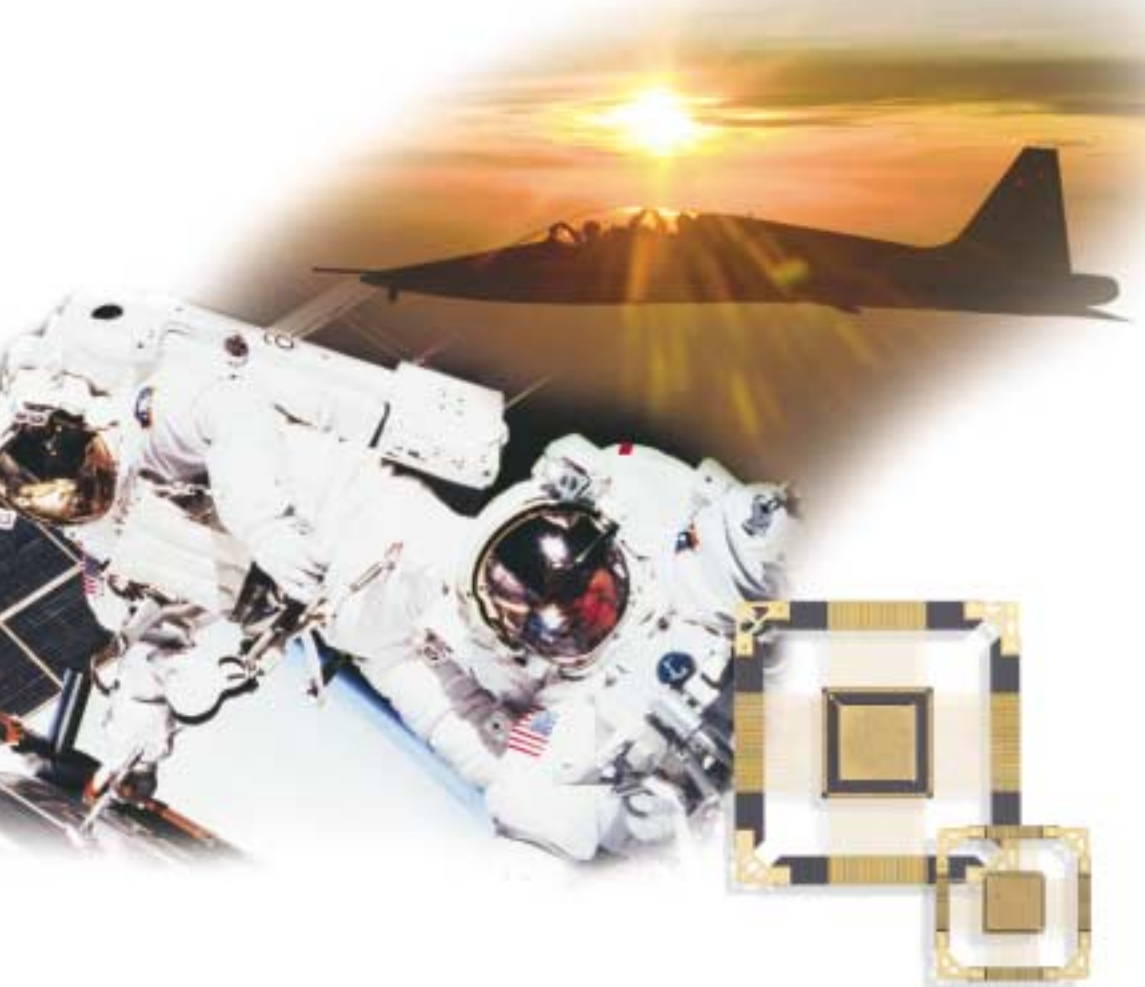


Actel Military/Aerospace Selector Guide



September 2002



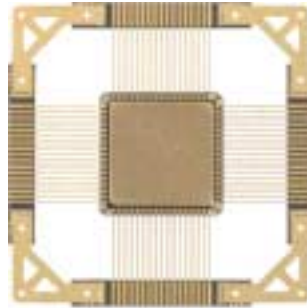
Mil/Avionics and SpaceProducts

Mil/Avionics and SpaceProducts		Military and Avionics														RadHard				RadTolerant						
		A1010B	A1020B	A1240A	A1280A	A1280XL	A1425A	A1460A	A14100A	A32100DX	A32200DX	A42MX36	A54SX16	A54SX32	A54SX32A	A54SX72A	RH1020	RH1280	RT1020	RT1280A	RT1425A	RT1460A	RT14100A	RT54SX16	RT54SX32S	RT54SX72S
Package	Pins																									
CPGA*	84	57	69																							
CPGA*	132			104																						
CPGA*	176				140	140																				
CPGA*	207							168																		
CPGA*	257								228																	
CQFP	84		69							60							69		69							
CQFP	132						100														100					
CQFP	172				140	140												140		140						
CQFP	196							168														168				
CQFP	208									202	202	180	228	228	212									179	227	212
CQFP	256								228		202	202	180	228	228	212							228	179	227	212

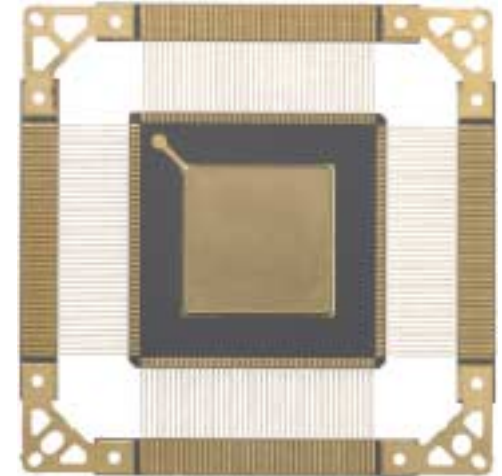
* CPGA packages not shown

Chips shown at actual size. CPGAs not shown.**CQ84**

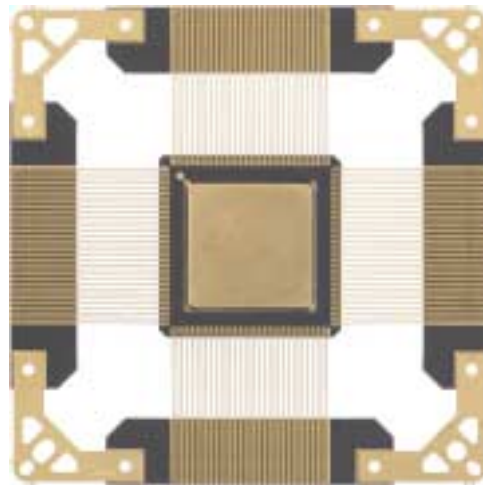
p.s. 1.6 x 1.6"
(40.64 x 40.64mm)
h. 90 mils (2.29mm)
p. 25 mils (0.64mm)

**CQ196**

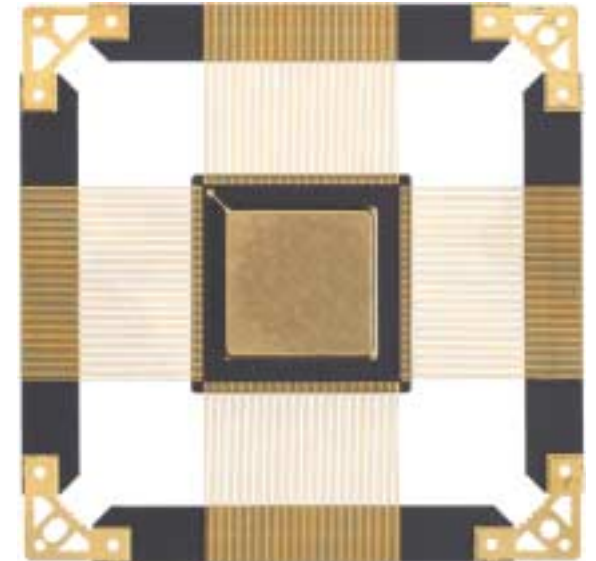
p.s. 2.5 x 2.5"
(63.37 x 63.37mm)
h. 105 mils (2.67mm)
p. 25 mils (0.64mm)

**CQ132**

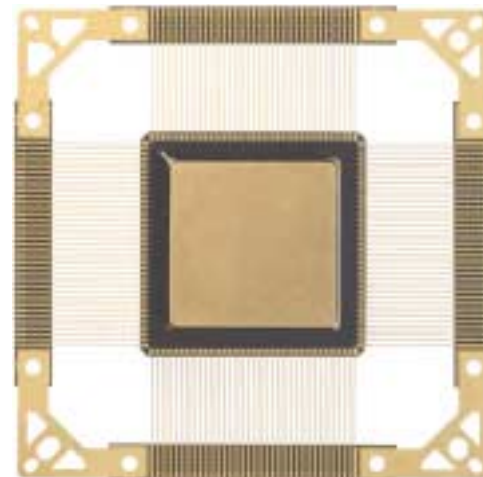
p.s. 2.5 x 2.5"
(63.5 x 63.5mm)
h. 105 mils (2.67mm)
p. 25 mils (0.64mm)

**CQ208**

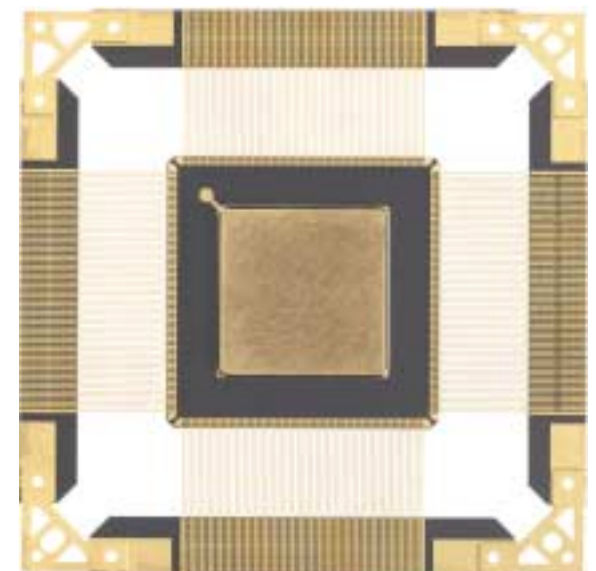
p.s. 2.95 x 2.95"
(75.00 x 75.00mm)
h. 105 mils (2.67mm)
p. 20 mils (0.50mm)

**CQ172**

p.s. 2.5 x 2.5"
(63.37 x 63.37mm)
h. 105 mils (2.67mm)
p. 25 mils (0.64mm)

**CQ256**

p.s. 2.95 x 2.95"
(75.00 x 75.00mm)
h. 105 mils (2.67mm)
p. 20 mils (0.50mm)



Actel Military/
Aerospace Device
Selector Guide

		Typical Gates	ASIC Gates	Logic Modules	Dedicated Flip- Flops	Max Flips- Flops	Max I/O Available	DSCC SMD	3.3V CMOS Drive	5V CMOS Drive	5V Tolerant Inputs	3.3V PCI I/O	5V PCI I/O	Slew Rate Control	Routed Clocks	Hard- wired Clocks	JTAG	33MHz PCI	TID KRad(Si)	SEL (LET)	SEU (LET)	Temp/ Screening	Speed Grades
Military and Avionics	A1010B	2,000	1,000	295	0	147	57	Yes		Yes	Yes				1							C, M, B	Std, -1
	A1020B	4,000	2,000	547	0	273	69	Yes		Yes	Yes				1							C, M, B	Std, -1
	A1240A	8,000	4,000	684	348	566	104	Yes		Yes	Yes				2							C, M, B	Std, -1
	A1280A	16,000	8,000	1,232	624	928	140	Yes		Yes	Yes				2							C, M, B	Std, -1
	A1280XL	16,000	8,000	1,232	624	928	140	Yes		Yes	Yes				2							C, M, B	Std, -1
	A1425A	5,000	2,500	310	160	235	100	Yes		Yes	Yes				2	2						C, M, B	Std, -1
	A1460A	12,000	6,000	848	432	640	168	Yes		Yes	Yes				2	2						C, M, B	Std, -1
	A14100A	20,000	10,000	1,377	697	1,037	228	Yes		Yes	Yes				2	2						C, M, B	Std, -1
	A32100DX	20,000	10,000	1,382	700	1,031	152	Yes		Yes	Yes				2		Yes					C, M, B	Std, -1
	A32200DX	40,000	20,000	2,438	1,230	1,822	202	Yes		Yes	Yes				6		Yes					C, M, B	Std, -1
	A42MX36	36,000	18,000	2,438	1,230	1,822	202	Yes	Yes	Yes	Yes				6		Yes					C, M, B	Std, -1
	A54SX16	16,000	8,000	1,452	528	990	179	Yes	Yes		Yes				2	1	Yes					C, M, B	Std, -1
	A54SX32	32,000	16,000	2,880	1,080	1,980	228	Yes	Yes		Yes				2	1	Yes					C, M, B	Std, -1
	A54SX32A	32,000	16,000	2,880	1,080	1,980	228	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2	1	Yes	Yes				C, M, B	Std, -1
	A54SX72A	72,000	36,000	6,036	2,012	4,024	213	Yes	Yes	Yes	Yes	Yes	Yes	Yes	6	1	Yes	Yes				C, M, B	Std, -1
RadHard	RH1020	4,000	2,000	547	0	273	69	Yes		Yes	Yes				1				300	>84	8	QML V/Q	Std
	RH1280	16,000	8,000	1,232	624	928	140	Yes		Yes	Yes				2				300	>120	4 S-mod, 17 C-mod	QML V/Q	Std
RadTolerant	RT1020	4,000	2,000	547	0	273	69			Yes	Yes				1				100	>84	8	B, E-Flow	Std
	RT1280A	16,000	8,000	1,232	624	928	140			Yes	Yes				2				7 to 60	>120	5 S-mod, 26 C-mod	B, E-Flow	Std, -1
	RT1425A	5,000	2,500	310	160	235	100			Yes	Yes				2	2			20-70	>110	5 S-mod, 28 C-mod	B, E-Flow	Std, -1
	RT1460A	12,000	6,000	848	432	640	168			Yes	Yes				2	2			20-70	>110	5 S-mod, 28 C-mod	B, E-Flow	Std, -1
	RT14100A	20,000	10,000	1,377	697	1,037	228			Yes	Yes				2	2			20-70	>110	5 S-mod, 28 C-mod	B, E-Flow	Std, -1
	RT54SX16	16,000	8,000	1,452	528	990	179	Yes	Yes		Yes				2	1	Yes		80-135	>120	17	B, E-Flow	Std, -1
	RT54SX32S	32,000	16,000	2,880	1,080	1,980	227	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2	1	Yes	Yes	80-135	>100	>50	B, E-Flow	Std, -1
	RT54SX72S	72,000	36,000	6,036	2,012	4,024	212	Yes	Yes	Yes	Yes	Yes	Yes	Yes	6	1	Yes	Yes	80-135	>100	>50	B, E-Flow	Std, -1

For Military and Industrial temperature products, refer to “Actel FPGA and Package Selector Guide” (5172039-11)

Actel Cage Code: 0J4Z0		Device	DSCC SMD	
Device Name	Device Family	Process Level	Gold Finished Lead	Solder Finished Lead
RH1280-CQ172V	RadHard	class VQ	5962F9215603QYC	—
RH1020-CQ84V		class VQ	5962F9096505QTC	—
A1010B-PG84B	A1010B	class B	5962-9096403MXC	5962-9096403MXA
A1010B-1PG84B		class B	5962-9096404MXC	5962-9096404MXA
A1020B-PG84B	A1020B	class B	5962-9096503MUC	5962-9096503MUA
A1020B-1PG84B		class B	5962-9096504MUC	5962-9096504MUA
A1020B-CQ84B		class B	5962-9096503MTC	5962-9096503MTA
A1020B-1CQ84B		class B	5962-9096504MTC	5962-9096504MTA
A1240A-PG132B	A1240A	class B	5962-9322101MXC	5962-9322101MXA
A1240A-1PG132B		class B	5962-9322102MXC	5962-9322102MXA
A1280A-PG176B	A1280A	class B	5962-9215601MXC	5962-9215601MXA
A1280A-1PG176B		class B	5962-9215602MXC	5962-9215602MXA
A1280A-CQ172B		class B	5962-9215601MYC	5962-9215601MYA
A1280A-1CQ172B		class B	5962-9215602MYC	5962-9215602MYA
A1425A-CQ132B	A1425A	class B	5962-9552001MYC	—
A1425A-1CQ132B		class B	5962-9552002MYC	—
A1460A-PG207B	A1460A	class B	5962-9550801MXC	—
A1460A-1PG207B		class B	5962-9550802MXC	—
A1460A-CQ196B		class B	5962-9550801MYC	—
A1460A-1CQ196B		class B	5962-9550802MYC	—
A14100A-PG257B	A14100A	class B	5962-9552101MXC	—
A14100A-1PG257B		class B	5962-9552102MXC	—
A14100A-CQ256B		class B	5962-9552101MYC	—
A14100A-1CQ256B		class B	5962-9552102MYC	—
A1280XL-PG176B	A1200XL	class B	5962-9215604QXC	—
A1280XL-1PG176B		class B	5962-9215605QXC	—
A1280XL-CQ172B		class B	5962-9215604QYC	—
A1280XL-1CQ172B		class B	5962-9215605QYC	—
A32100DX-CQ84B	A32100DX	class B	5962-9857901QXC	—
A32100DX-1CQ84B		class B	5962-9857902QXC	—
A32200DX-CQ256B	A32200DX	class B	5962-9952701QXC	—
A32200DX-1CQ256B		class B	5962-9952702QXC	—
A32200DX-CQ208B		class B	5962-9952701QYC	—
A32200DX-1CQ208B		class B	5962-9952702QYC	—
A42MX36-CQ256B	A42MX36	class B	5962-9958501QXC	—
A42MX36-1CQ256B		class B	5962-9958502QXC	—
A42MX36-CQ208B		class B	5962-9958501QYC	—
A42MX36-1CQ208B		class B	5962-9958502QYC	—

Actel Cage Code: 0J4Z0		Device	DSCC SMD	
Device Name	Device Family	Process Level	Gold Finished Lead	Solder Finished Lead
A54SX16-CQ256B	A54SX16	class B	5962-9956903QXC	—
A54SX16-1CQ256B		class B	5962-9956904QXC	—
A54SX16-CQ208B		class B	5962-9956903QYC	—
A54SX16-1CQ208B		class B	5962-9956904QYC	—
A54SX32-CQ256B	A54SX32	class B	5962-9958601QXC	—
A54SX32-1CQ256B		class B	5962-9958602QXC	—
A54SX32-CQ208B		class B	5962-9958601QYC	—
A54SX32-1CQ208B		class B	5962-9958602QYC	—
A54SX32A-CQ256B	A54SX32A	class B	5962-0151801QXC	—
A54SX32A-1CQ256B		class B	5962-0151802QXC	—
A54SX32A-CQ208B		class B	5962-0151801QYC	—
A54SX32A-1CQ208B		class B	5962-0151802QYC	—
A54SX72A-CQ256B	A54SX72A	class B	5962-0054301QXC	—
A54SX72A-1CQ256B		class B	5962-0054302QXC	—
A54SX72A-CQ208B		class B	5962-0054301QYC	—
A54SX72A-1CQ208B		class B	5962-0055302QYC	—
RT54SX16-CQ256B	RT54SX16	class B	5962-9956901QXC	—
RT54SX16-1CQ256B		class B	5962-9956902QXC	—
RT54SX16-CQ208B		class B	5962-9956901QYC	—
RT54SX16-1CQ208B		class B	5962-9956902QYC	—
RT54SX32S-CQ256B	RT54SX32S	class B	5962-0150801QXC	—
RT54SX32S-1CQ256B		class B	5962-0150802QXC	—
RT54SX32S-CQ208B		class B	5962-0150801QYC	—
RT54SX32S-1CQ208B		class B	5962-0150802QYC	—
RT54SX32S-CQ256E		E-flow	5962-0150803QXC	—
RT54SX32S-1CQ256E		E-flow	5962-0150804QXC	—
RT54SX32S-CQ208E		E-flow	5962-0150803QYC	—
RT54SX32S-1CQ208E		E-flow	5962-0150804QYC	—
RT54SX72S-CQ256B	RT54SX72S	class B	5962-0151501QXC	—
RT54SX72S-1CQ256B		class B	5962-0151502QXC	—
RT54SX72S-CQ208B		class B	5962-0151501QYC	—
RT54SX72S-1CQ208B		class B	5962-0151502QYC	—
RT54SX72S-CQ256E		E-flow	5962-0151503QXC	—
RT54SX72S-1CQ256E		E-flow	5962-0151504QXC	—
RT54SX72S-CQ208E		E-flow	5962-0151503QYC	—
RT54SX72S-1CQ208E		E-flow	5962-0151504QYC	—

For more information regarding the Actel's Aerospace Devices, please contact your local Actel sales representative.



Actel Corporation
 955 East Arques Avenue
 Sunnyvale, CA USA 94086
 Telephone 408.739.1010
 Facsimile 408.739.1540

Actel Europe Ltd.
 Maxfli Court, Riverside Way
 Camberley, Surrey GU15 3YL
 United Kingdom
 Telephone +44 0 1276.401450
 Facsimile +44 0 1276.401490

Actel Japan
 EXOS Ebisu Building 4F
 1-24-14 Ebisu Shibuya-ku
 Tokyo 150, Japan
 Telephone +81 0 3.3445.7671
 Facsimile +81 0 3.3445.7668