Controller (type)	C300	P300	C3221 C (HW 3.x)	C3231 C (HW 3.x)	C3251 C (HW3.x)	P500 (HW3.x)
Controller (photo)						
Available	Yes	Yes	Yes	Yes	Yes	Yes
Processor type	Texas Instruments AM387X 800MHz	Texas Instruments AM387X 800MHz	Intel Atom 1,46GHz	Intel Atom 1,75GHz	Intel Atom 1,91GHz	Intel Atom 1,75 GHz
Operating system	Windows Embedded Compact 7 on Flash memory	Windows Embedded Compact 7 on Flash memory	Windows CE6.0 on Flash memory	Windows CE6.0 on Flash memory	Windows CE6.0 on Flash memory	Windows CE6.0 on Flash memory
Cooling	No fan (passive)	No fan (passive)	No fan (passive)	No fan (passive)	No fan (passive)	No fan (passive)
Degree of protection class of enclosure	IP20	Front: IP65 Back: IP20	IP20	IP20	IP20	Front: IP65 Back: IP20
Top hat rail mounting	Yes	No	Yes	Yes	Yes	No
Dimensions (h x b x t [mm])	127 x 42 x 102	4,3": 130 x 104 x 45 7": 210 x 155 x 51 10,4": 282 x 240 x 51	112 x 136 x 105	112 x 136 x 105	112 x 136 x 105	7": 155 x 210 x 86 10,4": 240 x 282 x 86 15": 310 x 390 x 93
Display						
Size	-	4,3" (480x272) 16:9 7" (800x480) 16:9 10,4" (800x600) 4:3	-	-	-	7" (800x480) 10,4" (800x600) 15" (1024x768)
Touch technologie	-	Resistive	-	-	-	Resistive
Interfaces						
Ethernet, 100MBit/s (Number)	1	1	2 (With integr. switch)	2 (With integr. switch)	2 (With integr. switch)	2 (With integr. switch)
USB 2.0 (Number)	1	1	2	3	2	2
DVI-D for ext. monitor	No	No	No	Yes	No	No
Runtime software						
Characteristic						
Logic	FAST Runtime	FAST Runtime	FAST Runtime	FAST Runtime	FAST Runtime	FAST Runtime
FAST Motion	Yes	No	Yes	Yes	Yes	Yes
FAST Motion Libs	L_MC1P, L_MC2P	-	L_MC1P, L_MC2P, L_MC4P	L_MC1P, L_MC2P, L_MC4P	L_MC1P, L_MC2P, L_MC4P	L_MC1P, L_MC2P, L_MC4P
FAST - Technology	see TAB "TM&Motion 3.17"	see TAB "TM&Motion 3.17"	see TAB "TM&Motion 3.17"	see TAB "TM&Motion 3.17"	see TAB "TM&Motion 3.13"	see TAB "TM&Motion 3.13"
L-force Motion (MPC1200) OPTION	No	No	Yes**	Yes**	Yes**	Yes**
Visualisation	No	L-force Visu Compact 500 STANDARD / 1000 Option (Powertags)	No	L-force Visu Compact 500 Powertags OPTION	No	L-force Visu Compact 1000 Powertags STANDARD
Function						
Backup & Restore of project data	Yes	Yes	Yes	Yes	Yes	Yes
WebConfig	Yes*	Yes*	Yes	Yes	Yes	Yes
Telnet Connection	Yes	Yes	Yes	Yes	Yes	Yes
Remote Display (cerhost/cerdisp)	No	No	Yes	Yes	Yes	Yes
VNC Server	Yes	Yes	Yes	Yes	Yes	Yes
FTP access	Yes	Yes	Yes	Yes	Yes	Yes
PDF + Office Viewer	No	Optional	No	No	No	Yes
Internet Explorer	No	Optional	No	No	No	Yes
Notepad	No	Optional	No	No	No	Yes
Memory and data management						
Working memory (RAM)	512 MB	512 MB	1 GB	1 GB	1 GB	1 GB
Programm and data memory (Flash)	2 GB	2 GB	1 GB	2 GB	2 GB	2 GB
Retain data	128kB by internal capacitor	128kB by internal capacitor	60kB by internal capacitor	60kB by internal capacitor	60kB by internal capacitor	1024kB by internal capacitor
SD card for project data	>=512 MB	>=512 MB	>=512 MB	>=512 MB	>=512 MB	>=512 MB
PLC / Motion						
UPS functionality	By internal capacitor	By internal capacitor	By internal capacitor	By internal capacitor	By internal capacitor	by internal capacitor
Task management	CAN EtherCat	CAN EtherCat				
Max. number of task	32	32	32	32	32	32
Min. task cycle time	10ms 4ms	10ms 4ms	1ms	1ms	1ms	1ms
Min. system reserve	5ms 2ms	5ms 2ms	0,1ms	0,1ms	0,1ms	0,1ms
Memory						
Code	Free RAM memory	Free RAM memory	Free RAM memory	Free RAM memory	Free RAM memory	Free RAM memory
Data	Free RAM memory	Free RAM memory	Free RAM memory	Free RAM memory	Free RAM memory	Free RAM memory
Marker	4 kB	4 kB	4 kB	4 kB	4 kB	4 kB
Input-/output area	4 kB / 4 kB	4 kB / 4 kB	4 kB / 4 kB	4 kB / 4 kB	4 kB / 4 kB	4 kB / 4 kB
Retain persistent variables	128 kB	128 kB	60 kB	60 kB	60 kB	1 MB
Libraries						
CAA net base services	Yes	Yes	Yes	Yes	Yes	Yes
CAA file	Yes*	Yes*	Yes	Yes	Yes	Yes
Supported devices (FAST motion)						
Motion drives	9400 HL (Cia402), i700, i55x	None	9400 HL (Cia402), i700, i55x	9400 HL (Cia402), i700, i55x	9400 HL (Cia402), i700, i55x	9400 HL (Cia402), i700, i55x
Logic drives	8400 BL/SL/HL/TL/motec, 9400 HL, IO1000, i5xx	8400 BL/SL/HL/TL/motec, 9400 HL, IO1000, i5xx	8400 BL/SL/HL/TL/motec, 9400 HL, IO1000, i5xx	8400 BL/SL/HL/TL/motec, 9400 HL, IO1000, i5xx	8400 BL/SL/HL/TL/motec, 9400 HL, IO1000, i5xx	8400 BL/SL/HL/TL/motec, 9400 HL, IO1000, i5xx
EtherCat with Optional Nodes	Yes	Yes	Yes	Yes	Yes	Yes
IO-System 1000						
Top hat rail (direct stackable)	Yes Yes	No No	Yes	Yes	Yes	No
With bus coupler S110 (CAN) usable	Yes Yes	Yes Yes	Yes	Yes	Yes	Yes
With bus coupler S130 (EtherCAT) usable	Yes Yes	Yes Yes	Yes	Yes	Yes	Yes
Field busses						
Motion Bus	EtherCAT Master	None	EtherCAT	EtherCAT	EtherCAT	EtherCAT
On board	CAN Master /Slave EtherCAT Master	CAN Master /Slave EtherCAT Master	EtherCAT Master -	EtherCAT Master -	EtherCAT Master -	EtherCAT Master
Optional	Via optional module MC-PND (ProfiNet Device)	Via optional module MC-PND (ProfiNet Device)	1 slot existing MC-PND (ProfiNet Device) MC-PBM (ProfiBus Master) MC-PBS (ProfiBus Slave) MC-CAN2 (CAN Bus 2-times) MC-ETH (Ethernet 100MBit) On board or MC-ETH (Ethernet/IP Adapter) MC-ISI (seriell RS232/RS422/RS485)	1 slot existing MC-PND (ProfiNet Device) MC-PBM (ProfiBus Master) MC-PBS (ProfiBus Slave) MC-CAN2 (CAN Bus 2-times) MC-ETH (Ethernet 100MBit) On board or MC-ETH (Ethernet/IP Adapter) MC-ISI (seriell RS232/RS422/RS485)	1 slot existing MC-PND (ProfiNet Device) MC-PBM (ProfiBus Master) MC-PBS (ProfiBus Slave) MC-CAN2 (CAN Bus 2-times) MC-ETH (Ethernet 100MBit) On board or MC-ETH (Ethernet/IP Adapter) MC-ISI (seriell RS232/RS422/RS485)	1 slot existing MC-PND (ProfiNet Device) MC-PBS (ProfiBus Slave) MC-CAN2 (CAN Bus 2-times) MC-ETH (Ethernet 100MBit) On board or MC-ETH (Ethernet/IP Adapter) MC-ISI (seriell RS232/RS422/RS485)
Parallel usage EtheCAT / CAN	No**	No**	Yes	Yes	Yes	Yes
Tooling						
Engineering Software Programming	PLC Designer V3.x	PLC Designer V3.x	PLC Designer V3.x	PLC Designer V3.x	PLC Designer V3.x	PLC Designer V3.x
Engineering Software Visualisation	-	VisiwinNET	VisiwinNET	VisiwinNET	VisiwinNET	VisiwinNET
Engineering Software Commissioning	L-force Easy Starter*	L-force Easy Starter*	L-force Easy Starter	L-force Easy Starter	L-force Easy Starter	L-force Easy Starter
Remote maintenance						
Remote maintenance - PLC program	Yes, via Onboard Ethernet Interface	Yes, via Onboard Ethernet Interface	Yes, via Onboard Ethernet Interface	Yes, via Onboard Ethernet Interface	Yes, via Onboard Ethernet Interface	Yes, via Onboard Ethernet Interface
Remote maintenance - Drives via EtherCAT	Yes, via Ethernet -> EtherCAT Gateway *	Yes, via Ethernet -> EtherCAT Gateway *	Yes, via Ethernet -> EtherCAT Gateway	Yes, via Ethernet -> EtherCAT Gateway	Yes, via Ethernet -> EtherCAT Gateway	Yes, via Ethernet -> EtherCAT Gateway
Remote maintenance - Drives via CAN	Yes, via Ethernet -> CAN Gateway *	Yes, via Ethernet -> CAN Gateway *	Yes, via Ethernet -> CAN Gateway	Yes, via Ethernet -> CAN Gateway	Yes, via Ethernet -> CAN Gateway	Yes, via Ethernet -> CAN Gateway
Visualisation (VisiWinNET)						
Licensing						
Quantity of powertags	- -	500	-	500	-	1000
Sampling time	- -	HMI: default 500ms, min. 250msPLC: 500ms	-	Min: 0ms Default: 250ms	-	Min: 0ms Default: 250ms
Alarms						
Memory structure	- -	Circular buffer	-	Circular buffer	-	Circular buffer
Max. quantitiy of storable alarms	- -	2000	-	10000	-	10000
Alarm cache	- -	Fix: 5 minutes or 100 messages	-	Fix: 5 minutes or 100 messages	-	Fix: 5 minutes or 100 messages
Behaviour during power fail (Buffering of alarm cache)	- -	No	-	Data are buffered every 60s	-	Yes
Data path adjustable	- -	Yes	-	No	-	Yes
Trends						
Memory structure	- -	Circular buffer / Sequential archiving	-	Circular buffer	-	Circular buffer / Sequential archiving
Max. quantity of values per trend (circular buffer)	- -	5000	-	5000	-	No limitation Recommended: max. 10000
Max. quantity of sequence archives	- -	25	-	Sequence archive not possible	-	No limitation Recommended: max. 50
Max. quantity of trends	- -	20	-	50	-	No limitation Recommended: max. 50
Min. sampling time	- -	500ms Default 1000ms	-	Default: 1000ms	-	Default: 1000ms
Behaviour during power fail (Buffering of trend cache)	- -	No buffering	-	Data are buffered every 60s	-	No buffering
Minimal cache size	- -	Fix: 50	-	Default: 10	-	Fix: 100
Data path adjustable	- -	Yes	-	No	-	Yes
Recipes						
Quantity of recipe classes	- -	Max. 3	-	Max. 5	-	No limitation Recommended: max. 5
Quantity of recipes per recipe class	- -	Max. 250	-	Max. 50	-	No limitation Recommended: max. 250
Quantity of variables per recipe	- -	Max. 500	-	Max. 1000	-	No limitation Recommended: max. 1000
Data path adjustable	- -	Yes	-	No	-	Yes
Communication link						
Driver / OPC	- -	LogicAndMotionV3 Driver, CAN OPC Server Lenze Can Driver	-	LogicAndMotionV3 Driver, CAN OPC Server, DataManager OPC Server	-	LogicAndMotionV3 Treiber, CAN OPC Server, DataManager OPC Server Lenze Can Driver

Remarks

*) Due to possible motion cycle time prologation the use of the following tools and functions should be limited to phases of safe machine condition (i.e.: standstill):