

**Data sheet**  
 VIPA CPU 214DPM (214-2BM06)

## Technical data

|                  |                  |
|------------------|------------------|
| <b>Order no.</b> | <b>214-2BM06</b> |
| Type             | VIPA CPU 214DPM  |

## General information

|          |   |
|----------|---|
| Note     | -   |
| Features | work memory [KB]: 96<br>interface [RS485]: MPI<br>interface [RS485]: PROFIBUS master<br>MMC card slot, up to 32 expansion modules, programmable with<br>SPEED7 Studio, SIMATIC Manager and TIA Portal |

## 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) | 130 mA                |
| Current consumption (rated value)       | 1.5 A                 |
| Inrush current                          | 65 A                  |
| $I^2t$                                  | 0.75 A <sup>2</sup> s |
| Max. current drain at backplane bus     | 3 A                   |
| Max. current drain load supply          | -                     |
| Power loss                              | 5 W                   |

## Load and working memory

|  |                           |
|--|---------------------------|
| Load memory, integrated                  | 144 KB                    |
| Load memory, maximum                     | 144 KB                    |
| Work memory, integrated                  | 96 KB                     |
| Work memory, maximal                     | 96 KB                     |
| Memory divided in 50% program / 50% data | -                         |
| Memory card slot                         | MMC-Card with max. 512 MB |

## Hardware configuration

|                                    |               |
|------------------------------------|---------------|
| Racks, max.                        | 4             |
| Modules per rack, max.             | total max. 32 |
| Number of integrated DP master     | 1             |
| Number of DP master via CP         | 8             |
| Operable function modules          | 32            |
| Operable communication modules PtP | 32            |
| Operable communication modules LAN | -             |

## Command processing times

|                                 |              |
|---------------------------------|--------------|
| Bit instructions, min.          | 0.18 $\mu$ s |
| Word instruction, min.          | 0.78 $\mu$ s |
| Double integer arithmetic, min. | 1.8 $\mu$ s  |
| Floating-point arithmetic, min. | 40 $\mu$ s   |

**Timers/Counters and their retentive characteristics**

|                                 |                        |
|---------------------------------|------------------------|
| Number of S7 counters           | 256                    |
| S7 counter remanence            | adjustable 0 up to 64  |
| S7 counter remanence adjustable | C0 .. C7               |
| Number of S7 times              | 256                    |
| S7 times remanence              | adjustable 0 up to 128 |
| S7 times remanence adjustable   | not retentive          |

**Data range and retentive characteristic**

|  |                        |
|--|------------------------|
| Number of flags                                  | 8192 Bit               |
| Bit memories retentive characteristic adjustable | adjustable 0 up to 256 |
| Bit memories retentive characteristic preset     | MB0 .. MB15            |
| Number of data blocks                            | 2047                   |
| Max. data blocks size                            | 16 KB                  |
| Number range DBs                                 | 1 ... 2047             |
| Max. local data size per execution level         | 1024 Byte              |
| Max. local data size per block                   | 1024 Byte              |

**Blocks**

|   |            |
|---|------------|
| Number of OBs                                       | 14         |
| Maximum OB size                                     | 16 KB      |
| Total number DBs, FBs, FCs                          | -          |
| Number of FBs                                       | 1024       |
| Maximum FB size                                     | 16 KB      |
| Number range FBs                                    | 0 ... 1023 |
| Number of FCs                                       | 1024       |
| Maximum FC size                                     | 16 KB      |
| Number range FCs                                    | 0 ... 1023 |
| Maximum nesting depth per priority class            | 8          |
| Maximum nesting depth additional within an error OB | 1          |

**Time**

|                                     |                                       |
|-------------------------------------|---------------------------------------|
| Real-time clock buffered            | yes                                   |
| Clock buffered period (min.)        | 30 d                                  |
| Type of buffering                   | Vanadium Rechargeable Lithium Battery |
| Load time for 50% buffering period  | 20 h                                  |
| Load time for 100% buffering period | 48 h                                  |
| Accuracy (max. deviation per day)   | 10 s                                  |
| Number of operating hours counter   | 8                                     |
| Clock synchronization               | -                                     |
| Synchronization via MPI             | -                                     |
| Synchronization via Ethernet (NTP)  | -                                     |

**Address areas (I/O)**

|                             |           |
|-----------------------------|-----------|
| Input I/O address area      | 1024 Byte |
| Output I/O address area     | 1024 Byte |
| Process image adjustable    | -         |
| Input process image preset  | 128 Byte  |
| Output process image preset | 128 Byte  |

|                              |          |
|------------------------------|----------|
| Input process image maximal  | 128 Byte |
| Output process image maximal | 128 Byte |
| Digital inputs               | 8192     |
| Digital outputs              | 8192     |
| Digital inputs central       | 512      |
| Digital outputs central      | 512      |
| Integrated digital inputs    | -        |
| Integrated digital outputs   | -        |
| Analog inputs                | 512      |
| Analog outputs               | 512      |
| Analog inputs, central       | 128      |
| Analog outputs, central      | 128      |
| Integrated analog inputs     | -        |
| Integrated analog outputs    | -        |

### Communication functions

|   |          |
|---|----------|
| PG/OP channel                             | yes      |
| Global data communication                 | yes      |
| Number of GD circuits, max.               | 4        |
| 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.               | 16       |

### Functionality Sub-D interfaces

|                          |                          |
|--------------------------|--------------------------|
| Type                     | MP2I                     |
| Type of interface        | RS485                    |
| Connector                | Sub-D, 9-pin, female     |
| Electrically isolated    | -                        |
| MPI                      | yes                      |
| MP2I (MPI/RS232)         | yes                      |
| DP master                | -                        |
| DP slave                 | -                        |
| Point-to-point interface | -                        |
| 5V DC Power supply       | max. 90mA, non-isolated  |
| 24V DC Power supply      | max. 100mA, non-isolated |

|                       |                      |
|-----------------------|----------------------|
| Type                  | DP                   |
| Type of interface     | RS485                |
| Connector             | Sub-D, 9-pin, female |
| Electrically isolated | yes                  |
| MPI                   | -                    |
| MP2I (MPI/RS232)      | -                    |
| DP master             | yes                  |
| DP slave              | -                    |

|                          |                     |
|--------------------------|---------------------|
| Point-to-point interface | -                   |
| 5V DC Power supply       | max. 90mA, isolated |
| 24V DC Power supply      | -                   |

### Functionality MPI

|                             |              |
|-----------------------------|--------------|
| Number of connections, max. | 16           |
| PG/OP channel               | yes          |
| Routing                     | -            |
| 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.    | 187.5 kbit/s |

### Functionality PROFIBUS master

|   |            |
|---|------------|
| PG/OP channel                                       | yes        |
| Routing   | -          |
| S7 basic communication                              | -          |
| S7 communication                                    | -          |
| S7 communication as server                          | -          |
| S7 communication as client                          | -          |
| Activation/deactivation of DP slaves                | yes        |
| Direct data exchange (slave-to-slave communication) | -          |
| DPV1  | -          |
| Transmission speed, min.                            | 9.6 kbit/s |
| Transmission speed, max.                            | 12 Mbit/s  |
| Number of DP slaves, max.                           | 64         |
| Address range inputs, max.                          | 1 KB       |
| Address range outputs, max.                         | 1 KB       |
| User data inputs per slave, max.                    | 244 Byte   |
| User data outputs per slave, max.                   | 244 Byte   |

### Datasizes

|                  |   |
|------------------|---|
| Input bytes      | 0 |
| Output bytes     | 0 |
| Parameter bytes  | 4 |
| Diagnostic bytes | 0 |

### Housing

|          |                    |
|----------|--------------------|
| Material | PPE / PA 6.6       |
| Mounting | Profile rail 35 mm |

### Mechanical data

|                              |                         |
|------------------------------|-------------------------|
| Dimensions (WxHxD)           | 50.8 mm x 76 mm x 80 mm |
| Net weight                   | 150 g                   |
| Weight including accessories | -                       |
| Gross weight                 | -                       |

### Environmental conditions

|                       |               |
|-----------------------|---------------|
| Operating temperature | 0 °C to 60 °C |
|-----------------------|---------------|

|                     |                 |
|---------------------|-----------------|
| Storage temperature | -25 °C to 70 °C |
|---------------------|-----------------|

**Certifications**

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