

Data sheet
 VIPA CPU 017PN (017-CEFPR00)

Technical data

| | |
|---|--|
| Order no. | 017-CEFPR00 |
| Type | VIPA CPU 017PN |
| Module ID | - |
| General information | |
| Note | - |
| Features | <p>powered by SPEED7 work memory [KB]: 512 - 2.048 integrated PROFINET controller interface [2x RJ45]: PROFINET, ModbusTCP master/slave, openCommunication, SmartPROFINET (iDevice and Control up to 8 Device) interface [2x RJ45]: active Ethernet PG/OP communication with DHCP support, switch interface [2x RS485]: MPI, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave optional: PROFIBUS master/slave web server SD card slot with locking, up to 64 expansion modules, configurable with SPEED7 Studio, SIMATIC Manager and TIA Portal</p> |
| Technical data power supply | |
| 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) | 150 mA |
| Current consumption (rated value) | 1.1 A |
| Inrush current | 3 A |
| $I_{\Delta t}$ | 0.1 A ² s |
| Max. current drain at backplane bus | 3 A |
| Max. current drain load supply | 10 A |
| Power loss | 7.5 W |
| Communication functions | |
| 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 |
| Functionality Sub-D interfaces | |
| Type | X2 |
| Type of interface | RS485 |

| | |
|-------------------------------|--------------------------|
| Connector | Sub-D, 9-pin, female |
| Electrically isolated | yes |
| MPI | yes |
| MP ² 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 ² 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 PROFINET I/O controller

| | |
|-----------------------------|-------------|
| Realtime Class | - |
| Conformance Class | PROFINET IO |
| Number of PN IO devices | 128 |
| IRT support | - |
| Prioritized start-up | - |
| Number of PN IO lines | 1 |
| Address range inputs, max. | 4 KB |
| Address range outputs, max. | 4 KB |
| Transmitting clock | 1 ms |

| | |
|--|---|
| Update time | 1 ms .. 512 ms |
| Isochronous mode | - |
| Functionality RJ45 interfaces | |
| Type | - |
| Type of interface | Ethernet 10/100 MBit Switch |
| Connector | 2 x RJ45 |
| Electrically isolated | yes |
| PG/OP channel | yes |
| Number of connections, max. | 4 |
| Productive connections | yes |
| Fieldbus | - |
| Functionality RJ45 interfaces | |
| Type | - |
| Type of interface | Ethernet 10/100 MBit Switch |
| Connector | 2 x RJ45 |
| Electrically isolated | yes |
| PG/OP channel | yes |
| Number of connections, max. | 8 |
| Productive connections | yes |
| Fieldbus | PROFINET-IO |
| Ethernet communication CP | |
| Number of configurable connections, max. | 24 |
| Number of productive connections by Siemens NetPro, max. | 16 |
| 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. | 8 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. | 8 KB |
| UDP-connections | - |
| User data per UDP connection, max. | - |
| UDP-multicast-connections | - |
| UDP-broadcast-connections | - |
| Ethernet open communication | |
| Number of connections, max. | 24 |
| ISO on TCP connections (RFC 1006) | TSEND, TRCV, TCON, TDISCON |
| User data per ISO on TCP connection, max. | 32 KB |
| TCP-Connections native | TSEND, TRCV, TCON, TDISCON |
| User data per native TCP connection, max. | 32 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. | 4 |
| Number of productive connections by Siemens NetPro, max. | 4 |
| S7 connections | BSEND, BRCV, GET, PUT, Connection of active and passive data handling |
| User data per S7 connection, max. | 64 KB |
| TCP-connections | FETCH PASSIV, WRITE PASSIV, Connection of passive data handling |
| User data per TCP connection, max. | 8 KB |
| ISO on TCP connections (RFC 1006) | FETCH PASSIV, WRITE PASSIV, Connection of passive data handling |
| User data per ISO connection, max. | 8 KB |

Ethernet open communication via PG/OP

| | |
|---|----------------------------|
| Number of configurable connections, max. | 4 |
| ISO on TCP connections (RFC 1006) | TSEND, TRCV, TCON, TDISCON |
| User data per ISO on TCP connection, max. | 32 KB |
| TCP-Connections native | TSEND, TRCV, TCON, TDISCON |
| User data per native TCP connection, max. | 32 KB |
| User data per ad hoc TCP connection, max. | 1460 Byte |
| UDP-connections | TUSEND, TURCV |
| User data per UDP connection, max. | 1472 Byte |

Management & diagnosis

| | |
|---------------------|---|
| Protocols | ICMP DCP DHCP via PG/OP NTP via CP |
| Web based diagnosis | yes |
| NCM diagnosis | yes |

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 |

Environmental conditions

| | |
|-----------------------|-----------------|
| Operating temperature | 0 °C to 60 °C |
| Storage temperature | -25 °C to 70 °C |

Certifications

| | |
|------------------|----------------|
| UL certification | in preparation |
| KC certification | in preparation |