



OUR GLOBAL  
COMPETENCE  
CENTRES

 APOLLO DISPLAY  
TECHNOLOGIES



FORTEC  
INTEGRATED



FORTEC  
UNITED KINGDOM

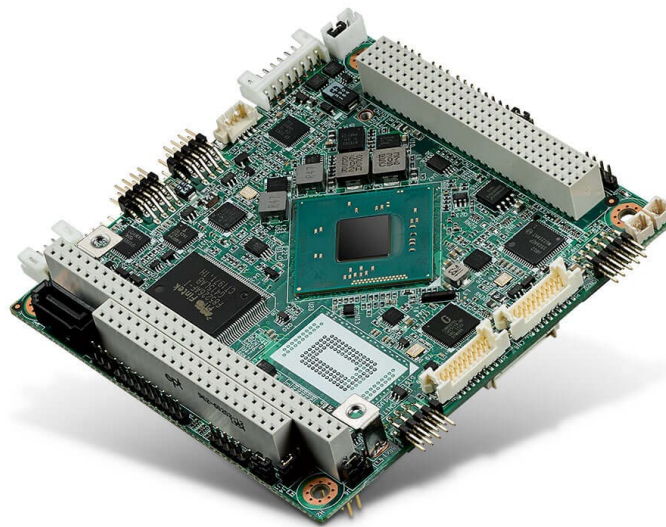


# Datasheet

## Advantech

### PCM-3365

Single Board Computer PC/104 CPU Module  
with Intel® Atom™ & Celeron® Processors



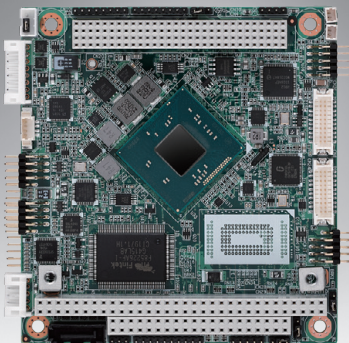
---

The information contained in this document has been carefully researched and is, to the best of our knowledge, accurate. However, we assume no liability for any product failures or damages, immediate or consequential, resulting from the use of the information provided herein. Our products are not intended for use in systems in which failures of product could result in personal injury. All trademarks mentioned herein are property of their respective owners. All specifications are subject to change without notice.

---

# PCM-3365

Intel® Atom™ E3825 / E3845 & Celeron® N2930,  
PC/104-Plus SBC



susiAccess CE FCC

## Features

- Intel® Atom™ E3825/E3845 & Celeron® N2930
- DDR3L-1066/1333MHz SODIMM up to 8GB
- 3 independent display: VGA+LVDS+HDMI/DVI
- Support PC/104-Plus expansion
- Rich I/O: 1 GbE, 3 COM, SATA, 6 USB2.0, full-size mSATA/miniPCIE
- Supports SUSIAccess and Embedded Software APIs

**Software APIs:**

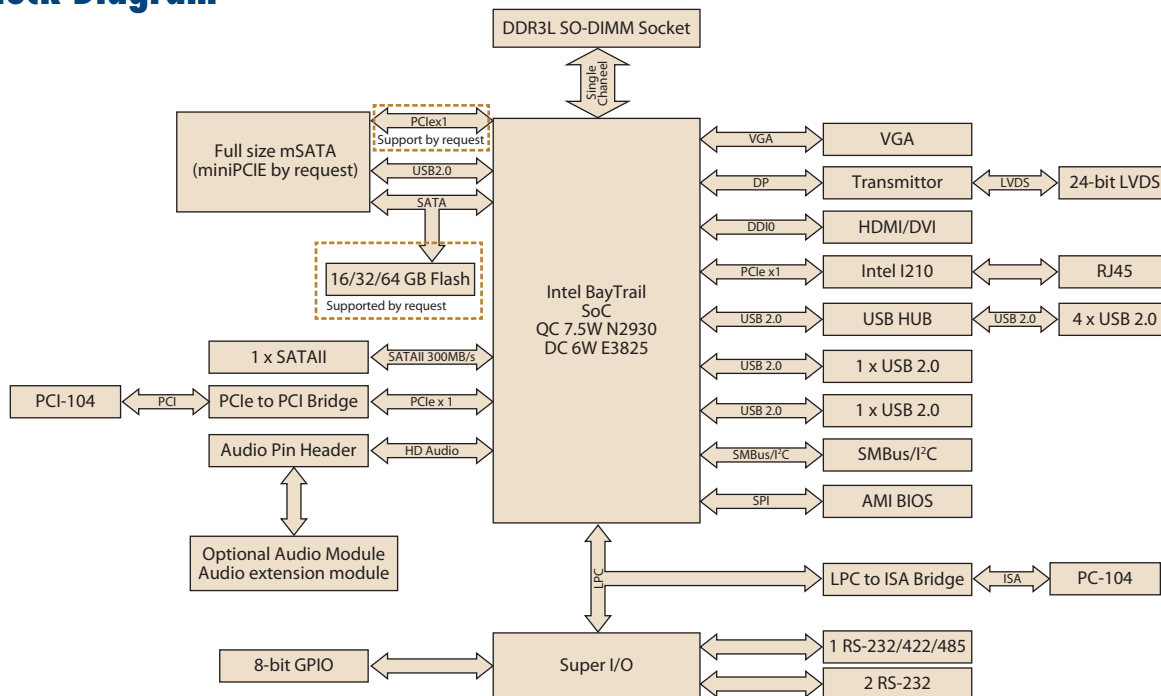
**Utilities:**

## Specifications

Processor System	CPU	Intel Celeron N2930	Intel Atom E3825	Intel Atom E3845
	Base Frequency	1.83 GHz (Quad-Core)	1.33 GHz (Dual-Core)	1.91 GHz (Quad-Core)
	Max Turbo Frequency	2.16 GHz	-	-
	L2 Cache	2MB	1MB	2MB
	BIOS	AMI UEFI BIOS at 64 Mb		
Memory	Technology	DDR3L 1333 MHz	DDR3L 1066 MHz	DDR3L 1333 MHz
	Max. Capacity	8 GB		
	Socket	1 x 204-pin SODIMM		
Display	Controller	Intel Gen7 graphic engine		
	Processor Graphics	DirectX11, OpenGL3.2, OpenCL1.1 Full HW acceleration, decode: H.264, MPEG2/4, VC-1, WMV9. Encode: H.264, MPEG2		
	VGA	2560 x 1600 at 60Hz		
	LVDS	24-bit LVDS up to WUXGA 1920 x 1200 at 60Hz Supports single channel 24-bit LVDS up to 1440 x 900 at 60Hz		
	HDMI / DVI	HDMI 1.4a for HD video playback, 1080P at 60Hz, up to 1920 x 1080 DVI 1.0 (DVI-D), up to 1920 x 1080 (Cable is optional)		
	Multit-Display	VGA + LVDS, VGA + HDMI/DVI, HDMI/DVI + LVDS		
Ethernet	Speed	10/100/1000Mbps		
	Controller	Intel I210		
	Connector	Pin Header		
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds		
Storage	SATA	1, up to 3Gb/s (300 MB/s)		
	mSATA	1 x Full-size (SATA signal shared with Onboard flash)		
	Onboard Flash*	16GB/32GB/64GB		
Internal I/O	Serial	1 RS-232/422/485 from COM 1, 2 RS-232 from COM2/3 (ESD protection: Air gap ±15kV, Contact ±8kV)		
	USB2.0	6		
	I <sup>2</sup> C	1 (Shared with SMBus pin)		
	SMBus	1		
	GPIO	8-bit		
Expansion	Mini PCIe	0 (PCIe is supported by request)		
	PC/104	PC/104 Expansion (ISA Bus), DMA is not supported and Memory address has limitation*		
	PCI-104	PCI-104 Expansion (PCI Bus)		
Power	Power Type	AT/ATX Support PC104 plus power module*		
	Power Supply Voltage	5V ± 5%		
	Power Consumption (Typical)	E3825: 0.877A@+5V, 0.006A@+12V, 0.003A@+5VSB (4.472W)		
		E3845: 0.923@+5V, 0.007A@+12V, 0.004A@+5VSB (4.719W)		
		N2930: 0.866A@+5V, 0.006A@+12V, 0.003A@+5VSB (4.417W)		
	Power Consumption (Max, test in HCT)	E3825: 1.107A@+5V, 0.008A@+12V, 0.008A@+5VSB (5.671W)		
E3845: 1.493@+5V, 0.008A@+12V, 0.025A@+5VSB (7.686W)				
N2930: 1.331A@+5V, 0.009A@+12V, 0.016A@+5VSB (6.843W)				
Power Management	ACPI			
Battery	Lithium 3 V / 210 mA			
Environment	Operational	0 ~ 60° C with 0.7m/s air flow (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)		
	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing		
Physical Characteristics	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")		
	Weight	0.735 kg (1.62 lb) (with heat-sink)		
	Height	Top side: 14.4mm (N2930, E3825 standard), 19.4mm (E3845 & E3825 extend temp.); Bottom side: 7.8mm, PCB: 1.6mm		

\* The specification is supported by request

## Block Diagram



## Ordering Information

Part No.	CPU	L2 Cache	Memory	VGA	HDMI/DVI	LVDS	USB2.0	SATA	GbE	COM	PCI-104	PC/104	Full-size mSATA	Thermal solution	Operating Temp
PCM-3365E-S3A2	E3825	1MB	SODIMM	Yes	Yes	24-bit	6	1	1	3	Yes	Yes	Yes	Passive	0 – 60
PCM-3365EW-S3A2	E3825	1MB	SODIMM	Yes	Yes	24-bit	6	1	1	3	Yes	Yes	Yes	Passive	-40 – 85
PCM-3365EW-S9A2	E3845	2MB	SODIMM	Yes	Yes	24-bit	6	1	1	3	Yes	Yes	Yes	Passive	-40 – 85
PCM-3365N-S8A2	N2930	2MB	SODIMM	Yes	Yes	24-bit	6	1	1	3	Yes	Yes	Yes	Passive	0 – 60

## Packing List

PN	Description	Quantity
	PCM-3365 SBC	1
	Startup manual	1
1700002332	ATX power cable 20P-13P/8P/3P/3P 13 cm	1
1700003491	AT power cable 1 x 8P-2.0/B4P-5.08 x 2 15 cm	1
1700017863	LAN cable RJ-45/2 x 5P-2.0 15 cm	1
1700071000	SATA data cable 7p 100 cm	1
1700022749-11	SATA power cable B4P-5.08/SATA 15P 10 cm	1
1703100260	USB cable 2 ports 2.0 mm pitch w/ bracket 26 cm	3
1701200220	RS-232 x 2 ports 2.0 mm 22 cm	1
1700019414	RS-232/422/485 30cm 1 prot	1
1700000898	VGA cable D-SUB 15P(F)/12P-1.25 mm15 cm	1
9689000002	mini Jumper pack	1
1960073365T001	Heatsink for E3845 & E3825 extend temp. (77.98 x 79.66 x 17.58 mm)	1
1960071977T001	Heatsink for E3825 standard/N2930 (79.66 x 77.98 x 12 mm)	1

## Optional Accessories

Part No.	Description
1960075183T001	Heat spreader of PCM-3365 (79.66 x 77.98 x 10.68 mm)
1653130421	PCI-104 connector 120-pin (Long pin)
165313222B	PC/104 connector 64-pin (Long pin)
165312022B	PC/104 connector 40-pin (Long pin)
1700025501-01	15cm DVI cable
1700025492-01	10cm HDMI cable
PCA-AUDIO-HDB1E	Audio extension module
1700025491-01	30cm audio cable connecting PCM-3365 and audio extension module

## Embedded OS/API

OS/API	Part No.	Description
Win10	2070015313	Win10 IoT Ent LTSP 2016 (64b)
WES7	2070014273	WES7E x64 V5.7.0 ENG
WEC7	2070014557	WEC7 x32 V7.4 ENG
Software API		iManager (SUSI 4.0)

Our company network supports you worldwide with offices in Germany, Austria, Switzerland, the UK and the USA. For more information please contact:

## Headquarters

Germany



**FORTEC**  
GROUP

FORTEC Elektronik AG  
Augsburger Str. 2b  
82110 Germering

Phone: +49 89 894450-0  
E-Mail: [info@fortecag.de](mailto:info@fortecag.de)  
Internet: [www.fortecag.de](http://www.fortecag.de)

---

## Fortec Group Members

Austria



**FORTEC**  
INTEGRATED

Distec GmbH Office Vienna  
Nuschinggasse 12  
1230 Wien

Phone: +43 1 8673492-0  
E-Mail: [info@distec.de](mailto:info@distec.de)  
Internet: [www.distec.de](http://www.distec.de)

Germany



**FORTEC**  
INTEGRATED

Distec GmbH  
Augsburger Str. 2b  
82110 Germering

Phone: +49 89 894363-0  
E-Mail: [info@distec.de](mailto:info@distec.de)  
Internet: [www.distec.de](http://www.distec.de)

Switzerland



**ALTRAC**  
A FORTEC GROUP MEMBER

ALTRAC AG  
Bahnhofstraße 3  
5436 Würenlos

Phone: +41 44 7446111  
E-Mail: [info@altrac.ch](mailto:info@altrac.ch)  
Internet: [www.altrac.ch](http://www.altrac.ch)

United Kingdom



**FORTEC**  
UNITED KINGDOM

Display Technology Ltd.  
Osprey House, 1 Osprey Court  
Hinchingbrooke Business Park  
Huntingdon, Cambridgeshire, PE29 6FN

Phone: +44 1480 411600  
E-Mail: [info@displaytechnology.co.uk](mailto:info@displaytechnology.co.uk)  
Internet: [www.displaytechnology.co.uk](http://www.displaytechnology.co.uk)

USA



 **APOLLO DISPLAY**  
**TECHNOLOGIES**  
A FORTEC GROUP MEMBER

Apollo Display Technologies, Corp.  
87 Raynor Avenue, Unit 1  
Ronkonkoma, NY 11779

Phone: +1 631 5804360  
E-Mail: [info@apolloDisplays.com](mailto:info@apolloDisplays.com)  
Internet: [www.apolloDisplays.com](http://www.apolloDisplays.com)