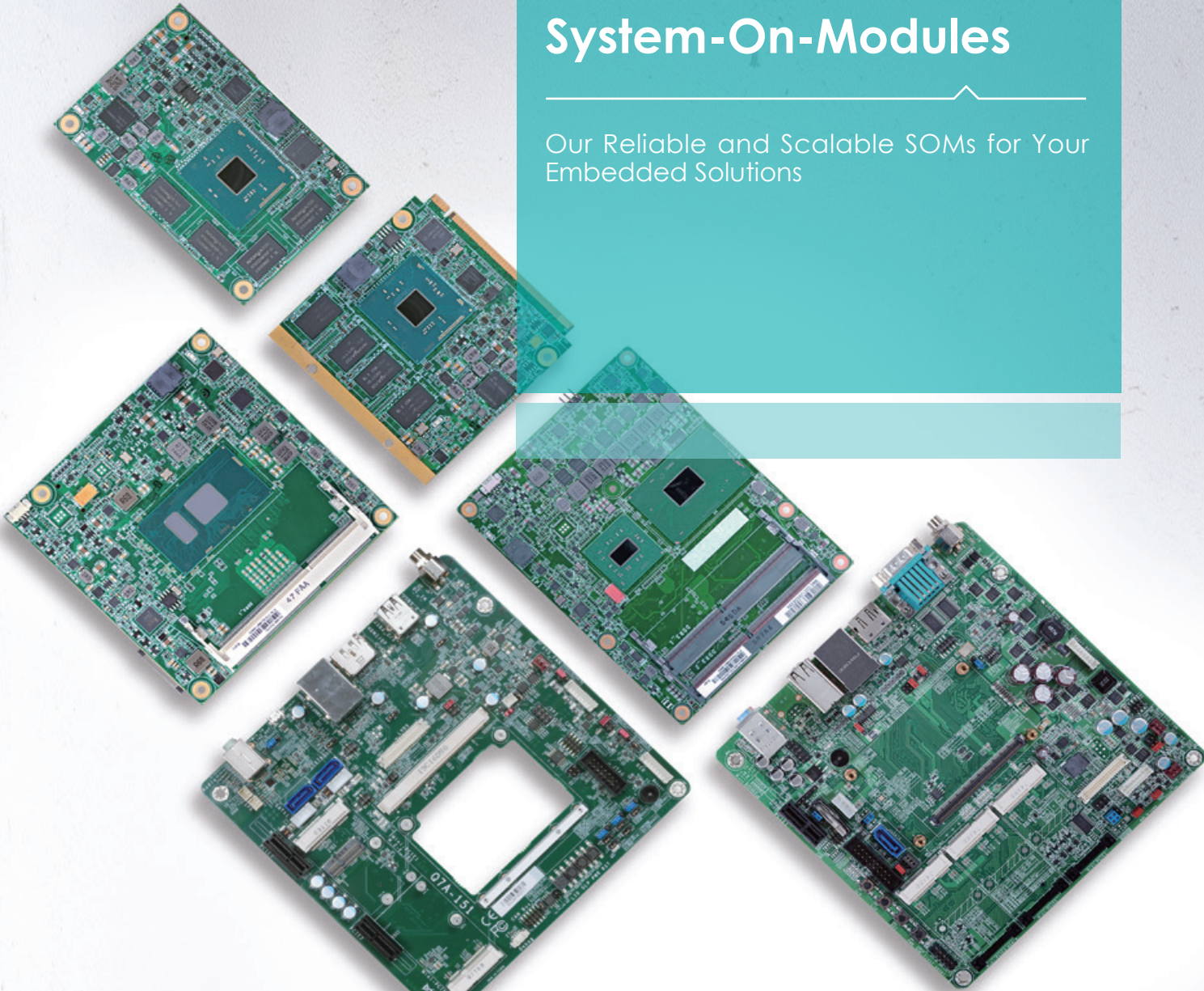


System-On-Modules

Our Reliable and Scalable SOMs for Your Embedded Solutions



Our Reliable and Scalable SOMs for Your Embedded Solutions

We provide off-the-shelf System-On-Modules including COM Express Mini, COM Express Compact, COM Express Basic, Qseven, SMARC and Customized Design-in Services for various embedded computing solutions

System-On-Modules Product Overview

SMARC



F8S00

Processor	Platform	Chipset	Model	Index
Freescale™ i.MX8X Series	ARM	-	F8S00	P6

Qseven



AL701

Processor	Platform	Chipset	Model	Index
Intel Atom® Processor E3900	Atom	-	AL701	P7
			AL700	
Intel Atom® Processor E3800	Atom	-	BT700	P8
Freescale™ i.MX6 Series	ARM	-	FS700	
Freescale™ i.MX8X Series	ARM	-	F8700	
Qualcomm® APQ8096	ARM	-	AP700	

COM Express Mini



WL9A3

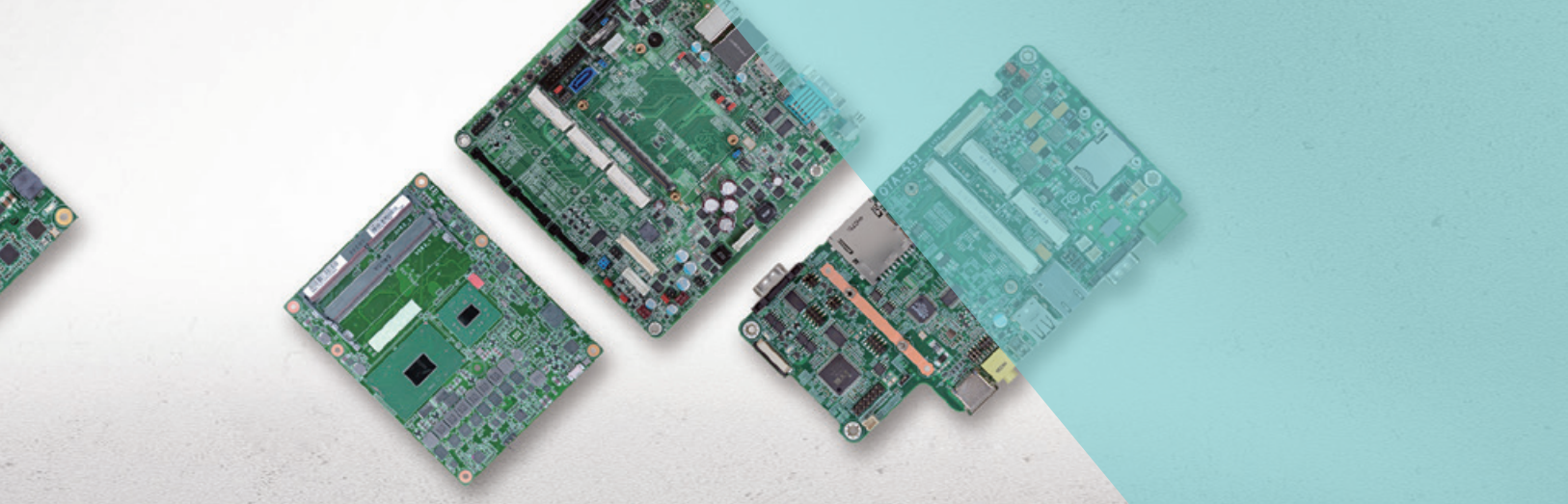
Type	Processor	Platform	Chipset	Model	Index
Type 10	8th Gen Intel® Core™ Processor	ULT	-	WL9A3	P9
	Intel Atom® Processor E3900/ Intel® Pentium® N4200	Atom	-	AL9A2	
				AL9A3	
	Intel Atom® Processor E3800	Atom	-	BT9A3	

COM Express Compact

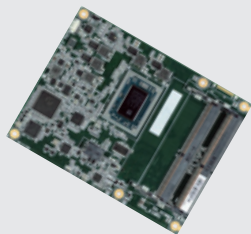


AL968

Type	Processor	Platform	Chipset	Model	Index
Type 6	8th Gen Intel® Core™ Processor	ULT	-	WL968	P10
	7th Gen Intel® Core™ Processor	ULT	-	KU968	
	6th Gen Intel® Core™ Processor	ULT	-	SU968	
	4th Gen Intel® Core™ Processor	ULT	-	HU968	P11
	Intel Atom® Processor E3900/ Intel® Pentium® N4200	Atom	-	AL968	
	Intel® Pentium®/Celeron® Processor N3000	Atom	-	BW968	
	Intel Atom® Processor E3800	Atom	-	BT968	
	AMD® Embedded G-Series SoC	AMD	-	KB968	



COM Express Basic



GH960

Type	Processor	Platform	Chipset	Model	Index
Type 7	Intel Atom® Processor C3000	Atom	-	DV970	P12
Type 6	8th Gen Intel® Core™ Processor	Mobile	CM246/QM370	CH960-CM246/QM370	
			HM370	CH960-HM370	P13
	7th Gen Intel® Core™ Processor	Mobile	CM238/QM175	KH960-CM238/QM175	
			HM175	KH960-HM175	
	6th Gen Intel® Core™ Processor	Mobile	CM236/QM170	SH960MD-CM236/QM170	P14
			HM170	SH960-CM236/QM170	
Type 6	4th Gen Intel® Core™ Processor	Mobile	QM87	HM960-QM87, HM961-QM87	P15
			HM86	HM960-HM86, HM961-HM86	
	2nd Gen AMD® Embedded R-Series	AMD	A77E	BE960	P15
Type 2	AMD® Ryzen™ V1000/R1000 Embedded Processors	AMD	-	GH960	
	4th Gen Intel® Core™ Processor	Mobile	QM87/HM86	HM920-QM87, HM920-HM86	

Carrier Board



COM333-I

Form Factor	Compliance	Model	Index
Mini-ITX	COM Express R2.1, Type 10	COM100-B	P16
microATX	COM Express R3.0, Type 7	COM333-I	P17
	COM Express R2.1, Type 6	COM332-B(R.A)	
	COM Express R2.1, Type 6	COM332-B(R.B1)	
ATX	COM Express R1.0, Type 2	COM630-B	P18
Mini-ITX	SMARC (F8S00)	CAR-SMARC	
	Qseven (F8700)	Q7A-151	
	Qseven (BT700)	Q7X-151(R.A)	
	Qseven (AL700, AL701, BT701)	Q7X-151(R.D1)	
Proprietary	Qseven (FS700)	Q7A-551	

SDM



SDML-WL

Form Factor	Compliance	Model	Index
SMD Large	8th Gen Intel® Core™ Processor	SDML-WL	P19

Design Assistance

- Comprehensive evaluation of carrier board design during planning phase
Hardware/Software Recommendations, Technical Specifications, Developing Schedule, and Database Schematic Review, Placement/Layout Review, Debugging Assistance Services, and General/Special Reference Design
- Comprehensive design documentation for designing carrier board
Carrier Board Design Guide, User's Manual, Schematic & Layout Checklist, and 2D/3D Mechanical Drawing

Strict Validation

- Strict validation and testing process ensures reliable deployments
Dedicated Design Review Team, Thermal Simulation, and COMe Debug Module Card

Thermal Solution

- Customized thermal solution design & Optional heatspreader
For special requirements like high-temperature environments or ultra-slim chassis

Software Integration

- Embedded OS and BIOS customization
Windows 10, Windows 7, WES 7, Windows XP, Linux (CentOS/Debian), etc.
- Windows licensing offerings
- Application Programming Interface (API) library
Watchdog, Hardware Control/Monitor, GPIO, Backlight Control, SMBus, etc.
- Remote management utility



Planning



Design



Validation



Integration



Production



Rugged Design

- Industrial-rated components with high MTBF over 100,000 hrs
- Extended operating temperatures
- High ESD protection for I/O ports
- Signal integrity measurement
- Wide range power design
- 100% Japanese-made solid capacitor
- Power hot plug protection for DC-in type SBC and Industrial Motherboards



Software Integration

- Embedded BIOS and OS customization services
- Windows licensing offerings
- Android, Linux distribution (Yocto/Ubuntu/CentOS/Debian)
- Embedded API
(Hardware Monitor, SMBus, I²C, Brightness Control, GPIO, Watchdog)
- Remote management utility



Embedded Total Solution

- Express customization service: 30 days (NRE cost: project based)
- Strict revision control
- Long product life cycle support
- High volume OEM/ODM production capabilities



Embedded Boards



Peripherals



Systems



Embedded Software & BIOS



Vertical Solutions

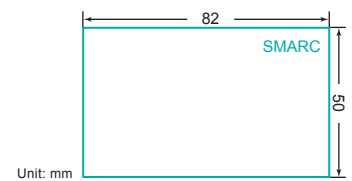
SMARC

Extremely Energy-Saving & Small Solutions



Features

SMARC ("Smart Mobility ARChitecture") is mainly designed for applications that require extremely energy-saving, constrained space, and high performance with a full-size module measuring 82 x 80 mm and short size measuring 82 x 50 mm. It's the ideal solution for digital signage, human-machine interface, automation, and portable devices.



Full Size: 82mm x 80mm
Short Size: 82mm x 50mm



Wide Temp

ARM

Model Name		F8S00
Compliance		SMARC R2.0
System	Processor	Freescaler™ i.MX8X series
	Socket	BGA 609
	Max. Speed	1.2GHz
	TDP	3.3W
	Cache	32KB
	Chipset	-
	BIOS	-
Memory	Technology	Single Channel LPDDR4 3200MHz
	Max. Capacity	4GB
	Socket	Memory down
Graphics	Interface	1 HDMI, 1 eDP
Expansion	PCIe	1 PCIe x1
	PCI	-
	LPC	-
	I ² C	4
	SMBus	-
	CAN Bus	2
Audio	Interface	I ² S
Ethernet	Controller	1 Atheros AR8033
I/O	USB	2 USB 3.0, 3 USB 2.0, 1 USB 2.0 OTG
	SATA	1 SATA3.0
	IDE	-
	SSD	-
	eMMC	4GB/8GB/16GB
	DIO	-
	SD	4-bit SDIO
TPM		-
iAMT		-
Power		3.3V~5V
Operating Temperature		-40°C to 85°C

*Populated by default

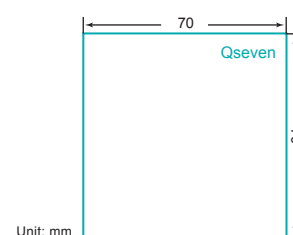
Qseven

Extremely Small & Mobile Solutions



Features

Qseven is equipped with fast serial interfaces in an ultra-small form factor with a measurement of just 70 x 70 mm. It is much smaller than other system-on-module standards such as COM Express, which makes it an ideal solution for space-limited and low power applications such as industrial automation, retail, and power & energy.



Wide Temp
Atom



Wide Temp
Atom

Model Name		AL701	AL700
Compliance		Qseven R2.1	Qseven R2.1
System	Processor	Intel Atom® E3900	Intel Atom® E3900
	Socket	BGA 1296	BGA 1296
	Max. Speed	1.1~2.5GHz	1.1~2.5GHz
	TDP	6W/6.5W/9.5W/12W	6W/6.5W/9.5W/12W
	Cache	2M	2M
	Chipset	-	-
Memory	BIOS	AMI SPI 128Mbit	AMI SPI 128Mbit
	Technology	Dual Channel LPDDR4 3200MHz	Dual Channel DDR3L 1600MHz
	Max. Capacity	4GB/8GB	4GB/8GB
	Socket	Memory down	Memory down
Graphics	Interface	1 LVDS*/eDP, 1 DDI	1 LVDS*/eDP, 1 DDI
Expansion	PCIe	4 PCIe x1	4 PCIe x1
	PCI	-	-
	LPC	1	1
	I ² C	1	1
	SMBus	1	1
	CAN Bus	1 (only Linux support)	-
Audio	Interface	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I211 / 1 Intel® I210	1 Intel® I211 / 1 Intel® I210
I/O	USB	1 USB 3.0, 8 USB 2.0	1 USB 3.0, 8 USB 2.0
	SATA	2 SATA 3.0	2 SATA 3.0
	IDE	-	-
	SSD	-	-
	eMMC	optional	optional
	DIO	4-bit DIO	4-bit DIO
	SD	1	1
TPM		optional	optional
iAMT		-	-
Power		VCC_RTC, 5V standby, 5V	VCC_RTC, 5V standby, 5V
Operating Temperature		-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C

*Populated by default



Wide Temp
Atom



ARM



ARM

Model Name		BT700	F8700	FS700
Compliance		Qseven R2.0	Qseven R2.1	Qseven R1.2
System	Processor	Intel Atom® E3800	Freescaler™ i.MX8X series	Freescaler™ i.MX6 Series
	Socket	BGA 1170	BGA 609	FCPBGA
	Max. Speed	1.46~2.41GHz	1.2GHz	1.0GHz
	TDP	5W/7.5W/8W/10W	3.3W	-
	Cache	0.5M/1M/2M	32KB	32KB
	Chipset	-	-	-
	BIOS	AMI SPI 64Mbit	-	-
Memory	Technology	Single Channel DDR3L 1066/1333MHz	Single Channel LPDDR4 3200MHz	Single Channel DDR3 1000/1200MHz
	Max. Capacity	2GB/4GB	4GB	1GB/2GB
	Socket	Memory down	Memory down	Memory down
Graphics	Interface	1 LVDS, 1 DDI	1 HDMI, 1 LVDS	1 HDMI, 2 LVDS
Expansion	PCIe	3 PCIe x1	1 PCIe x1	1 PCIe x1
	PCI	-	-	-
	LPC	1	-	-
	I ² C	1	2	2
	SMBus	1	-	-
	CAN Bus	-	1	1
Audio	Interface	HD Audio	I ² S	I ² S
Ethernet	Controller	1 Intel® I210	1 Atheros AR8033	1 Atheros AR8033
I/O	USB	1 USB 3.0, 6 USB 2.0	3 USB 3.0, 1 USB 2.0 OTG	4 USB 2.0, 1 USB OTG
	SATA	2 SATA 2.0	-	1 SATA 2.0
	IDE	-	-	-
	SSD	-	-	-
	eMMC	optional	16GB onboard	onboard
	DIO	-	-	-
	SD	1	4-bit SDIO	1 SDIO, 1 microSD onboard
TPM		optional	-	-
iAMT		-	-	-
Power		VCC_RTC, 5V standby, 5V	5V	VCC_RTC, 5V standby, 5V
Operating Temperature		-40°C~85°C, -20°C~70°C, 0°C~60°C	-20°C~70°C, 0°C~60°C	-20°C~70°C, 0°C~60°C



Coming Soon

ARM

Model Name		AP700
Compliance		Qseven R2.1
System	Processor	Qualcomm® APQ8096
	Socket	994C MNSP
	Max. Speed	2.15GHz
	TDP	-
	Cache	-
	Chipset	-
	BIOS	AMI SPI 4Mbit
Memory	Technology	Dual-channel PoP LPDDR4 3733MHz
	Max. Capacity	4GB
	Socket	Memory down
Graphics	Interface	1 LVDS, 1 HDMI
Expansion	PCIe	1 PCIe
	PCI	-
	LPC	-
	I ² C	1
	I ² S	1
	SMBus	-
Audio	Interface	HD Audio
	Controller	AR8151-BL1A-R
I/O	USB	7 USB 3.0, 2 USB 2.0
	SATA	1
	IDE	-
	SSD	-
	eMMC	-
	UFS	optional
	DIO	8-bit DIO
	SD	optional
TPM		1 (TX/RX)
MIPI-CSI		-
iAMT		1
Power		-
Operating Temperature		4.75V~20V, 5VSB, VCC_RTC (ATX mode), 4.75V~20V, VCC_RTC (AT mode) 0°C~60°C

*Populated by default

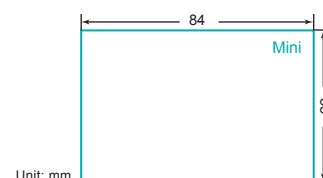
COM Express Mini

Power-Saving & Small-Size Solutions



Features

COM Express® Mini module delivers high performance on a small footprint which features 55 x 84 mm in size. It is ideal for space-limited, power-saving and mobile applications. DFI's ultra-small modules are available with COM Express® pin-out Type 10.



COMe Type 10



Wide Temp

ULT



Wide Temp

Atom



Wide Temp

Atom



Wide Temp

Atom

Model Name		WL9A3	AL9A2	AL9A3	BT9A3
Compliance		COM Express® R2.1 Mini, Type 10	COM Express® R2.1 Mini, Type 10	COM Express® R2.1 Mini, Type 10	COM Express® R2.1 Mini, Type 10
System	Processor	8th Gen Intel® Core™	Intel Atom® E3900/Intel® Pentium® N4200	Intel Atom® E3900/Intel® Pentium® N4200	Intel Atom® E3800
	Socket	FCBGA 1528	BGA 1296	BGA 1296	BGA 1170
	Max. Speed	1.7~4.4GHz	1.1~2.5GHz	1.1~2.5GHz	1.46~2.41GHz
	TDP	15W	6W/6.5W/9.5W/12W	6W/6.5W/9.5W/12W	5W/7.5W/8W/10W
	Cache	4M/6M/8M	2M	2M	0.5M/1M/2M
	Chipset	-	-	-	-
Memory	BIOS	AMI SPI 128Mbit	AMI SPI 128Mbit	AMI SPI 128Mbit	AMI SPI 64Mbit
	Technology	Dual Channel LPDDR3 2133MHz	Single Channel DDR3L 1866MHz	Dual Channel DDR3L 1866MHz	Single Channel DDR3L 1066/1333MHz
	Max. Capacity	8GB	4GB non-ECC/8GB ECC	4GB/8GB	4GB/2GB
Graphics	Socket	Memory down	Memory down	Memory down	ECC memory down
	Interface	1 LVDS*/eDP, 1 DDI	1 LVDS*/eDP, 1 DDI	1 LVDS*/eDP, 1 DDI	1 LVDS, 1 DDI
Expansion	PCIe	4 PCIe x1	4 PCIe x1	4 PCIe x1	3 PCIe x1
	PCI	-	-	-	-
	LPC	1	1	1	1
	I ² C	2	2	1	1
	SMBus	1	1	1	1
	CAN Bus	-	-	-	-
Audio	Interface	HD Audio	HD Audio	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I219	1 Intel® I210	1 Intel® I210	1 Intel® I210
I/O	USB	2 USB 3.0, 8 USB 2.0	2 USB 3.0, 8 USB 2.0	2 USB 3.0, 8 USB 2.0	1 USB 3.0, 8 USB 2.0
	SATA	2 SATA 3.0	2 SATA 3.0	2 SATA 3.0	2 SATA 2.0
	IDE	-	-	-	-
	SSD	-	-	optional	-
	eMMC	optional	optional	-	optional
	DIO	8-bit DIO	8-bit DIO	8-bit DIO	8-bit DIO
	SD	optional	optional	optional	-
TPM		-	-	-	-
iAMT		-	-	-	-
Power		4.75V~20V, 5VSB, VCC_RTC (ATX mode)	4.75V~20V, 5VSB, VCC_RTC (ATX mode)	4.75V~20V, 5VSB, VCC_RTC (ATX mode)	4.75V~20V, 5VSB, VCC_RTC (ATX mode)
		4.75V~20V, VCC_RTC (AT mode)	4.75V~20V, VCC_RTC (AT mode)	4.75V~20V, VCC_RTC (AT mode)	4.75V~20V, VCC_RTC (AT mode)
Operating Temperature		-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C

*Populated by default

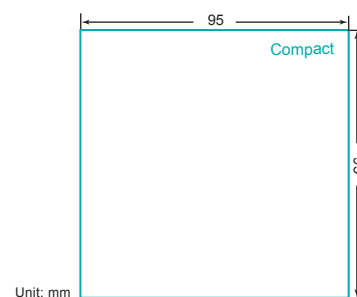
COM Express Compact

Reliable & Compact Solutions

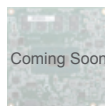


Features

COM Express® Compact module is designed with computing capability and cost efficiency in a compact form factor with a footprint of 95 x 95 mm, making it the best option for transportation and defense applications. DFI's Compact modules are available with COM Express® pin-out Type 2 and Type 6.



COMe Type 6



Coming Soon

Wide Temp

ULT



Wide Temp

ULT



Wide Temp

ULT

Model Name		WL968	KU968	SU968
Compliance		COM Express® R3.0 Compact, Type 6	COM Express® R2.1 Compact, Type 6	COM Express® R2.1 Compact, Type 6
System	Processor	8th Gen Intel® Core™	7th Gen Intel® Core™	6th Gen Intel® Core™
	Socket	FCBGA 1528	BGA 1356	BGA 1356
	Max. Speed	1.7~4.4GHz	2.2~3.9GHz	2~3.4GHz
	TDP	15W	15W	15W
	Cache	4M/6M/8M	2M/3M/4M	2M/3M/4M
	Chipset	-	-	-
Memory	BIOS	AMI SPI 128Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit
	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 2133MHz	Dual Channel DDR3L 1600MHz
	Max. Capacity	64GB	4GB/8GB/16GB	16GB
Graphics	Socket	2 SODIMM	Memory down	2 SODIMM
	Interface	1 VGA*/DDI, 1 LVDS*/eDP, 1 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 1 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 1 DDI
Expansion	PCIe	4 PCIe x1 + 1 PCIe x4	4 PCIe x1 + 1 PCIe x4	4 PCIe x1 + 1 PCIe x4
	PCI	-	-	-
	LPC	1	1	1
	I²C	1	1	1
	SMBus	1	1	1
	CAN Bus	-	-	-
Audio	Interface	HD Audio	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I219	1 Intel® I219	1 Intel® I219
I/O	USB	4 USB 3.0, 8 USB 2.0	4 USB 3.0, 8 USB 2.0	4 USB 3.0, 8 USB 2.0
	SATA	3 SATA 3.0 (RAID)	3 SATA 3.0 (RAID)	3 SATA 3.0 (RAID)
	IDE	-	-	-
	SSD	-	-	-
	eMMC	up to 128GB	-	-
	DIO	8-bit DIO	8-bit DIO	8-bit DIO
	SD	-	-	-
TPM		optional	optional	optional
iAMT		iAMT 12.0 (Core i7/i5)	iAMT 11.0 (Core i7/i5)	iAMT 11.0 (Core i7/i5)
Power		12V, 5VSB, VCC_RTC (ATX mode)	12V, 5VSB, VCC_RTC (ATX mode)	12V, 5VSB, VCC_RTC (ATX mode)
		12V, VCC_RTC (AT mode)	12V, VCC_RTC (AT mode)	12V, VCC_RTC (AT mode)
Operating Temperature		-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C

*Populated by default

COME Type 6



ULT



Wide Temp

Atom



Atom

Model Name		HU968	AL968	BW968
Compliance		COM Express® R2.1 Compact, Type 6	COM Express® R2.1 Compact, Type 6	COM Express® R2.1 Compact, Type 6
System	Processor	4th Gen Intel® Core™	Intel Atom® E3900/Intel® Pentium® N4200	Intel® Pentium®/Celeron® N3000
	Socket	BGA 1168	BGA 1296	BGA 1170
	Max. Speed	1.6~3.3GHz	1.1~2.5GHz	2.24~2.56GHz
	TDP	15W	6W/6.5W/9.5W/12W	4W/6W
	Cache	2M/3M/4M	2M	2M
	Chipset	-	-	-
Memory	BIOS	AMI SPI 64Mbit	Insyde SPI 128Mbit	Insyde SPI 64Mbit
	Technology	Dual Channel DDR3L 1600MHz	Dual Channel DDR3L 1600MHz	Dual Channel DDR3L 1600MHz
	Max. Capacity	2GB/4GB/8GB	8GB	8GB
Graphics	Socket	Memory down	2 SODIMM	2 SODIMM
	Interface	1 VGA, 1 LVDS, 1 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 1 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 1 DDI
Expansion	PCIe	1 PCIe x4, 1 PCIe x2, 1 PCIe x1	4 PCIe x1	3 PCIe x1
	PCI	-	-	-
	LPC	1	1	1
	i²C	1	1	1
	SMBus	1	1	1
	CAN Bus	-	-	-
Audio	Interface	HD Audio	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I218	1 Intel® I211 / 1 Intel® I210	1 Intel® I211
I/O	USB	2 USB 3.0, 8 USB 2.0	4 USB 3.0, 8 USB 2.0	4 USB 3.0, 8 USB 2.0
	SATA	3 SATA 3.0 (RAID)	2 SATA 3.0	2 SATA 3.0
	IDE	-	-	-
	SSD	optional	-	-
	eMMC	-	optional	-
	DIO	4-bit DIO	8-bit DIO	8-bit DIO
	SD	-	optional	optional
TPM		optional	-	-
iAMT		iAMT 9.5	-	-
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
	Operating Temperature	0°C~60°C	-40°C~85°C, 0°C~60°C	0°C~60°C



Wide Temp

Atom



AMD

COME Type 6 & 2

Model Name		BT968	KB968
Compliance		COM Express® R2.1 Compact, Type 6	COM Express® R2.1 Compact, Type 6
System	Processor	Intel Atom® E3800	AMD® Embedded G-Series SoC
	Socket	BGA 1170	FT3 BGA
	Max. Speed	1.46~2.41GHz	1.0~2.0GHz
	TDP	5W/7.5W/8W/10W	6W/9W/15W/25W
	Cache	0.5M/1M/2M	1M/2M
	Chipset	-	-
Memory	BIOS	AMI SPI 64Mbit	AMI SPI 32Mbit
	Technology	Dual/Single Channel DDR3L 1066/1333MHz	Single Channel DDR3 1066/1333/1600MHz
	Max. Capacity	4GB/8GB	8GB
Graphics	Socket	1 or 2 SODIMM	1 SODIMM
	Interface	1 VGA, 1 LVDS*/DDI, 1 DDI	1 VGA, 1 DP/LVDS, 1 DP
Expansion	PCIe	3 PCIe x1	1 PCIe x4, 4 PCIe x1
	PCI	-	-
	LPC	1	1
	i²C	1	1
	SMBus	1	1
	CAN Bus	-	-
Audio	Interface	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I210	1 Intel® I210
I/O	USB	1 USB 3.0, 8 USB 2.0	2 USB 3.0/2.0, 6 USB 2.0
	SATA	2 SATA 2.0	2 SATA 3.0
	IDE	-	-
	SSD	-	optional
	eMMC	optional	-
	DIO	8-bit DIO	8-bit DIO
	SD	-	-
TPM		optional	optional
iAMT		-	-
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
	Operating Temperature	-40°C~85°C, -20°C~70°C, 0°C~60°C	0°C~60°C

*Populated by default

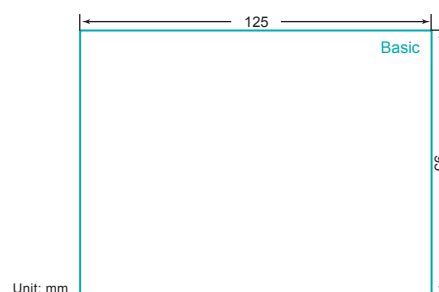
COM Express Basic

High-Performance & Cost-Effective Solutions



Features

COM Express® Basic module provides high-level processing performance and high-speed interfaces for a wide range of computing-demand applications such as medical, transportation, and industrial automation. DFI's Basic modules are compatible with COM Express® pin-out Type 2, Type 6 and Type 7.



COMe Type 7 & 6



Wide Temp
Atom



Wide Temp
CM246/QM370



Wide Temp
HM370

Model Name		DV970	CH960-CM246/QM370	CH960-HM370
Compliance		COM Express® R3.0 Basic, Type 7	COM Express® R2.1 Basic, Type 6	COM Express® R2.1 Basic, Type 6
System	Processor	Intel Atom® C3000	8th Gen Intel® Core™	8th Gen Intel® Core™
	Socket	BGA 1310	BGA 1440	BGA 1440
	Max. Speed	1.7~2.0GHz	2.5~4.4GHz	2.5~4.2GHz
	TDP	17W/25W/31W	45W	45W
	Cache	12M/16M	8M/12M	8M
	Chipset	-	Intel® CM246/QM370	Intel® HM370
	BIOS	Insyde SPI 128Mbit	AMI SPI 128Mbit	AMI SPI 128Mbit
Memory	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 2666MHz	Dual Channel DDR4 2666MHz
	Max. Capacity	32GB	32GB	32GB
	Socket	2 SODIMM	2 SODIMM	2 SODIMM
Graphics	Interface	-	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI
Expansion	PCIe	2 PCIe x8	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1
	PCI	-	-	-
	LPC	1	1	1
	I²C	1	1	1
	SMBus	1	1	1
	CAN Bus	-	-	-
Audio	Interface	-	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I210, 4 10Gbase-KR	1 Intel® I219	1 Intel® I219
I/O	USB	2 USB 3.0, 4 USB 2.0	4 USB 3.1, 8 USB 2.0	4 USB 3.1, 8 USB 2.0
	SATA	2 SATA 3.0 (RAID)	4 SATA 3.0 (RAID)	4 SATA 3.0
	IDE	-	-	-
	SSD	-	-	-
	eMMC	-	-	-
	DIO	8-bit DIO	8-bit DIO	8-bit DIO
	SD	-	-	-
TPM		optional	optional	optional
iAMT		-	iAMT 12.0 (Core i7/i5)	-
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode), 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode), 12V, VCC_RTC (AT mode)
Operating Temperature		-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C

*Populated by default

COME Type 6



Wide Temp
CM238/QM175



Wide Temp
HM175

Model Name		KH960-CM238/QM175	KH960-HM175
Compliance		COM Express® R2.1 Basic, Type 6	COM Express® R2.1 Basic, Type 6
System	Processor	7th Gen Intel® Core™	7th Gen Intel® Core™
	Socket	BGA 1440	BGA 1440
	Max. Speed	2.1~4.0GHz	2.1~3.7GHz
	TDP	25W/35W/45W	25W/35W/45W
	Cache	3M/6M/8M	3M/6M/8M
	Chipset	Intel® CM238/QM175	Intel® HM175
Memory	BIOS	Insyde SPI 128Mbit	Insyde SPI 128Mbit
	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 2400MHz
	Max. Capacity	32GB	32GB
Graphics	Socket	2 SODIMM	2 SODIMM
	Interface	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI
Expansion	PCIe	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1
	PCI	-	-
	LPC	1	1
	I ² C	1	1
	SMBus	1	1
	CAN Bus	-	-
Audio	Interface	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I219	1 Intel® I219
I/O	USB	4 USB 3.0, 8 USB 2.0	4 USB 3.0, 8 USB 2.0
	SATA	4 SATA 3.0 (RAID)	4 SATA 3.0
	IDE	-	-
	SSD	-	-
	eMMC	-	-
	DIO	8-bit DIO	8-bit DIO
	SD	-	-
TPM		optional	optional
iAMT		iAMT 11.0 (Core i7/i5)	-
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
Operating Temperature		-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C



Wide Temp
HM170



Wide Temp
CM236/QM170



Wide Temp
CM236/QM170

COME Type 6

Model Name		SH960-HM170	SH960-CM236/QM170	SH960MD-CM236/QM170
Compliance		COM Express® R2.1 Basic, Type 6	COM Express® R2.1 Basic, Type 6	COM Express® R2.1 Basic, Type 6
System	Processor	6th Gen Intel® Core™	6th Gen Intel® Core™	6th Gen Intel® Core™
	Socket	BGA 1440	BGA 1440	BGA 1440
	Max. Speed	1.6~3.5GHz	1.6~3.7GHz	1.9~3.5GHz
	TDP	25W/35W/45W	25W/35W/45W	25W/35W/45W
	Cache	2M/3M/6M/8M	2M/3M/6M/8M	2M/3M/6M/8M
	Chipset	Intel® HM170	Intel® CM236/QM170	Intel® CM236/QM170
Memory	BIOS	Insyde SPI 128Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit
	Technology	Dual Channel DDR4 2133MHz	Dual Channel DDR4 2133MHz	Dual Channel DDR4 2400MHz
	Max. Capacity	32GB	32GB	16GB
Graphics	Socket	2 SODIMM	2 SODIMM	Memory down
	Interface	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI
Expansion	PCIe	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1
	PCI	-	-	-
	LPC	1	1	1
	I ² C	1	1	1
	SMBus	1	1	1
	CAN Bus	-	-	-
Audio	Interface	HD Audio	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I219	1 Intel® I219	1 Intel® I210
I/O	USB	4 USB 3.0, 8 USB 2.0	4 USB 3.0, 8 USB 2.0	4 USB 3.1, 8 USB 2.0
	SATA	4 SATA 3.0	4 SATA 3.0 (RAID)	4 SATA 3.0 (RAID)
	IDE	-	-	-
	SSD	-	-	-
	eMMC	-	-	-
	DIO	8-bit DIO	8-bit DIO	8-bit DIO
	SD	-	-	-
TPM		optional	optional	optional
iAMT		iAMT 11.0	iAMT 11.0	-
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
Operating Temperature		-40°C~85°C, 0°C~60°C	-40°C~85°C, 0°C~60°C	-40°C~85°C

*Populated by default

COMe Type 6



QM87



QM87

Model Name		HM960-QM87	HM961-QM87
Compliance		COM Express® R2.1 Basic, Type 6	COM Express® R2.1 Basic, Type 6
System	Processor	4th Gen Intel® Core™	4th Gen Intel® Core™
	Socket	BGA 1364	BGA 1364
	Max. Speed	1.6~3.4GHz	1.6~3.4GHz
	TDP	25W/37W/47W	25W/37W/47W
	Cache	3M/6M	3M/6M
	Chipset	Intel® QM87	Intel® QM87
Memory	BIOS	AMI SPI 64Mbit	AMI SPI 64Mbit
	Technology	Dual Channel DDR3L 1333/1600MHz	Dual Channel DDR3L 1333/1600MHz
	Max. Capacity	16GB	16GB
Graphics	Socket	2 SODIMM	2 ECC SODIMM
	Interface	1 VGA, 1 LVDS, 3 DDI	1 VGA, 1 LVDS, 3 DDI
Expansion	PCIe	1 PCIe x16, 7 PCIe x1	1 PCIe x16, 7 PCIe x1
	PCI	-	-
	LPC	1	1
	I²C	1	1
	SMBus	1	1
	CAN Bus	-	-
Audio	Interface	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I217	1 Intel® I217
I/O	USB	4 USB 3.0, 8 USB 2.0	4 USB 3.0, 8 USB 2.0
	SATA	4 SATA 3.0 (RAID)	4 SATA 3.0 (RAID)
	IDE	-	-
	SSD	optional	optional
	eMMC	-	-
	DIO	8-bit DIO	8-bit DIO
	SD	-	-
TPM		optional	optional
iAMT		iAMT 9.0	iAMT 9.0
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
Operating Temperature		0°C~60°C	0°C~60°C



HM86



HM86

COMe Type 6

Model Name		HM960-HM86	HM961-HM86
Compliance		COM Express® R2.1 Basic, Type 6	COM Express® R2.1 Basic, Type 6
System	Processor	4th Gen Intel® Core™	4th Gen Intel® Core™
	Socket	BGA 1364	BGA 1364
	Max. Speed	1.6~3.4GHz	1.6~3.4GHz
	TDP	25W/37W/47W	25W/37W/47W
	Cache	3M/6M	3M/6M
	Chipset	Intel® HM86	Intel® HM86
Memory	BIOS	AMI SPI 64Mbit	AMI SPI 64Mbit
	Technology	Dual Channel DDR3L 1333/1600MHz	Dual Channel DDR3L 1333/1600MHz
	Max. Capacity	16GB	16GB
Graphics	Socket	2 SODIMM	2 ECC SODIMM
	Interface	1 VGA, 1 LVDS, 3 DDI	1 VGA, 1 LVDS, 3 DDI
Expansion	PCIe	1 PCIe x16, 7 PCIe x1	1 PCIe x16, 7 PCIe x1
	PCI	-	-
	LPC	1	1
	I²C	1	1
	SMBus	1	1
	CAN Bus	-	-
Audio	Interface	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I217	1 Intel® I217
I/O	USB	2 USB 3.0, 8 USB 2.0	2 USB 3.0, 8 USB 2.0
	SATA	2 SATA 3.0, 2 SATA 2.0	2 SATA 3.0, 2 SATA 2.0
	IDE	-	-
	SSD	optional	optional
	eMMC	-	-
	DIO	8-bit DIO	8-bit DIO
	SD	-	-
TPM		optional	optional
iAMT		-	-
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
Operating Temperature		0°C~60°C	0°C~60°C

*Populated by default

COMe Type 6



Wide Temp
AMD



AMD

Model Name		GH960	BE960
Compliance		COM Express® R3.0 Basic, Type 6	COM Express® R2.1 Basic, Type 6
System	Processor	AMD® Ryzen™ V1000/R1000 Embedded Processors	2nd Gen AMD® Embedded R-Series
	Socket	FP5 BGA	FP3 BGA
	Max. Speed	2~3.8GHz	2.5~3.6GHz
	TDP	12/54W	35W
	Cache	4/8M	4M
	Chipset	-	AMD® A77E
BIOS		Insyde SPI 64Mbit	AMI SPI 64Mbit
Memory	Technology	Dual Channel DDR4 up to 2400/3200MHz	Dual Channel DDR3L 1866MHz
	Max. Capacity	32GB	16GB
	Socket	2 SODIMM	2 SODIMM
Graphics	Interface	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI	1 VGA*/DDI, 1 LVDS*/eDP, 2 DDI
Expansion	PCIe	1 PCIe x16 / 2 PCIe x8, 8 PCIe x1	1 PCIe x16, 7 PCIe x1
	PCI	-	-
	LPC	1	1
	I ² C	1	1
	SMBus	1	1
	CAN Bus	-	-
Audio	Interface	HD Audio	HD Audio
Ethernet	Controller	1 Intel® I210	1 Intel® I210
I/O	USB	4 USB 3.1, 8 USB 2.0	4 USB 3.0, 8 USB 2.0
	SATA	4 SATA 3.0 (RAID)	4 SATA 3.0
	IDE	-	-
	SSD	-	-
	eMMC	-	-
	DIO	8-bit DIO	8-bit DIO
	SD	-	-
TPM		optional	optional
iAMT		-	-
Power		12V, 5VSB, VCC_RTC (ATX mode), 12V, VCC_RTC (AT mode)	12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
Operating Temperature		-40~85°C, 0~60°C	0°C~60°C



QM87/HM86

COMe Type 2

Model Name		HM920-QM87/HM86
Compliance		COM Express® R2.1 Basic, Type 2
System	Processor	4th Gen Intel® Core™
	Socket	BGA 1364
	Max. Speed	1.5~3.4GHz
	TDP	25W/37W/47W
	Cache	2M/3M/6M
	Chipset	Intel® QM87/Intel® HM86
BIOS		AMI SPI 64Mbit
Memory	Technology	Dual Channel DDR3L 1333/1600MHz
	Max. Capacity	16GB
	Socket	2 SODIMM
Graphics	Interface	1 VGA, 1 LVDS
Expansion	PCIe	1 PCIe x16, 5 PCIe x1
	PCI	4
	LPC	1
	I ² C	1
	SMBus	1
	CAN Bus	-
Audio	Interface	HD Audio
Ethernet	Controller	1 Intel® I217
I/O	USB	8 USB 2.0
	SATA	4 SATA 3.0 (RAID)
	IDE	1
	SSD	optional
	eMMC	-
	DIO	8-bit DIO
	SD	-
TPM		optional
iAMT		iAMT 9.0 (QM87)
Power		12V, 5VSB, VCC_RTC (ATX mode) 12V, VCC_RTC (AT mode)
Operating Temperature		0°C~60°C

*Populated by default

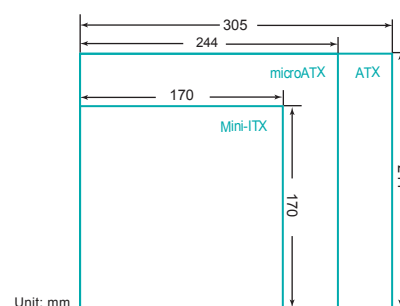
Carrier Board

Compatible with a Wide Range of Modules



Features

Our carrier board (also known as base board or evaluation board) offers a flexible engineering development environment for COM Express Type 10, Type 7, Type 6, Type 2, Qseven and SMARC to help our customers minimize installation requirements while reducing design time and cost.



Type 7



Type 10



Model Name		COM333-I	COM100-B
Compliance		COM Express® R3.0, Type 7	COM Express® R2.1, Type 10
Form Factor		microATX (244 x 244 mm)	Mini-ITX (170 x 170 mm)
Graphics	Connector	1 VGA via BMC	1 LVDS, 1 DP
Expansion	PCIe, PCI	2 x PCIe x4/ 1 x PCIe x8	1 PCIe x1
	Mini PCIe, M.2	-	3 Mini PCIe
	SIM	-	1
Audio	Audio Codec	-	Realtek ALC886
Rear I/O	Ethernet (GbE)	2 GbE, 4 10Gbase-KR(2 RJ45, 2 SFP+)	1
	Serial	-	2 RS-232
	USB	4 USB 3.0/2.0	2 USB 3.0, 4 USB 2.0
	Display	-	1 DP
	Audio	-	Mic-in, Line-in, Line-out
	PS/2	-	-
Internal I/O	Serial	1 (TX/RX)	2 (TX/RX)
	USB	-	-
	Display	-	1 LVDS
	Audio	-	Front Audio, S/PDIF
	SATA	2 SATA 3.0	1 SATA 3.0
	DIO	8-bit DIO	8-bit DIO
	LPC	1	1
	SMBus	1	1
	I ² C	1	1
Power		4-pin ATX 12V, 24-pin ATX	5-19V DC-in
Operating Temperature		0°C~60°C	0°C~60°C

*Populated by default

Type 6



Type 6



Model Name		COM332-B(R.A)	COM332-B(R.B1)
Compliance		COM Express® R2.1, Type 6	COM Express® R2.1, Type 6
Form Factor		microATX (244 x 244 mm)	microATX (244 x 244 mm)
Graphics	Connector	1 VGA 1 LVDS*/eDP., 3 DP, 1 eDP*/LVDS	1 VGA 1 LVDS*/eDP., 3 DP, 1 eDP*/LVDS
Expansion	PCIe, PCI	1 PCIe x16, 6 PCIe x1	1 PCIe x16, 4 PCIe x1
	Mini PCIe, M.2	2 Mini PCIe	1 M.2
	SIM	-	-
Audio	Audio Codec	Realtek ALC888	Realtek ALC888
Rear I/O	Ethernet (GbE)	1	1
	Serial	-	-
	USB	4 USB 3.0, 4 USB 2.0	4 USB 3.1, 4 USB 2.0
	Display	3 DP	3 DP
	Audio	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out
	PS/2	-	-
Internal I/O	Serial	2 (TX/RX)	2 (TX/RX)
	USB	-	-
	Display	1 VGA, 1 LVDS, 1 eDP	1 VGA, 1 LVDS, 1 eDP
	Audio	Front Audio, S/PDIF	Front Audio, S/PDIF
	SATA	4 SATA 3.0	4 SATA 3.0
	DIO	8-bit DIO	8-bit DIO
	LPC	1	1
	SMBus	1	1
Power	i²C	-	-
		4-pin ATX 12V, 24-pin ATX	4-pin ATX 12V, 24-pin ATX
Operating Temperature		0°C~60°C	0°C~60°C

Type 2



SMARC



Wide Temp

Model Name		COM630-B	CAR-SMARC
Compliance		COM Express® R1.0, Type 2	F8S00
Form Factor		ATX (305 x 244 mm)	Mini-ITX (170 x 170 mm)
Graphics	Connector	1 VGA, 1 LVDS	1 LVDS, 2 eDP, 1 HDMI/DP, 1 DP
Expansion	PCIe, PCI	1 PCIe x16, 2 PCIe x1, 4 PCI	2 PCIe x1
	Mini PCIe	-	2 Mini PCIe, 1 mSATA
	SIM	-	-
Audio	Audio Codec	Realtek ALC262	I²S
Rear I/O	Ethernet (GbE)	1	2
	Serial	3	4 UART (2 TX/RX, 2 Tx/Rx/RTS/CTS)
	USB	4 USB 2.0	2 USB 3.0, 2 USB 2.0, 1 USB 2.0 OTG, 1 USB 3.0 OTG
	Display	1 VGA	1 DP, 1 DP/HDMI
	Audio	Mic-in, Line-in, Line-out	1 Line-out, 1 Mic-in
	PS/2	2	-
Internal I/O	Serial	1	4 UART (2 TX/RX, 2 Tx/Rx/RTS/CTS)
	USB	4 USB 2.0	2 USB 2.0
	Display	1 LVDS	2 eDP, 1LVDS
	Audio	Front Audio, S/PDIF	1 Speaker
	SATA	4 SATA 2.0	-
	DIO	8-bit DIO	12-bit DIO
	LPC	-	-
	SMBus	-	-
Power	i²C	-	1
	CAN Bus	-	2
Power		24-pin ATX	12V DC-in
Operating Temperature		0°C~60°C	-40°C~85°C

*Populated by default



Q7

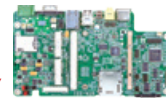


Q7

Model Name		Q7X-151(R.A)	Q7X-151(R.D1)
Compliance		BT700	AL700 / AL701 / BT701
Form Factor		Mini-ITX (170 x 170 mm)	Mini-ITX (170 x 170 mm)
Graphics	Connector	1 LVDS, 1 DP	1 LVDS, 2 DP, 1 eDP
Expansion	PCIe, PCI	1 PCIe x4	2 PCIe
	Mini PCIe	-	2 Mini PCIe
	SIM	-	-
Audio	Audio Codec	Realtek ALC886	Realtek ALC886
Rear I/O	Ethernet (GbE)	1	1
	Serial	2 RS-232	2 RS-232
	USB	1 USB 3.0, 2 USB 2.0	3 USB 3.0, 6 USB 2.0
	Display	1 DP	1 DP
	Audio	Mic-in, Line-in, Line-out	Mic-in, Line-in, Line-out
	PS/2	-	-
Internal I/O	Serial	1 (TX/RX)	1 (TX/RX)
	USB	4 USB 2.0 (optional)	2 USB 2.0 (optional)
	Display	1 LVDS	1 LVDS
	Audio	-	-
	SATA	2 SATA 3.0	2 SATA 3.0
	DIO	-	-
	LPC	1	1
	SMBus	1	1
	I ² C	1	1
	CAN Bus	1	1
Power		12V DC-in	12V DC-in
Operating Temperature		0°C~60°C	0°C~60°C



Q7



Q7

Model Name		Q7A-151	Q7A-551
Compliance		F8700	FS700
Form Factor		Mini-ITX (170 x 170 mm)	Proprietary (190 x 102 mm)
Graphics	Connector	1 LVDS, 1 HDMI	1 HDMI, 1 LVDS
Expansion	PCIe, PCI	2 PCIe x1	-
	Mini PCIe	2 Mini PCIe	1 Mini PCIe
	SIM	-	1
Audio	Audio Codec	I ² S	I ² S
Rear I/O	Ethernet (GbE)	1	1
	Serial	-	1 RS-232/422/485, 1 RS232/UART
	USB	3 USB 3.0, 1 USB 2.0, 1 Micro USB	2 USB 2.0, 1 USB Client
	Display	1 HDMI	1 HDMI
	Audio	Line-out, Mic-in	Line-out / Mic-in
	PS/2	-	-
Internal I/O	Serial	1 UART	1 RS-232/422/485
	USB	-	-
	Display	1 LVDS	1 LVDS
	Audio	-	-
	SATA	2	-
	DIO	8-bit DIO	12-bit DIO
	LPC	-	-
	SMBus	1	-
	I ² C	1	-
	CAN Bus	1	1
Power		12V DC-in	12~36V DC-in
Operating Temperature		0°C~60°C	0°C~60°C

*Populated by default

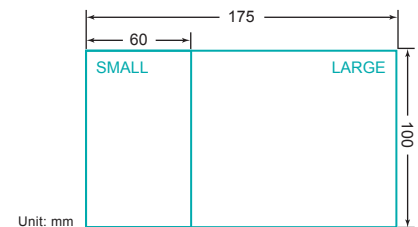
SDM

Compact & Smart Retail Signage Solutions



Features

Intel® Smart Display Module is for next generation commercial AIO displays and visual IoT devices. Intel® SDM provides the primary compute building block and requires an interface board on the displays or host system to complete platform implementation and provide standard end user physical interfaces.



Large Size: 175mm x 100mm
Small Size: 60mm x 100mm



Model Name		SDML-WL
Compliance		SDM Large
System	Processor	8th Gen Intel® Core™
	Socket	FCBGA 1528
	Max. Speed	1.7~4.4GHz
	TDP	15W
	Cache	2M/4M/6M/8M
	Chipset	-
Memory	BIOS	AMI SPI 128Mbit
	Technology	Dual Channel DDR4 2400MHz
	Max. Capacity	32GB
	Socket	2 SODIMM
Graphics	Interface	1 DP, 2 HDMI
Expansion	PCIe	1 PCIe x1 for docking, 1 PCIe x4 for M.2 M Key, 1 PCIe x1 for M.2 B Key, 1 PCIe x1 for M.2 E Key
	PCI	-
	LPC	-
	i²C	1 i²C master, 1 i²C slaver (for docking)
	SMBus	-
	CAN Bus	-
Audio	Interface	HD Audio
Ethernet	Controller	1 Intel® I219
I/O	USB	4 USB 3.1 (Type A), 1 USB 3.1 (Type C)
	SATA	-
	IDE	-
	SSD	-
	eMMC	-
	DIO	-
	SD	-
TPM		Option
iAMT		iAMT 12.0 (Core i7/i5)
Power		12V DC-in
Operating Temperature		0°C~60°C

*Populated by default



Headquarters DFI Inc.

10F, No.97, Sec.1, Xintai 5th Rd.
Xizhi Dist., New Taipei City 22175
Taiwan (R.O.C.)
Tel: +886 (2) 2697-2986
Fax: +886 (2) 2697-2168
www.dfi.com
estore.dfi.com

DFI AMERICA, LLC.

15 Corporate Place South, Suite 201
Piscataway, NJ 08854, U.S.A.
Tel: +1 (732) 390-2815
Fax: +1 (732) 562-0693
us.dfi.com
www.dfi-itox.com/estore

DFI Co., Ltd.

5F Dai2 Denpa Bldg. 2-14-10 Sotokanda
Chiyoda-ku, Tokyo, 101-0021, Japan
Tel: +81 (3) 5209-1081
Fax: +81 (3) 5209-1082
www.dfi.com

Diamond Flower Information (NL) B.V.

Klompemakerstraat 89, 3194 DD
Rotterdam Hoogvliet, The Netherlands
Tel: +31 (10) 313-4100
Fax: +31 (10) 313-4101
www.dfi.com

Yan Ying Hao Trading Co., Ltd. (Shenzhen)

303, No. 29, Xincun, Yanglong, Gaofeng
Community, Dalang Sub-District, Longhua
District, Shenzhen City, China
Tel: +86 (0755) 2372-9390/2372-9391
Fax: +86 (0755) 2372-4065
www.dfi.com

Value-Added Services



eStore

Easy / Fast / Convenient

Provides you around-the-clock services worldwide



Online Technical Service

Real-Time / Professional / 24/7

Resolves your technical questions on the spot

