

SPECTRA POWERTWIN PANEL-PC WITH APOLLO LAKE CPU

FEATURES

- 8" to 24" multi-functional All-in-One Panel PC
- Screen variations:
 - Projected Capacitive Touchscreen
 - 5-wire resistive Touchscreen
 - without Touchscreen
 - Sunlight readable
- Panel-PC Modules with Intel® Atom™ x7-E3950 Quad Core 1,60 GHz
- Fanless
- Panel PC Module with automatic Display and resolution detection
- Easy replacement of Display or Module
- Panel & VESA mount
- Die-cast aluminium front frame
- Front panel with IP65 protection class



Modular



Fanless



SELECTION GUIDE

STEP 1 – CHOOSE YOUR SERIES PENDING ON YOUR APPLICATION



ROBUST

The robust version is intended for rough industrial use. The industrial RAM and industrial SSD with extended temperature range allow the use in particularly demanding environments (-10°C to +70°C).



STANDARD

With the PowerTwin Panel PCs in the standard version, most requirements and operating conditions can be easily covered. They are the ideal devices for cost-conscious use in normal industrial environments (0°C to +50°C).



SUNLIGHT READABLE

PowerTwin Panel PCs with sunreadable display are used if the display of the Panel PC is particularly exposed to sunlight and the robustness requirements are particularly high. With a luminance of 1500 or 1600 cd/m², Wide-Temp RAM and SSD with PowerGuard, they are even suitable for outdoor use.

STEP 2 – CHOOSE THE PERFORMANCE OF THE PC MODULE



APOLLO LAKE CPU

- Intel® Atom™ x7-E3950

STEP 3 – CHOOSE THE DISPLAY SPECIFICATIONS



Sunlight-readable:	yes	no
Size:	8" to 19"	8" to 24"
Touchscreen:	PCAP	resistive / PCAP / without Touch

RESULT – CUSTOM-FIT SPECTRA POWERTWIN PANEL PC



Following the same principle, the combination of a display module with a monitor module results in a monitor that is ready to switch on.

EXTENDED FUNCTIONALITIES

WIDE TEMP.

DRAM and SSD products with extended temperature range theoretically allow operating temperatures from -40°C to +85°C. However, depending on the properties of the individual components, the permitted temperature range of the overall system may be narrower.

POWERGUARD

The Power Loss Data Protection (PowerGuard) feature of an SSD provides protection in the event of an unexpected power failure. Additional tantalum capacitors integrated in the SSD provide the permanently stored charge in the event of an interruption of the power supply, so that the current flash write process can be completely terminated and no data is lost. In addition, firmware and the integrity of the mapping table are protected.

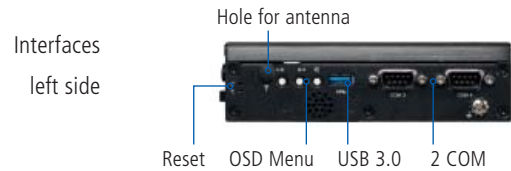
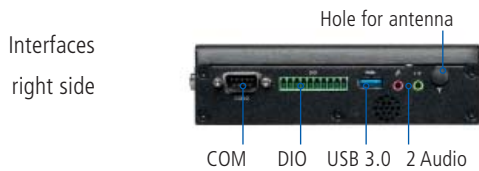
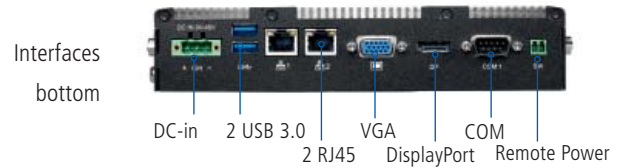
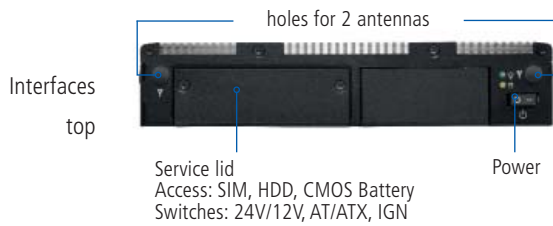
EXPANDABILITY

- > Power Ignition Funktion for mobile use
- > PoE+ function for power over Ethernet
- > RFID equipment for Spectra PowerTwin with 12", 15" XGA & 17" Displays



RFID equipment
right or left of Display or under

INTERFACES & CONSTRUCTION OF PC UNIT



SPECTRA POWERTWIN 8.4" TO 15"

TECHNICAL DATA

Model	Spectra PowerTwin P08	Spectra PowerTwin P10	Spectra PowerTwin PH10	Spectra PowerTwin PH12	Spectra PowerTwin P15
Display size / Aspect ratio	8.4" / 4:3	10.4" / 4:3		12.1" / 4:3	15" / 4:3
Resolution	800 x 600	800 x 600	1.024 x 768	1.024 x 768	1.024 x 768

WITH STANDARD DISPLAY

Brightness (cd/m ²)	400	400	400	500	350
Contrast ratio	600:1	700:1	1400:1	700:1	800:1
Viewing angles (h/v)	150°/130°	160°/130°	178°/178°	160°/160°	160°/150°
MTBF Backlight (h)	30.000	50.000	50.000	50.000	50.000
Touchscreen	P-CAP / resistive				

WITH SUNLIGHT READABLE DISPLAY

Brightness (cd/m ²)	1600	–	1500	1500	1600
Contrast ratio	600:1	–	1400:1	700:1	800:1
Viewing angles (h/v)	160°/140°	–	178°/178°	160°/160°	160°/150°
MTBF Backlight (h)	50.000	–	50.000	50.000	50.000
Touchscreen	P-CAP, 7H Hard glas, UV-resistant	–	P-CAP, 7H Hard glas, UV-resistant		

PC TECHNICAL DATA

Processor	Intel® Atom™ x7-E3950 (or Pentium® N4200 upon request)
Memory	1 x DDR3L max. 8 GB
Drives / Flash cards	1 x 2.5" SATA (with front access), 1 x SIM Socket (with front access)
I/O Interfaces	4 x USB 3.0, 4 x RS-232/422/485, 1 x VGA, 1 x DP, Line-out, Mic-in
Ethernet	2 x Intel® I210AT Gigabit-LAN
Digital I/Os	Fintek F81866 Controller, 4 input / 4 output, isolated
Expansion slots	2 x mPCIe (Full-Size)
Miscellaneous	Watchdog, Wireless: holes for 4 antennas, Speakers: 2 x 2 W, OSD Menu: LCD on/off & Brightness
Power	9 to 48 V DC, 3-pin Terminal Block,

MECHANICAL DATA

Chassis	Display: Sheet steel housing, Aluminium front, grey, Front IP65 / PC Module: Aluminium, grey			
Mounting	Panel, Wall, Stand (VESA100)			
Cut-out dimensions (WxH)	248 x 172 mm	281 x 213 mm	331 x 251 mm	394 x 298,5 mm
Dimensions (WxHxD)	262 x 186,2 x 69,35	295 x 227,3 x 69,35 mm	345 x 265,3 x 69,85 mm	408 x 312,4 x 72,35
Weight	3,1 kg	3,7 kg	4,7 kg	5,9 kg

SPECTRA POWERTWIN 15.6" TO 19"**TECHNICAL DATA**

Model	Spectra PowerTwin PW15	Spectra PowerTwin PWH15	Spectra PowerTwin P17	Spectra PowerTwin P19
Display size / Aspect ratio	15.6" / 16:9	15.6" / 16:9	17" / 5:4	19" / 5:4
Resolution	1.366 x 768	1.920 x 1.080	1.280 x 1.024	1.280 x 1.024

WITH STANDARD DISPLAY

Brightness (cd/m ²)	400	–	350	350
Contrast ratio	500:1	–	800:1	1000:1
Viewing angles (h/v)	170°/160°	–	160°/140°	170°/160°
MTBF Backlight (h)	50.000	–	50.000	50.000
Touchscreen	P-CAP / resistive / without			

WITH SUNLIGHT READABLE DISPLAY

Brightness (cd/m ²)	–	1500	1500	1600
Contrast ratio	–	700:1	800:1	1000:1
Viewing angles (h/v)	–	160°/140°	160°/140°	170°/160°
MTBF Backlight (h)	–	50.000	50.000	50.000
Touchscreen	–	P-CAP, 7H Hard glas, UV-resistant		

PC TECHNICAL DATA

Processor	Intel® Atom™ x7-E3950 (or Pentium® N4200 upon request)
Memory	1 x DDR3L max. 8 GB
Drives / Flash cards	1 x 2.5" SATA (with front access), 1 x SIM Socket (with front access)
I/O Interfaces	4 x USB 3.0, 4 x RS-232/422/485, 1 x VGA, 1 x DP, Line-out, Mic-in
Ethernet	2 x Intel® I210AT Gigabit-LAN
Digital I/Os	Fintek F81866 Controller, 4 input / 4 output, isolated
Expansion slots	2 x mPCIe (Full-Size)
Miscellaneous	Watchdog, Wireless: holes for 4 antennas, Speakers: 2 x 2 W, OSD Menu: LCD on/off & Brightness
Power	9 to 48 V DC, 3-pin Terminal Block

MECHANICAL DATA

Chassis	Display: Sheet steel housing, Aluminium front, grey, Front IP65 / PC Module: Aluminium, grey		
Mounting	Panel, Wall, Stand (VESA100)		
Cut-out dimensions (WxH)	406 x 240 mm	436 x 336 mm	496 x 375 mm
Dimensions (WxHxD)	420 x 254 x 79,35 mm	450 x 350 x 76,35 mm	510 x 389,3 x 76,35 mm
Weight	5,8 kg	7,2 kg	8,5 kg

SPECTRA POWERTWIN 21.5" TO 24"

TECHNICAL DATA

Model	Spectra PowerTwin PW21	Spectra PowerTwin PW24
Display size / Aspect ratio	21.5" / 16:9	24" / 16:9
Resolution	1.920 x 1.080	1.920 x 1.080

WITH STANDARD DISPLAY

Brightness (cd/m ²)	300	300
Contrast ratio	5000:1	5000:1
Viewing angles (h/v)	178°/178°	178°/178°
MTBF Backlight (h)	50.000	50.000
Touchscreen	P-CAP / resistive / without	

WITH SUNLIGHT READABLE DISPLAY

Brightness (cd/m ²)	1000	1500
Contrast ratio	5000:1	5000:1
Viewing angles (h/v)	178°/178°	178°/178°
MTBF Backlight (h)	50.000	50.000
Touchscreen	P-CAP, 7H Hard glas, UV-resistant	

PC TECHNICAL DATA

Processor	Intel® Atom™ x7-E3950 (or Pentium® N4200 upon request)
Memory	1 x DDR3L max. 8 GB
Drives / Flash cards	1 x 2.5" SATA (with front access), 1 x SIM Socket (with front access)
I/O Interfaces	4 x USB 3.0, 4 x RS-232/422/485, 1 x VGA, 1 x DP, Line-out, Mic-in
Ethernet	2 x Intel® I210AT Gigabit-LAN
Digital I/Os	Fintek F81866 Controller, 4 input / 4 output, isolated
Expansion slots	2 x mPCIe (Full-Size)
Miscellaneous	Watchdog, Wireless: holes for 4 antennas, Speakers: 2 x 2 W, OSD Menu: LCD on/off & Brightness
Power	9 to 48 V DC, 3-pin Terminal Block

MECHANICAL DATA

Chassis	Aluminium, grey, Front IP65	
Mounting	Panel, Wall, Stand (VESA100)	
Cut-out dimensions (WxH)	536 x 316,5 mm	591 x 359 mm
Dimensions (WxHxD)	550 x 330,5 x 76,35 mm	605 x 373 x 76,35 mm
Weight	7 kg	8,3 kg

READY-TO-RUN SYSTEMS

CONFIGURATION & ORDERING INFORMATION

Display size & resolution	Capacitive Touch Display	Resistive Touch Display
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ROBUST

Intel® Atom™ x7-E3950, 8 GB SO-DIMM DDR3L Wide Temp., 128 GB 2.5" SATA-6G SSD Wide Temp. with Powerguard, Windows® 10 IoT Enterprise, 60 W Power adapter, Operating temp.: -10°C to 70°C

8.4"	SVGA	158222	Spectra PowerTwin P08C-AL-R10	156478	Spectra PowerTwin P08R-AL-R10
10.4"	SVGA	156477	Spectra PowerTwin P10C-AL-R10	156474	Spectra PowerTwin P10R-AL-R10
12.1"	XGA	156431	Spectra PowerTwin PH12C-AL-R10	156421	Spectra PowerTwin PH12R-AL-R10
15"	XGA	156432	Spectra PowerTwin P15C-AL-R10	156425	Spectra PowerTwin P15R-AL-R10
15.6"	WXGA	156480	Spectra PowerTwin PW15C-AL-R10	156479	Spectra PowerTwin PW15R-AL-R10
17"	SXGA	156433	Spectra PowerTwin P17C-AL-R10	156426	Spectra PowerTwin P17R-AL-R10
19"	SXGA	156434	Spectra PowerTwin P19C-AL-R10	156427	Spectra PowerTwin P19R-AL-R10
21.5"	Full HD	156435	Spectra PowerTwin PW21C-AL-R10	156428	Spectra PowerTwin PW21R-AL-R10
24"	Full HD	157797	Spectra PowerTwin PW24C-AL-R10	157796	Spectra PowerTwin PW24R-AL-R10

STANDARD

Intel® Atom™ x7-E3950, 4 GB SO-DIMM DDR3L, 128 GB 2.5" SATA-6G SSD, Windows® 10 IoT Enterprise, 60 W Power adapter, Operating temp.: 0°C to 50°C

8.4"	SVGA	159703	Spectra PowerTwin P08C-AL-S10	159693	Spectra PowerTwin P08R-AL-S10
10.4"	SVGA	159704	Spectra PowerTwin P10C-AL-S10	159694	Spectra PowerTwin P10R-AL-S10
12.1"	XGA	159708	Spectra PowerTwin PH12C-AL-S10	159695	Spectra PowerTwin PH12R-AL-S10
15"	XGA	159709	Spectra PowerTwin P15C-AL-S10	159697	Spectra PowerTwin P15R-AL-S10
15.6"	WXGA	159710	Spectra PowerTwin PW15C-AL-S10	159698	Spectra PowerTwin PW15R-AL-S10
17"	SXGA	159711	Spectra PowerTwin P17C-AL-S10	159699	Spectra PowerTwin P17R-AL-S10
19"	SXGA	159714	Spectra PowerTwin P19C-AL-S10	159700	Spectra PowerTwin P19R-AL-S10
21.5"	Full HD	159715	Spectra PowerTwin PW21C-AL-S10	159701	Spectra PowerTwin PW21R-AL-S10
24"	Full HD	159716	Spectra PowerTwin PW24C-AL-S10	159702	Spectra PowerTwin PW24R-AL-S10

SUNLIGHT READABLE

Intel® Atom™ x7-E3950, 8 GB SO-DIMM DDR3L Wide Temp., 128 GB 2.5" SATA-6G SSD Wide Temp. with Powerguard, Windows® 10 IoT Enterprise, 60 W Power adapter, Operating temp.: -10°C to 70°C

10.4"	XGA	159792	Spectra PowerTwin PH10C-AL-SR10	-	
12.1"	XGA	159793	Spectra PowerTwin PH12C-AL-SR10	-	
15"	XGA	159794	Spectra PowerTwin P15C-AL-SR10	-	
17"	SXGA	159795	Spectra PowerTwin P17C-AL-SR10	-	
19"	SXGA	159796	Spectra PowerTwin P19C-AL-SR10	-	

ACCESSORIES

ORDERING INFORMATION

Article n°	Model	Description
N° 158059	PB-3000-IGN V1.5	Power Ignition Module-Kit
N° 156452	PT-PN4-CFM-PoE02	Module-Kit, PoE+, 25,5 W
N° 156631	PowerTwin RFID Mounting Kit (left/right)	Black, Mounting bar, Snap-in holder, screws
N° 148077	PowerTwin RFID Mounting Kit (under)	Black, Mounting bar, Snap-in holder, screws
Upon request	RFID Module	

SPECTRA POWERTWIN-SERIES | NOMENCLATURE

Spectra PowerTwin	M	H	12	C	-			SR		
Spectra PowerTwin	P		24		-	AL	-	R	10	
Spectra PowerTwin	P	W	15	R	-	i7SL	-	P	E	10

Series

M: Monitor
P: Panel-PC

Resolution

W: Widescreen
H: High Resolution

Display size

- 08: 8.4"
- 10: 10.4"
- 12: 12.1"
- 15: 15" o. 15.6"
- 17: 17"
- 19: 19"
- 21: 21.5"
- 24: 24"

Touchscreen

R: Resistive
C: P-CAP
: without Touch

Processor (Generation)

- BT: Bay Trail Atom™ E3845
- BTJ19: Bay Trail Celeron® J1900 upon request
- AL: Apollo Lake Atom® x7-E3950
- ALN42: Apollo Lake Pentium® N4200 upon request
- i7SL: Skylake Core™ i7-6600U
- i5SL: Skylake Core™ i5-6300U
- i3SL: Skylake Core™ i3-6100U
- i3WL: Whiskey Lake Core™ i3-8145UE
- i5WL: Whiskey Lake Core™ i5-8365UE

Version

P: Performant
R: Robust
S: Standard
L: Legacy
SR: Sunlight readable

Expansion

E: 1 PCIe Slot (or PCI upon request)
or 2 universal brackets

Operating System

7: Win7
10: Win10IoT



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