

**Data sheet**  
 VIPA CPU 015N (015-CEFNR00)

**Technical data**

<b>Order no.</b>	<b>015-CEFNR00</b>
Type	VIPA CPU 015N
Module ID	-
<b>General information</b>	
Note	-
Features	<p>powered by SPEED7          SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio, SIMATIC manager          work memory [KB]: 256 - 512          integrated Ethernet CP   EtherCAT controller          Interface [1x RJ45]: EtherCAT-Master          Interface [1x RJ45]: active Ethernet CP, ModbusTCP master/slave, openCommunication          Interface [2x RJ45]: active PG/OP-communication with DHCP support          interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave          optional: integrated motion controller 4/8/20 axes, PROFIBUS master/slave          web server</p>
<b>Technical data power supply</b>	
Power supply (rated value)	DC 24 V
Power supply (permitted range)	DC 20.4...28.8 V
Reverse polarity protection	yes
Current consumption (no-load operation)	175 mA
Current consumption (rated value)	1.1 A
Inrush current	3 A
$I^2t$	0.1 A <sup>2</sup> s
Max. current drain at backplane bus	3 A
Max. current drain load supply	10 A
Power loss	8 W
<b>Communication functions</b>	
PG/OP channel	yes
Global data communication	yes
Number of GD circuits, max.	8
Size of GD packets, max.	22 Byte
S7 basic communication	yes
S7 basic communication, user data per job	76 Byte
S7 communication	yes
S7 communication as server	yes
S7 communication as client	-
S7 communication, user data per job	160 Byte
Number of connections, max.	32
<b>Functionality Sub-D interfaces</b>	
Type	X2
Type of interface	RS485

Connector	Sub-D, 9-pin, female
Electrically isolated	yes
MPI	yes
MP <sup>2</sup> I (MPI/RS232)	-
DP master	-
DP slave	-
Point-to-point interface	yes
5V DC Power supply	max. 90mA, isolated
24V DC Power supply	max. 100mA, non-isolated

Type	X3
Type of interface	RS485
Connector	Sub-D, 9-pin, female
Electrically isolated	yes
MPI	yes
MP <sup>2</sup> I (MPI/RS232)	-
DP master	optional
DP slave	optional
Point-to-point interface	-
5V DC Power supply	max. 90mA, isolated
24V DC Power supply	max. 100mA, non-isolated

#### Functionality MPI

Number of connections, max.	32
PG/OP channel	yes
Routing	yes
Global data communication	yes
S7 basic communication	yes
S7 communication	yes
S7 communication as server	yes
S7 communication as client	-
Transmission speed, min.	19.2 kbit/s
Transmission speed, max.	12 Mbit/s

#### Functionality PROFIBUS master

PG/OP channel	yes
Routing	yes
S7 basic communication	yes
S7 communication	yes
S7 communication as server	yes
S7 communication as client	-
Activation/deactivation of DP slaves	-
Direct data exchange (slave-to-slave communication)	-
DPV1	yes
Transmission speed, min.	9.6 kbit/s
Transmission speed, max.	12 Mbit/s
Number of DP slaves, max.	124
Address range inputs, max.	2 KB
Address range outputs, max.	2 KB

User data inputs per slave, max.	244 Byte
User data outputs per slave, max.	244 Byte

### Functionality PROFIBUS slave

PG/OP channel	yes
Routing	yes
S7 communication	yes
S7 communication as server	yes
S7 communication as client	-
Direct data exchange (slave-to-slave communication)	-
DPV1	yes
Transmission speed, min.	9.6 kbit/s
Transmission speed, max.	12 Mbit/s
Automatic detection of transmission speed	-
Transfer memory inputs, max.	244 Byte
Transfer memory outputs, max.	244 Byte
Address areas, max.	32
User data per address area, max.	32 Byte

### Point-to-point communication

PtP communication	yes
Interface isolated	yes
RS232 interface	-
RS422 interface	-
RS485 interface	yes
Connector	Sub-D, 9-pin, female
Transmission speed, min.	150 bit/s
Transmission speed, max.	115.5 kbit/s
Cable length, max.	500 m

### Point-to-point protocol

ASCII protocol	yes
STX/ETX protocol	yes
3964(R) protocol	yes
RK512 protocol	-
USS master protocol	yes
Modbus master protocol	yes
Modbus slave protocol	yes
Special protocols	-

### Functionality RJ45 interfaces

Type	X1
Type of interface	Ethernet 10/100 MBit Switch
Connector	RJ45
Electrically isolated	yes
PG/OP channel	yes
Number of connections, max.	4
Productive connections	-
Fieldbus	-

Type	X5
Type of interface	Ethernet 10/100 MBit Switch
Connector	RJ45
Electrically isolated	yes
PG/OP channel	yes
Number of connections, max.	4
Productive connections	-
Fieldbus	-

Type	X4
Type of interface	Ethernet 100 MBit
Connector	RJ45
Electrically isolated	yes
PG/OP channel	-
Number of connections, max.	-
Productive connections	-

Type	X6
Type of interface	Ethernet 10/100 MBit
Connector	RJ45
Electrically isolated	yes
PG/OP channel	yes
Number of connections, max.	8
Productive connections	yes

#### Ethernet communication CP

Number of configurable connections, max.	8
Number of productive connections by Siemens NetPro, max.	8
S7 connections	BSEND, BRCV, GET, PUT, Connection of active and passive data handling
User data per S7 connection, max.	32 KB
TCP-connections	FETCH PASSIV, WRITE PASSIV, Connection of passive data handling
User data per TCP connection, max.	64 KB
ISO-connections	-
User data per ISO connection, max.	-
ISO on TCP connections (RFC 1006)	FETCH PASSIV, WRITE PASSIV, Connection of passive data handling
User data per ISO on TCP connection, max.	32 KB
UDP-connections	-
User data per UDP connection, max.	-
UDP-multicast-connections	-
UDP-broadcast-connections	-

#### Ethernet open communication

Number of connections, max.	8
ISO on TCP connections (RFC 1006)	TSEND, TRCV, TCON, TDISCON
User data per ISO on TCP connection, max.	8 KB

TCP-Connections native	TSEND, TRCV, TCON, TDISCON
User data per native TCP connection, max.	8 KB
User data per ad hoc TCP connection, max.	1460 Byte
UDP-connections	TUSEND, TURCV
User data per UDP connection, max.	1472 Byte

## Ethernet communication via PG/OP

Number of productive connections via PG/OP, max.	-
Number of productive connections by Siemens NetPro, max.	-
S7 connections	-
User data per S7 connection, max.	-
TCP-connections	-
User data per TCP connection, max.	-
ISO on TCP connections (RFC 1006)	-
User data per ISO connection, max.	-

## Ethernet open communication via PG/OP

Number of configurable connections, max.	-
ISO on TCP connections (RFC 1006)	-
User data per ISO on TCP connection, max.	-
TCP-Connections native	-
User data per native TCP connection, max.	-
User data per ad hoc TCP connection, max.	-
UDP-connections	-
User data per UDP connection, max.	-

## EtherCAT Master

Number of EtherCAT-slaves	128
Update time	1 ms .. 512 ms
Address range inputs, max.	2 KB
Address range outputs, max.	2 KB
EoE support	yes
FoE support	yes
Distributed Clock support	yes
Hotconnect Slaves	yes
Isochronous mode	yes

## Management & diagnosis

Protocols	ICMP DCP
Web based diagnosis	-
NCM diagnosis	-

## Housing

Material	PPE / PPE GF10
Mounting	Profile rail 35 mm

## Mechanical data

Dimensions (WxHxD)	131.5 mm x 109 mm x 83 mm
Net weight	335 g
Weight including accessories	335 g

Gross weight	365 g
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**Environmental conditions**

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Operating temperature	0 °C to 60 °C
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Storage temperature	-25 °C to 70 °C
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**Certifications**

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UL certification	in preparation
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KC certification	in preparation
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