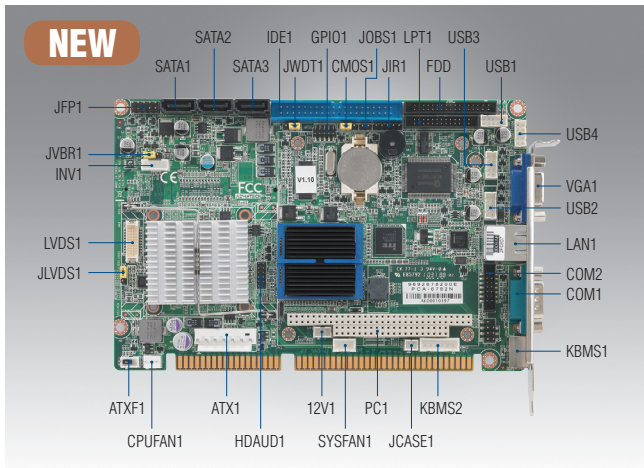


# PCA-6782

## Intel® Atom N455/D525 ISA Half-size SBC with VGA/LVDS/GbE LAN/SATA/COM/CFC/FDD and PC/104



### Features

- Ultra low power, fanless N455 CPU and maximum 2 GB DDR2 667 memory (Only for N SKU)
- Dual core high performance D525 CPU and maximum 2 GB DDR2 667/800 memory (Only for D SKU)
- VGA/LVDS dual video outputs
- Optional module for 4 x RS-485 w/ auto-flow control
- Supports embedded software APIs and utilities

**Software APIs:**

- Watchdog H/W
- Monitor Brightness
- GPIO
- Backlight On/Off
- CPU Speed
- System Throttling

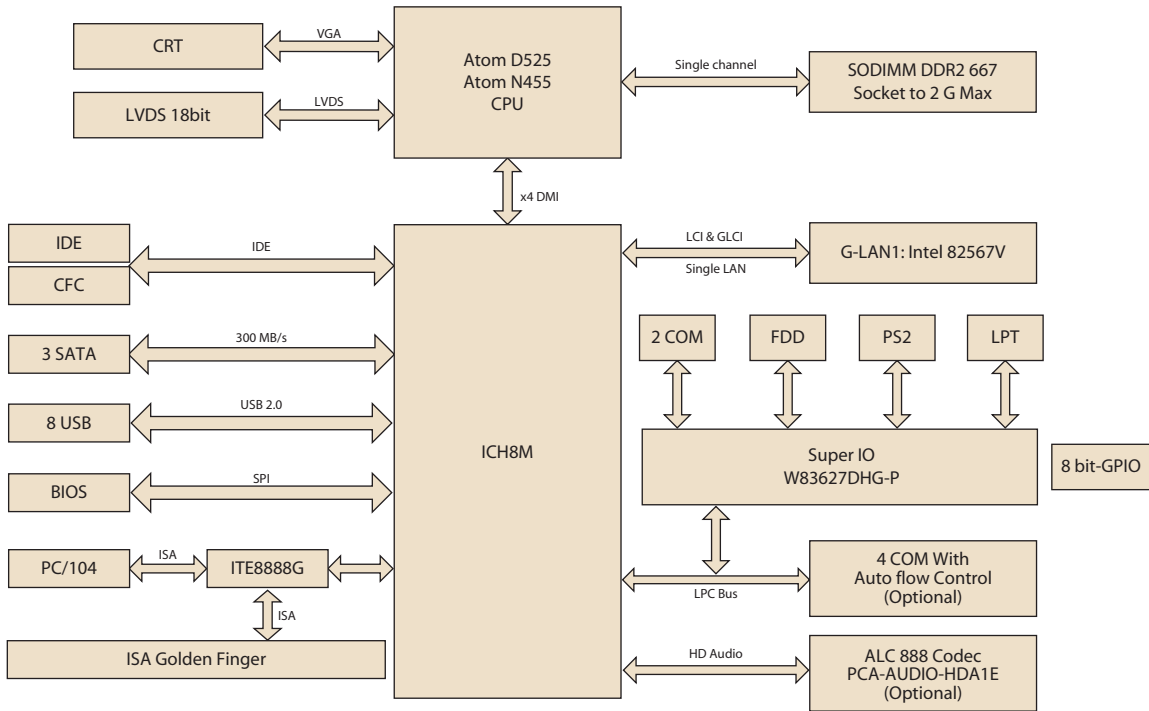
**Utilities:**

- BIOS flash
- Monitoring
- Flash Lock
- Embedded Security ID
- eSOS (Requires BIOS Customization)

### Specifications

Processor System	CPU	Intel Atom N455	Intel Atom D525					
	Speed	1.66 GHz	1.8 GHz					
	L2 Cache	512 KB	1 MB					
	Chipset	Intel ICH8M						
	BIOS	AMI 16Mb SPI Flash						
Bus	PCI	N/A						
	ISA	16-bit/ Gold Finger						
Memory	Technology	Single channel DDR2 667 MHz	Single channel DDR2 667/800 MHz					
	Max. Cap.	max 2 GB SODIMM	Max. Cap. max 2 GB SODIMM					
	Socket	200-pin DIMM x 1	Socket 200-pin DIMM x 1					
Graphics	On board	Embedded Gen3.5+ GFX Core technology, Direct X 9/Pixel Shader 2.0 compliant						
	VRAM	Shared 224 MB						
	Video Interface	15-pin VGA D-sub connector x1/Onboard LVDS pin header x 1 (supports single channel 18-bit LVDS)						
Ethernet	Interface	10/100/1000 Mbps						
	Controller	LAN1: Intel 82567V						
SATA 2	Connector	RJ45 with LED Connector x1						
	Max. Transfer Rate	300 MB/s						
EIDE	Channel	3						
	Mode	ATA 100/66/33						
I/O Interface	Channel	1 (Supports up to 2 IDE devices; Master device is alternative for CF socket)						
	USB 2.0	8 ports on the SHB						
	Serial	Two RS-232 onboard pin-headers, plus four ports of RS-485 with auto-flow control by module (optional, Advantech P/N: PCA-COM485-00A1E)						
	Parallel	1 (EPP/ECP)						
	GPIO	1 (8-bit)						
	FDD	1						
Watchdog Timer	PS/2	1 (for mouse and keyboard, a Y cable is included in the package)						
	Output	Interrupt, system reset						
Miscellaneous	Interval	Programmable, 1~255 sec/min						
	Audio Output	Intel High Definition audio interface (requires an audio extension module, P/N: PCA-AUDIO-HDA1E)						
Power Requirement	Test Equipment	Atom D525 CPU 1.8 GHz; Memory: One of 2 GB DDR2 667 MHz SODIMM; Storage: One SATA HDD						
	Test Program	Hot CPU pro 4.22						
	Voltage	+12 V	+5 V	+3.3 V	+5 VSB	-12 V	-5 V	Total
	Current	0.46 A	2.41 A	0 A	0.01 A	0 A	0 A	17.62 W
	Test Equipment	Atom N455 CPU 1.66 GHz; Memory: One of 2 GB DDR2 667 MHz SODIMM; Storage: One SATA HDD						
	Test Program	Hot CPU pro 4.22						
Environment	Voltage	+12 V	+5 V	+3.3 V	+5 VSB	-12 V	-5 V	Total
	Current	0.13 A	2.19 A	0 A	0.01 A	0 A	0 A	12.56 W
Physical	Operating	Non-Operating						
	Temperature	0 ~ 60° C (32 ~ 140° F)			-40 ~ 85° C and 60° C @ 95% RH Non-Condensing			
Physical	Dimensions	(Operational humidity: 40° C @ 85% RH Non-Condensing)						
	Dimensions	185 mm (L) x 122 mm (W) (7.3" x 4.8")						

### Board Diagram



### Ordering Information

P/N	CPU	Fan-Less	LAN	PC104	LVDS	FDD	SATA	USB	RAM
PCA-6782D-S8A1E	Atom D525	No	Single GbE LAN	Yes	Yes	1	3	8	Socket to 2G
PCA-6782N-S6A1E	Atom N455	Yes	Single GbE LAN	Yes	Yes	1	3	8	Socket to 2G

### Optional Accessories

Part Number	Description
PCA-COM485-00A1E	Extension module for four ports of RS-422/485 with auto-flow control function
PCA-AUDIO-HDA1E	Extension module for 7.1 channel High Definition audio
1701340603	FDD cable

### Bracket View



PCA-6782D-S8A1E  
PCA-6782N-S6A1E

### Packing List

Part Number	Description	Quantity
1960046526N001	CPU Cooler for Atom D510 CPU (Only Available for D SKU)	x 1
1701400452	Ultra ATA 66/100 HDD cables	x 1
1700003194	Serial ATA HDD data cable	x 2
1703150102	Serial ATA HDD power cable	x 2
1700008954	Print port & COM port cable	x 1
1700002343	ATX Feature Cable	x 1
1700014398	4-port USB cable kit	x 1
1700060202	Y cable for PS/2 keyboard and PS/2 mouse	x 1
1703070101	ATX Power Cable 20P/7P 10 cm	x 1
1703080101	AT Power Cable	x 1
9689000002	Jumper Pack	x 1
-	Warranty card	x 1
-	PCA-6782 Startup Manual	x 1
-	CD with driver utility and manual (in PDF format)	x 1