

Data sheet SLIO CPU 015 (015-CEFPR00)

## Technical data

Order no.	015-CEFPR00
Туре	SLIO CPU 015
Module ID	-
General information	
Note	-
Features	SPEED7 technology 256 kB work memory Memory extension (max. 512 kB) via VIPASetCard PROFIBUS slave/master activatable via VIPASetCard Full-function RS485 interface integrated, switchable MPI/PtP PROFINET controller for up to 128 participants integrated Ethernet PG/OP interface
Load and working memory	
Load memory, integrated	512 KB
Load memory, maximum	512 KB
Work memory, integrated	256 KB
Work memory, maximal	512 KB
Memory divided in 50% program / 50% data	✓
Memory card slot	SD/MMC-Card with max. 2 GB
Hardware configuration	
Racks, max.	1
Modules per rack, max.	64
Number of integrated DP master	1
Number of DP master via CP	-
Operable function modules	64
Operable communication modules PtP	64
Operable communication modules LAN	-
Command processing times	
Bit instructions, min.	0.01 μs
Word instruction, min.	0.01 μs
Double integer arithmetic, min.	0.01 μs
Floating-point arithmetic, min.	0.06 μs
Timers/Counters and their retentive characteristic	s
Number of S7 counters	512
S7 counter remanence	adjustable 0 up to 512
S7 counter remanence adjustable	C0 C7
Number of S7 times	512
S7 times remanence	adjustable 0 up to 512
S7 times remanence adjustable	not retentive
Data range and retentive characteristic	
Number of flags	8192 Byte



Bit memories retentive characteristic adjustable	adjustable 0 up to 8192	A YASKAWA COMPANY
Bit memories retentive characteristic preset	MB0 MB15	
Number of data blocks	4096	
Max. data blocks size	64 KB	
Number range DBs	1 8191	
Max. local data size per execution level	4096 Byte	
Max. local data size per block	4096 Byte	
Blocks		
Number of OBs	24	
Maximum OB size	64 KB	
Total number DBs, FBs, FCs	4096	
Number of FBs	4096	
Maximum FB size	64 KB	
Number range FBs	0 8191	
Number of FCs	4096	
Maximum FC size	64 KB	
Number range FCs	0 8191	
Maximum nesting depth per priority class	16	
Maximum nesting depth additional within an error OB	4	
Time		
Time		
Real-time clock buffered	∢	
Clock buffered period (min.)	30 d	
Type of buffering	Goldcap	
Load time for 50% buffering period	15 min	
Load time for 100% buffering period	1 h	
Accuracy (max. deviation per day)	10 s	
Number of operating hours counter	8	
Clock synchronization	✓	
Synchronization via MPI	Master/Slave	
Synchronization via Ethernet (NTP)	Slave	
Address areas (I/O)		
Input I/O address area	2048 Byte	
Output I/O address area	2048 Byte	
Process image adjustable	✓	
Input process image preset	128 Byte	
Output process image preset	128 Byte	
Input process image maximal	2048 Byte	
Output process image maximal	2048 Byte	
Digital inputs	16384	
Digital outputs	16384	
Digital inputs central	512	
Digital outputs central	512	
Integrated digital inputs	-	
Integrated digital outputs	-	
Analog inputs	1024	



Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions         -           PG/OP channel	Analog inputs, central	256	A YASKAWA COMPANY
Integrated analog outputs	Analog outputs, central	256	
PGIOP channel Global data communication Number of GD circuits, max. 8 Size of GD packets, max. 22 Byte S7 basic communication 87 basic communication 87 communication 87 communication 87 communication 87 communication server 87 communication as erver 87 communication as client 87 communication, user data per job 100 Byte Number of connections, max. 82 Functionality Sub-D interfaces 88485 Connector 80 byte, phin, female Electrically isolated 87 communication 87 communication 88 connection 89 connection 80 connection	Integrated analog inputs	-	
PGIOP channel  Global data communication  Number of GD circuits, max.  Size of GD packets, max.  22 Byte  S7 basic communication  S7 basic communication  S7 basic communication  S7 communication  S7 communication as server  S7 communication as server  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  BS485  Connector  Sub-D, 9-pin, female  Electrically isolated  MPI  MPI (MPI/RS232)  DP master  DP slave  Point-to-point interface  BS485  Connector  Sub-D, 9-pin, female  Electrically isolated  WPI  Type  X3  Type of interface  BS485  Connector  Sub-D, 9-pin, female  Electrically isolated  WPI  WPI (MPI/RS232)  DP master  DP slave  Point-to-point interface  PS485  Electrically isolated  WPI  MPI (MPI/RS232)  DP master  DP slave  Point-to-point interface  PS485  Electrically isolated  WPI  MPI (MPI/RS232)  DP master  DP pin, female  Electrically isolated  WPI  MPI (MPI/RS232)  DP master  DP pin, female  Electrically isolated  WPI  MPI (MPI/RS232)  DP master  Optional  DP slave  Optional  DP slave  Optional  Point-to-point interface  -  Functionality MPI  Number of connections, max.  32  Electrically mpi (MPI/RS232)  Alectrically mpi (MPI/RS232)  Al	Integrated analog outputs	-	
Number of GD circuits, max.   8	Communication functions		
Number of GD circuits, max.   8	PG/OP channel	✓	
Size of GD packets, max.         22 Byte           S7 basic communication         Image: Communication of the property of t	Global data communication		
87 basic communication         76 Byte           87 communication         76 Byte           87 communication         4           87 communication as server         4           87 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         4           MPI         4           MPI (MPI/RS232)         -           DP slave         -           Point-to-point interface         4           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         4           MPI         X3           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         4           MPI         4           MPI         4           MPI (MPI/RS232)         -           DP master         optional           DP interface         pit interface	Number of GD circuits, max.	8	
S' basic communication, user data per job  76 Byte  77 communication  78 communication as server  79 communication as client  70 communication, user data per job  160 Byte  Number of connections, max.  32  Functionality Sub-D interfaces  Type  X2 Type of interface  RS485  Connector  Blectrically isolated  MPI  MPPI (MPVRS232)  Po master  Point-to-point interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  X3 Type of interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  MPI  MPPI (MPVRS232)  Po master  Point-to-point interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  MPI  MPPI (MPVRS232)  Prype of interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  MPI  MPPI (MPVRS232)  Prype of interface  Point-to-point	Size of GD packets, max.	22 Byte	
S7 communication	S7 basic communication	✓	
ST communication as server	S7 basic communication, user data per job	76 Byte	
S7 communication as client S7 communication, user data per job Number of connections, max. 32  Functionality Sub-D interfaces Type	S7 communication	✓	
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         Image: Connection of the pink of the	S7 communication as server	✓	
Functionality Sub-D Interfaces           Type         X2           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electricality isolated         ✔           MPI         ✔           MPI (MPI/RS232)         -           DP master         -           DP slave         -           Point-to-point interface         ✔           Type         X3           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         ✔           MPI         ✔           MP2 (MPI/RS232)         -           DP master         optional           DP slave         optional           Point-to-point interface         -           Functionality MPI           Number of connections, max.         32           PG/OP channel         ✔           Routing         ✔           Global data communication         ✔	S7 communication as client	-	
Functionality Sub-D interfaces  Type X2 Type of interface RS485 Connector Sub-D, 9-pin, female Electrically isolated   MPI  MP3 (MPI/RS232) - DP master Point-to-point interface RS485 Connector - Electrically isolated   X3 Type X3 Type of interface RS485 Connector RS485 Connector Sub-D, 9-pin, female Electrically isolated   MPI  MP3 (MPI/RS232) - DP master Point-to-point interface PS485 Connector Point-to-point interface PS485 Electrically isolated   MPI  MP4 (MPI/RS232) - DP master Optional DP slave Optional Point-to-point interface -  Functionality MPI  Number of connections, max. 32 PG/OP channel   Routing   Global data communication   X2  A  Sub-D, 9-pin, female  Electrically isolated   A  MPI  MP4 (MPI/RS232) - DP master Optional Point-to-point interface -  Functionality MPI  Number of connections, max. 32 PG/OP channel   Routing   Global data communication   X2  Sub-D, 9-pin, female   A  A  A  A  A  A  A  A  A  A  A  A  A	S7 communication, user data per job	160 Byte	
Type         X2           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         ✔           MPI         ✔           MP2 (MPI/RS232)         -           DP master         -           DP slave         -           Point-to-point interface         ✔           Type         X3           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         ✔           MP1         ✔           MP2 (MPI/RS232)         -           DP master         optional           DP slave         optional           Point-to-point interface         -           Functionality MPI           Number of connections, max.         32           PG/OP channel         ✔           Routing         ✔           Global data communication         ✔	Number of connections, max.	32	
Type         X2           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         ✔           MPI         ✔           MP2 (MPI/RS232)         -           DP master         -           DP slave         -           Point-to-point interface         ✔           Type         X3           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         ✔           MP1         ✔           MP2 (MPI/RS232)         -           DP master         optional           DP slave         optional           Point-to-point interface         -           Functionality MPI           Number of connections, max.         32           PG/OP channel         ✔           Routing         ✔           Global data communication         ✔	Functionality Sub-D interfaces		
Type of interface Sub-D, 9-pin, female Electrically isolated   MPI  MPI (MPI/RS232)  DP master  DP slave Point-to-point interface  Type of interface  MPI  MPI  MPI  MPA  Type of interface  Connector  Sub-D, 9-pin, female  Electrically isolated  MPI  MPA  MPA  MPA  MPA  MPA  MPA  MPA		X2	
Connector Sub-D, 9-pin, female   Electrically isolated Image: Connector of Sub-D, 9-pin, female   MPI Image: Connector of Sub-D, 9-pin, female   DP master			
MPI (MPI/RS232) - COMPAISER -		Sub-D, 9-pin, female	
MPI (MPI/RS232)         -           DP master         -           DP slave         -           Point-to-point interface              ✓             ✓	Electrically isolated	✓	
MPI (MPI/RS232)         -           DP master         -           DP slave         -           Point-to-point interface              ✓             ✓	MPI	✓	
DP slave Point-to-point interface  Type X3 Type of interface RS485 Connector Sub-D, 9-pin, female Electrically isolated  MPI MPI MPI MPI MPI MPI MPI Optional Optional Optional Point-to-point interface  Point-to-point interface  Tunctionality MPI Number of connections, max.  PG/OP channel Routing Global data communication	MP²l (MPI/RS232)		
Point-to-point interface  Type X3  Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated   MPI   MP2I (MPI/RS232) -  DP master optional  DP slave optional  Point-to-point interface -  Functionality MPI  Number of connections, max. 32  PG/OP channel   Routing Global data communication   A 34  A 35  A 36  A 37  A 37  A 38	DP master	-	
Type X3  Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated   MPI	DP slave	-	
Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated  MPI  MPal (MPI/RS232) - DP master optional DP slave optional Point-to-point interface -  Functionality MPI  Number of connections, max. 32  PG/OP channel  Routing  Global data communication  PS485  Sub-D, 9-pin, female  AV  AV  AV  AV  AV  AV  AV  AV  AV  A	Point-to-point interface	∢	
Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated  MPI  MPal (MPI/RS232) - DP master optional DP slave optional Point-to-point interface -  Functionality MPI  Number of connections, max. 32  PG/OP channel  Routing  Global data communication  PS485  Sub-D, 9-pin, female  AV  AV  AV  AV  AV  AV  AV  AV  AV  A			
Connector  Electrically isolated  MPI  MPI	Туре	X3	
Electrically isolated  MPI  MPI  MP2I (MPI/RS232)	Type of interface	RS485	
MPI	Connector	Sub-D, 9-pin, female	
MP2I (MPI/RS232)  DP master optional  DP slave optional  Point-to-point interface -  Current of connections, max. 32  PG/OP channel	Electrically isolated	✓	
DP master optional optional  Point-to-point interface -  Functionality MPI  Number of connections, max. 32  PG/OP channel   Routing  Global data communication   optional opti	MPI	✓	
DP slave optional Point-to-point interface -  Functionality MPI  Number of connections, max. 32  PG/OP channel   Routing  Global data communication   Optional  option	MP²I (MPI/RS232)	-	
Functionality MPI  Number of connections, max. 32  PG/OP channel   Routing  Global data communication   Output  Description:  Global data communication   Output  Description:  Descript	DP master	optional	
Functionality MPI  Number of connections, max. 32  PG/OP channel   Routing   Global data communication   Global munication   Global data communication   Global data commu	DP slave	optional	
Number of connections, max. 32 PG/OP channel   Routing   Global data communication   32  32  33  34  35  36  37  38  39  30  30  30  30  30  30  30  30  30	Point-to-point interface	-	
PG/OP channel  Routing  Global data communication	Functionality MPI		
Routing   Global data communication   Global data communication	Number of connections, max.	32	
Global data communication	PG/OP channel	✓	
Global data communication	Routing	✓	
	Global data communication		
To the state of th	S7 basic communication	<b>√</b>	



S7 communication	✓	A YASKAWA COMPANY
S7 communication as server	✓	
S7 communication as client	-	
Transmission speed, min.	19.2 kbit/s	
Transmission speed, max.	12 Mbit/s	
Functionality PROFIBUS master		
PG/OP channel	✓	
Routing	✓	
S7 basic communication	✓	
S7 communication	✓	
S7 communication as server	✓	
S7 communication as client	-	
Activation/deactivation of DP slaves	-	
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.	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	✓	
Routing	✓	
S7 communication	✓	
S7 communication as server	✓	
S7 communication as client	-	
Direct data exchange (slave-to-slave communication)	-	
DPV1	✓	
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	✓	
Interface isolated	✓	
RS232 interface	-	
RS422 interface	-	



RS485 interface	✓	A YASKAWA COMPANY
Connector	Sub-D, 9-pin, female	
Transmission speed, min.	150 bit/s	
Transmission speed, max.	115.5 kbit/s	
Cable length, max.	500 m	
Doint to point protocol		
Point-to-point protocol		
ASCII protocol	∢	
STX/ETX protocol	✓	
3964(R) protocol	✓	
RK512 protocol	-	
USS master protocol	✓	
Modbus master protocol	√ .	
Modbus slave protocol	✓	
Special protocols	-	
For all and the PROFINET I/O controller		
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.	2 KB	
Address range outputs, max.	2 KB	
Transmiting clock	1 ms	
Update time	1 ms 512 ms	
Functionality RJ45 interfaces		
Type	X1	
Type of interface	Ethernet 10/100 MBit	
Connector	RJ45	
Electrically isolated	✓	
PG/OP channel	✓	
Number of connections, max.	4	
Productive connections	-	
Туре	X4	
Type of interface	Ethernet 10/100 MBit	
Connector	RJ45	
Electrically isolated	✓	
PG/OP channel	4	
	8	
Number of connections, max.  Productive connections	₹	
	V	
Ethernet communication CP		
	•	



Number of productive connections, max.	8 A YASKAWA COMPANY	
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	
User data per ISO on TCP connection, max.	8 KB	
User data per native TCP connection, max.	8 KB	
User data per ad hoc TCP connection, max.	1460 Byte	
User data per UDP connection, max.	1472 Byte	
Housing		
Material	PPE	
Mounting	Profile rail 35 mm	
Mechanical data		
Dimensions (WxHxD)	131.5 mm x 109 mm x 83 mm	
Weight	310 g	
Environmental conditions		
Operating temperature	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	
Certifications		
UL508 certification	in preparation	