting encryption and switched lines)
<b>Subsystems</b>	Max. 1 subsystem	– 1 intrusion detection subsystem

## Technical data NK8231 CEI interface

<b>Lines to remote host</b>	1 <sup>st</sup> Ethernet IEEE 802.3	10/100 Mbit/sec
	<ul style="list-style-type: none"> <li>– Transport protocol: CEI 79-5 type A and type B <ul style="list-style-type: none"> <li>– Host (<i>single host only</i>): <ul style="list-style-type: none"> <li>– FEP station equipped with NS8210 Network Driver (supporting up to 500 NK823x)</li> <li>– FEAL 64-bit encryption</li> <li>– Support of switched lines (type A)</li> </ul> </li> </ul> </li> </ul>	
<b>Switched lines to remote host (as backup line)</b>	1 RS232 line – Up to 5 telephone numbers	NK8021 Analog modem Siemens M20 or MC35i GSM modem
<b>Lines to subsystems</b>	1 RS232/RS485 line, protocol and baud rate options configured by NK8000 configuration tool (Composer):	
	<ul style="list-style-type: none"> <li>– Windsor proprietary protocol: Windsor</li> <li>– UDP/EDP protocol: SPC</li> </ul>	RS232: 2400 baud RS232: 115200 baud
<b>Ethernet data traffic</b>	Very low network load: <ul style="list-style-type: none"> <li>– Keep-alive message: 1 empty TCP/IP packet</li> <li>– Periodic authentication: (CEI 79-5 only) exchange of three packets with max. 30 bytes</li> <li>– Single alarm event: from 20 to 60 bytes</li> </ul>	
		Configurable, default every 30 s Configurable, default 10 min.
<b>Connectors</b>	<ul style="list-style-type: none"> <li>– D-Sub 9 pin, female type (for serial and modem lines)</li> <li>– RJ-45 connector for Ethernet</li> </ul>	
<b>Cables</b>	– RS232 lines: two unshielded twisted pairs	Cat.3 UTP, max. 15 m
<b>Power supply requirements</b>	– Input voltage (DC power supply to NK8231 board)	10-33 Vdc 4,5 W
<b>Operating conditions</b>	<ul style="list-style-type: none"> <li>– Temperature range</li> <li>– Humidity</li> </ul>	0 to 50 °C 10 to 95 % non condensing
<b>Dimensions</b>	– NK8231 boards	W x H x D [mm] 160 x 100 x 35 (Euro-size PCB)
<b>Weight</b>	– NK8231 boards	0,28 kg
<b>Onboard Digital Input</b>	3 digital inputs	<b>Note:</b> Not yet supported by MM2000
<b>Onboard Relay Output</b>	1 relay output	<b>Note:</b> Not yet supported by MM2000
<b>Regulatory Approvals (CE, FCC conformity)</b>	EN 61000-6-3 EN 50130-4 FCC Part 15 Class B	EMC emission EMC immunity EMC emission

## Disposal



This device includes electrical and electronic components and must not be disposed of as domestic waste.

**Current local legislation must be observed.**

## Related Products

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**Note:** See Sales and Technical documentation for product-specific details. A complete list is available in *DMS8000 Documentation Resource Information* (STEP #A6V10089056).

<b>NK8235</b>	Ethernet Port	(replacement for NK8223)
<b>NK8232</b>	Ethernet Port for a single subsystem	
<b>NK8225</b>	Ethernet Port	
<b>NK8223</b>	Ethernet Port	
<b>NK8222</b>	Ethernet Port for a single subsystem	
<b>NS8210</b>	Network Driver (on FEP station for MM2000)	
<b>MM2000</b>	Management Station	
<b>WW8000</b>	Composer	

## Details for ordering

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<b>NK8231</b>		<b>CEI interface for a single sub-system</b>	
S54461-C5-A1	NK8231.2	Base module	– 1 Ethernet line for remote host(s) – 2 serial lines for a single subsystem / local host / modem
<b>NK823x HW Accessories</b>			
S54461-B4-A1	NKA8011-A1	Mounting plate for NK823x	
A6E600245	NK8021	NK8021 Analog modem	Analog modem for public switched telephone network (PSTN)

**Note:** WW8000 Composer and all necessary NK8000 configuration tools are included in the DMS8000 MP4.30 product CD.

## Sales and Technical documentation

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→ See the *DMS8000 Documentation Resource Information and Glossary Guide* (STEP#A6V10089056) for a complete list of all DMS8000 Reference Documents available.

## Export restrictions for cryptographic algorithms

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The NK8000 Ethernet Ports include devices and software that make use of cryptographic algorithms. Specific cryptographic export control regulations apply that currently prohibit shipping and installing NK8000 software in the following countries:

- Cuba
- Iran
- North Korea
- Rwanda
- Sudan
- Syria

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