

Product line

ATG and BSCAN Product Catalog

This product catalog presents a general overview of all PLD ATG, Boundary Scan products available from ACUGEN Software, Inc.. Each product listing includes a brief description but for more detailed information refer to the specific Product Description for each product. These product descriptions are available at <http://www.acugen.com> and via fax and paper on request. When purchasing product from ACUGEN, users should contact an ACUGEN® sales person for current pricing, terms and conditions and licensing information.

ACUGEN Software has long led the market in test generation solutions for programmable devices and continues to support customers as they strive to meet newer challenges in testing these parts. If you want assistance in choosing the best configuration for your company's ATG needs please call us at (603) 881-8821 or email acugen@acugen.com today. Thanks for your interest in our ATGEN® product line.

.....VECTOR GENERATORS and TESTABILITY ANALYZERS.....

INSIDE:

Device support-
Sim models
Translators

S75 Hierarchial ATGEN Test Generator

Full functional test generator, hierarchial vector sets, 5x faster than S55, four ATG algorithms, true min-max simulator, 1 million gate/10 million vector capacity, engine only. PLD, CPLD & FPGA device support purchased separately.

S55 Premium ATGEN Test Generator

Full functional test generator, flat vector sets, four ATG algorithms, engine only. PLD, CPLD & FPGA device support purchased separately.

S25 FASTpass™ ATGEN Test Generator

Fast, effective low-cost test generator, two ATG algorithms, engine only. PLD, CPLD & FPGA device support purchased separately.

S2020 SHARPEYE™ Testability Analyzer

Analyzes digital logic designs and reports testability problem in easy-to-read format. Includes all JEDEC and FPGA models. Stan-

dalone.

ES2020 SHARPEYE Testability Analyzer

Analyzes digital logic designs and reports testability problem in easy-to-read format. Add-on to ATGEN base product.

S34 PROGBSDL™ BSDL Customizer

Modifies BSDL to match socket on board. Accepts manually specified customization instructions or will automatically extract the device footprint from FPGA design files. Standalone.

S36 TESTBSDL™ BSDL ATG

Generates high coverage pin fault tests for boundary scan devices. Useful for BSDL verification and In-Circuit Board Test. Standalone. Translators to Verilog, VHDL, board testers and component testers are available but sold separately.

S37 MODBSDL™ BSDL Modeler

Reads BSDL files to create an ACUGEN simu-

lation model. Used in conjunction with model generators to produce simulation models for other simulators such as Verilog, HILO and LASAR. Simulation is beneficial for verification, board-level simulation, and fault grading. Standalone.

S38 AACDB™ Cluster Test ATG

Reads board netlist and cluster definition in Victory format, generates vectors, fault grades, and produces a fault dictionary. Automates test and diagnostics generation for multidevice clusters for Victory users (including Acculogic, Asset Intertech, and Intellitech users). Requires S55 or S75 ATGEN package, models and vector translator.

S39 AASERVER™ Job Stream Manager

Client/server enables sharing of an ATGEN installation over a network. Add-on to ATGEN base product.

S4 PROMATG™ Test Generator

Generates tests for PROMs, EPROMs and EEPROMs. Standalone.

S5 AADELAY™ AC Test Generator

Creates accurate timing for AC testing. Requires AC translator. Add-on to ATGEN base

product.

TestWay Testability Analyzer

Analyzes board-level netlists for testability problems at the schematic stage or after layout. Selects, manages and minimizes test points. Calculates potential fault coverage for combined boundary scan and non-boundary scan testing. Supports wide variety of netlist formats and has a wide variety of other capabilities useful to board test engineers. Helps ASSET users by automatically generating .CHR files. Helps Goepel users by automatically creating CIC models. Helps JTAG Technologies users by automatically creating EDIF, JDN, NIF and DIF files from Mentor databases without requiring any edits of Mentor libraries.

FaultView Fault Ticket Analyzer

Used in board repair operations to analyze fault ticket information produced at board test. Locates defects on graphical presentation of schematic and layout, improving board repair throughput by 50-100%. Also useful during debug of new board test programs to speed up analysis of false failures.

JEDEC MODEL LIBRARIES

This section lists the models packages. For lists of models available for individual purchase, see the Individual models section later in this document.

MSP3 Starter Library

98 JEDEC-based models up to 10 macrocell size. Includes models in MSP3 list.

6l16	16ld8	18cv8	20l8	22ap10	161
8l14	16n8	18g8	20r4	22cv10p	162
10h8	16p8	18l4	20r6	22cv10z	163
10l8	16r4	18n8	20r8	22p10	173
12h6	16r6	18p8	20rp4	22v10	179
12l10	16r8	18u8q	20rp6	22vp10	253
12l6	ric16p8b	18v10	20rp8	24r4	273
14h4	ric16rp4b	18v8z	20rs10	24r8	ep310
14l4	ric16rp6b	19l8	20rs4	85c224	ep320
14l8	ric16rp8b	19r4	20rs8	85c508	plx448
16a4	16rp4	19r6	20s10	100	473
16c1	16rp6	19r8	20v8	103	839
16h2	16rp8	20c1	20v8a	151	9800
16hd8	16v8	20cg10	20x10	153	
16l2	16v8a	20g10	20x4	155	
16l6	16x4	20l10	20x8	157	
16l8	16z8	20l2	20xv10	159	

Table 1: MSP3 Model List

MSP4 Intermediate Library

177 JEDEC-based models. Includes MSP3 models plus list in MSP4 chart.

mach4-32	20rp10	26cv12	m144	333	atm750	2605
mach4-64	20vp8	26v12	167	335	atm750b	2678
10h16p8	20xrp10	32r16	168	371	ep900	ph3032
10h20eg8	20xrp4	32vx10	204e	372	1016c4	ph3064
10h20ev8	20xrp6	85c22v10	mach210	373	1016ld8	6001
10h20p8	20xrp8	105	mach211	374	1016p4	6002
16pe8	22rx8a	mach110	mach215	405	1016rd8	7024
16ra8	22xp10	mach111	mach220	415	ep1200	
sig16v8	23s8	mach120	mach221	501	atm1500	
16v8h	24l10	m128	330	506	atm1504	
16vp8	24r10	mach130	331	507	ep1800	
20ra10	24v10	mach131	332	ep600	atm2500	

Table 2: MSP4 Model List in addition to MSP3

ASP1 AMD/Vantis MACH Library

All Vantis MACH device models presently on our price list plus ASP2. (30 models, covering MACH families 1, 2, 3, 4 and 5.) See ASP1 List.

mach4-192	mach4-96	mach130	mach215	machv-256	mach445
mach4-32	mach110	mach131	mach220	machv-320	mach446
mach4-384	mach111	machv-192	mach221	machv-384	mach465
mach4-512	mach120	mach210	mach230	mach435	mach466
mach4-64	machv-128	mach211	mach231	mach436	machv-512

Table 3: ASP1 Model List

ATM1PR Atmel Model Library (Premium)

All Atmel device models presently on our price list. (8 models.) See ATM1PR List.

atm750	atm1500	atm1504	atm2500
atm750b	atm1502	atm1508	atm5000

Table 4: ATM1PR/ATM1FP Model List

ATM1FP Atmel Model Library (Fast-Pass)

All Atmel device models presently on our price list. (8 models.) See ATM1PR List.

CSP1PR Cypress Model Library (Premium)

All Cypress device models presently on our price list. (19 models.) See CSP1PR Model List.

18g8	331	335	373	37032	37192	37512
20g10	332	371	374	37064	37256	
330	333	372	375	37128	37384	

Table 5: CSP1PR/CSP1FP Model List

CSP1FP Cypress Model Library (Fast-Pass)

All Cypress device models presently on our price list. (19 models.) See CSP1PR List.

MSP1 Deluxe Models Subscription

Includes all 221 JEDEC-based device models presently on our price list plus MSP2. See MSP1 Table for list of models in MSP1 in addition to those in MSP4.

aaqmax	29m16	48n22	ep512	2552	37064	37384
5ac312	29ma16	ep241	780	ph3128	37128	37512
5ac324	30s16	375	atm1502	atm5000	37192	
gaz23sv8	42va12	sm448	atm1508	37032	37256	

Table 6: MSP1 Model List in addition to MSP4 and ASP1

MSP2 Deluxe Models Renewal

Subscription to all JEDEC-based device models developed within the following four quarters. Requires MSP1 or MSP2 in prior year.

ASP2 AMD/Vantis MACH Renewal

Subscription to all Vantis MACH models developed within the following four quarters. Requires

ASP1 or ASP2 in prior year.

MP3FP FASTpass Deluxe Models

FASTpass version of MSP1. Requires S25 base product.

MP2FP FASTpass MACH Models

FASTpass version of ASP1. Requires S25 base product.

FPGA DEVICE SUPPORT

Actel Device Support

Reads .adl/.pin files produced by Actel's design software. Requires S25 or S55 or S75 base product. Choose one from list below.

ES6-AAACT-B ACT1010, ACT1020, ACT1415, TI1010, TI1020, 40MX02.

ES8-AAACT-C ES6 plus 1225, 1240, 1425, 1440, 40MX04, 42MX09.

ES9-AAACT-E ES8 plus 1280, 1460, 3265, 42MX16, 54SX08.

ES32-AAACT-F ES9 plus 14100, 32100, 32140, 42MX24, 54SX16.

ES43-AAACT-G ES32 plus 32200, 32300, 54SX32.

ES40-AAACT-H ES43 plus 32400, 42MX36, 42MX52, 54SX64.

ES55-AAACT-I ES43 plus 54SX72.

ES16-AAACT-Z All .adl/.pin files.

ES16-AAACT-Z-FP FASTpass version of ES16-AAACT-Z.

Altera MAX+PLUS II Device Support

Reads .rpt/.fit, and EDIF versions 2 and 3 netlists produced by Altera's MAX-PLUS II design system (use EDIF for accurate timing). Requires S25 or S55 or S75 base product. Choose one from list below.

ES2-AAMAX-32-A EPM5016, EPM5024, EPM5032, EPM7032, CY7C344.

ES3-AAMAX-128-B ES2 plus EPM5064, EPM5096, EPM5127, EPM5128, EPM5130, EPM7064, EPM7096, EPM7128, EPX880, CY7C342, CY7C343, CY7C346, EPS464.

ES7-AAMAX-256-C ES3 plus EPM5192, EPM7160, EPM7192, EPM7256, EPX8160, CY7C341.

ES20-AAMAX-512-E ES7 plus EPM7512, EPF8282, EPF8452, EPM9320.

ES22-AAMAX-F ES20 plus EPF8820, EPF8636, EPF81188, EPM9400, EPM9480, EPM9560, EPF10K10.

ES23-AAMAX-G ES22 plus EPF6016, EPF6024, EPF81500, EPF10K20, EPF10K30.

ES41-AAMAX-H ES23 plus EPF10K40, EPF10K50.

ES42-AAMAX-I ES41 plus EPF10K70, EPF10K100.

ES19-AAMAX-Z All .rpt/.fit and EDIF files produced by MAX-PLUS II.

ES19-AAMAX-Z-FP FASTpass version of ES19-AAMAX-Z.

Altera MAX Quartus Device Support

Reads .vo, .sdo and .pin files produced by Al-

tera's Quartus design system and targeted to MAX devices. Requires S25 or S55 or S75 base product. Choose one from list below.

ES62-AAQMAX-128-B EPM5016, EPM5024, EPM5032, EPM7032 EPM5064, EPM5096, EPM5127, EPM5128, EPM5130, EPM7064, EPM7096, EPM7128, EPX880.

ES63-AAQMAX-C ES62 plus EPM5192, EPM7160, EPM7192, EPM7256, EPX8160.

ES64-AAQMAX-E ES63 plus EPM7512, EPF8282, EPF8452, EPM9320.

ES65-AAQMAX-F ES64 plus EPF8820, EPF8636, EPF81188, EPM9400, EPM9480, EPM9560, EPF10K10.

ES66-AAQMAX-G ES65 plus EPF6016, EPF6024, EPF81500, EPF10K20, EPF10K30.

ES67-AAQMAX-H ES66 plus EPF10K40, EPF10K50.

ES68-AAQMAX-I ES67 plus EPF10K70, EPF10K100.

ES61-AAQMAX-Z All .vo/.pin files produced by Quartus for MAX devices.

ES61-AAQMAX-Z-FP FASTpass version of ES61-AAMAX-Z.

Lattice Device Support

Reads .sim netlist files produced by Lattice development system. Requires S25 or S55 or S75 base product. Choose one from list below.

ES14-AALAT-B pLSI1016, pLSI1024, pLSI1032, pLSI2032, pLSI2064, pLSI2096, pLSI2128, ispGDX80, ispGDX120.

ES15-AALAT-C ES14 plus pLSI1048, pLSI1048C, ispLSI2192, pLSI3160, pLSI3192, ispGDX160, ispLSI5256.

ES31-AALAT-E ES15 plus pLSI3256, pLSI3320, ispLSI5384, ispLSI5512.

ES56-AALAT-F ES31 plus ispLSI8600, ispLSI8840.

ES57-AALAT-G ES56 plus ispLSI81080.

ES58-AALAT-H ES57 plus .

ES59-AALAT-I ES58 plus .

ES17-AALAT-Z All .sim files produced by Lattice pLSI design tools.

ES17-AALAT-Z-FP FASTpass version of ES17-AALAT-Z.

Lucent ORCA Device Support

Reads EDIF files produced by ORCA development system. Requires S25 or S55 or S75 base product. Choose one from list below.

ES48-AAORCA-E 2c04, 2c06, 2c08, 2c04a, 2c06a, 2c08a, 2t04a, 2t06a, 2t08a.

ES49-AAORCA-F ES48 plus 2c10, 2c12, 2c15, 2c10a, 2c12a, 2c15a, 2t10a, 2t12a, 2t15a.

ES50-AAORCA-G ES49 plus 2c26, 2c26a, 2t26a, 3t20.

ES51-AAORCA-H ES50 plus 2c40, 2c40a, 2t40a, 3t30, 3c55, 3t55.

ES53-AAORCA-I ES51 plus 3c80, 3t80.

ES54-AAORCA-J ES53 plus 3t125.

ES52-AAORCA-Z All ORCA devices supported by ORCA development system.

ES52-AAORCA-Z-FP FASTpass version of ES52-AAORCA-Z.

QuickLogic Device Support

Reads EDIF netlist produced by QuickLogic's pASIC design tools. Requires S25 or S55 or S75 base product. Choose one from list below.

ES26-AAQL-B 8x12B, CYP381, CYP382.

ES27-AAQL-C ES26 plus 12x16B, CYP383, CYP384.

ES28-AAQL-E ES27 plus 16x24B, CYP385, CYP386, 2003.

ES29-AAQL-F ES28 plus 24x32B, CYP388, 2005, 2007, 3012.

ES46-AAQL-G ES29 plus 2009, 2012, 2016, 3025, 3040.

ES47-AAQL-H ES46 plus 2020, 3060.

ES30-AAQL-Z All EDIF files produced by QuickLogic's pASIC design tools.

ES30-AAQL-Z-FP FASTpass version of ES30-AAQL-Z.

Xilinx Device Support

Reads .xnf and .edn file produce by Xilinx XACT tools. Requires S25 or S55 or S75 base product. Choose one from list below.

ES1-LCA2ICT any XC2000, XC3000, or XC4000 series LCA with synthetic design.

ES10-AALCA-B ES1 plus XC2018, XC2064, XC3020, XC3120, XC4002, XC5202, XC7272,

XC7336, XC7354, XC7372, XC9536, XC9572, XC95108.

ES11-AALCA-C ES10 plus XC3030, XC3042, XC3130, XC3142, XC4003, XC4004, XC5204, XC73108, XC73144, XC95144, XC95160, XC95180, XC95216, XCS05.

ES12-AALCA-D ES11 plus XC3064, XC3164, XC4005, XC4006, XCS10.

ES13-AALCA-E ES11 plus XC3064, XC3164, XC4005, XC4006, XCS10, XC3090, XC3190, XC4008, XC4010, XC5206, XC95288, XC95432, XCS20.

ES24-AALCA-F ES13 plus XC3195, XC4013, XC4020, XC5210, XC5215, XC95576, XCS30, XCS40.

ES25-AALCA-G ES24 plus XC4025, XC4028, XC4036.

ES45-AALCA-H ES25 plus XC4044, XC4052,

XC4062, XCV50.

ES60-AALCA-I ES45 plus XC4085, XC40110, XC40150, XCV100, XCV150.

ES18-AALCA-Z All .xnf files and Xilinx EDIF files.

ES18-AALCA-Z-FP FASTpass version of ES18-AALCA-Z.

ES44-FPGA-OVERFP Oversized FASTpass
For customers who have licensed one or more FPGA products below level Z, this option will allow larger devices to run, but in FASTpass mode. One of this option enhances all FPGA products otherwise licensed by customer.

Multi-FPGA Pricing Policy

For installations that license multiple FPGA device support families, special multi-FPGA pricing is available.

BOARD TEST TRANSLATION SOFTWARE

TS1 JED2VCL Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into VCL or PCF format for HP3065/3070 in-circuit board testers, complete with disabling (digital guarding).

TS4 JED2DTS Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into DTS format for GenRad 227x/228x in-circuit board testers, complete with disabling (digital guarding).

TS15 JED2DTGL Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into DTGL format for GenRad 2750 in-circuit board testers, complete with disabling (digital guarding).

TS7 JED2S30 Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into .sr and .d files for Schlumberger/ Factron Series 30 in-circuit board testers, complete with disabling (digital guarding).

TS17 JED2MED Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into Mediator format for Schlumberger 700 series in-circuit board testers, complete with disabling (digital guarding).

TS12 JED2L200 Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into .sym and .chr files for Teradyne L200/L300 families of in-circuit board testers, complete with disabling (digital guarding).

TS19 JED2ZDD Translates .jvw files produced by ATGEN or TESTBSDL into Data Director format for Teradyne/ Zenthel Z800 in-circuit board testers.

TS20 JED2Z8K Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into vector template format for Z8000 in-circuit board testers, complete with disabling (digital guarding).

TS29 JED2Z18 Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into .asc vector template format for Teradyne Z1800 in-circuit board testers, complete with disabling (digital guarding). Also produces parallel vector format for Teradyne Victory cluster testing.

TS34 JED2SPEC Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into .bdf vector template model format for Teradyne Spectrum in-circuit board testers, complete with PREFERRED-style disabling (digital guarding).

TS30 JED2LSM Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into LSM format for Marconi 80/53X in-circuit board testers, complete with disabling (digital guarding).

TS33 JED2TDL Translates .jvw and .cnn files produced by ATGEN or TESTBSDL into TDL format for Marconi 4210 in-circuit board testers, complete with disabling (digital guarding).

COMPONENT TEST TRANSLATION SOFTWARE

TS2 JTL Translates .jwv files produced by ATGEN or TESTBSDL software into LMI format for Sentry 7, 20, 21 component testers. Available only on Microsoft operating systems.

TS6 JTS Translates .jwv and .jdl files produced by ATGEN or TESTBSDL software into complete functional plus DC test programs for Sentry 7, 20, 21 component testers.

TS14 JTS+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for Sentry 7, 20, 21 component testers. Requires AADELAY.

TS28 JED2S15 Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for Sentry S15 and S50 component testers. Requires AADELAY.

TS35 JED283K+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for HP 83000 component testers. Requires AADELAY.

TS24 JED2HP82K+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for HP 82000 component testers. Requires AADELAY.

TS18 JED2MCT+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for MCT 2000 component testers. Requires AADELAY.

TS21 JED2TRIL+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for Trillium component testers. Requires AADELAY.

TS22 JED2ADV+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for Advantest component testers. Requires AADELAY.

TS25 JED2ANDO+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for ANDO component testers. Requires AADELAY.

TS16 JED2ATP+ Translates .jdl files produced by AADELAY software into complete functional, DC and AC test programs for GenRad 115, 125, 130 component testers. Requires AADELAY.

TS27 JWV2ACT Translates .jwv files produced by ATGEN software into Actel Activator programmer format.

SIMULATION TESTBENCH TRANSLATION SOFTWARE

TS37 JED2V Translates .jwv files produced by stimulus.
ATGEN software into Verilog and VHDL test

SIMULATOR MODEL GENERATORS

TS8 LASMOD LASAR Generates simulation models in Teradyne V6 LASAR structural model format with accurate timing. For ATGEN models, users can create new timing parameter files in order to model different speed grades of devices in the library. Requires at least one of ATGEN or MODBSDL products.

TS23 AAGHDL HILO Generates simulation models in GenRad HILO .cct format with accurate timing. For ATGEN models, users can create new timing parameter files in order to model different speed grades of devices in the library. Requires at least one of ATGEN or MODBSDL products.

timing parameter files in order to model different speed grades of devices in the library. Requires at least one of ATGEN or MODBSDL products.

TS36 ACUMOD Verilog Generates simulation models in Verilog structural format with accurate timing. For ATGEN models, users can create new timing parameter files in order to model different speed grades of devices in the library. Requires at least one of ATGEN or MODBSDL products.

TEST GENERATION SERVICE RUNS

ACUGEN can generate tests for designs as a service, with pricing depending on the size of the design. Customers wishing to out-source a large number of designs should call for volume pricing. For orders placed at single-quantity pricing, 50% of order will be available for software license purchase made within 90 days. Technical data re-

quired are: design netlist data (depends on manufacturer, call tech support if you need assistance), board level wiring constraint information if for board test, target tester type, fixture wiring data if for component test. In the event fault coverage is low, ACUGEN will return a testability report along with the test vectors.

INDIVIDUAL MODELS

The models available for individual purchase are listed below grouped by size/price category. The smallest size category is shown even though the MSP3 package is the most cost-effective way to acquire these models.

Size i JEDEC Models : 37512

Size h JEDEC Models : sm448 ,machv-512 ,37384

Size g JEDEC Models : mach4-384 ,mach4-512 ,machv-320 ,machv-384 ,37256

Size f JEDEC Models : machv-256 ,mach465 ,mach466 ,37192

Size e JEDEC Models : mach4-192 ,machv-192 ,atm5000 ,37128

mach4-96	mach221	374	mach436	780	37064
machv-128	mach230	375	mach445	atm1508	
mach220	mach231	mach435	mach446	ph3128	

Table 7: Size d JEDEC Models

mach4-64	mach130	mach211	335	atm1504	ph3064	37032
5ac324	mach131	mach215	372	ep1800	6001	
mach120	m144	330	373	atm2500	6002	
m128	mach210	332	atm1500	2552	7024	

Table 8: Size c JEDEC Models

mach4-32	30s16	85c224	331	501	atm750	atm1502
5ac312	32r16	mach110	371	506	atm750b	ph3032
29m16	42va12	mach111	405	507	ep900	
29ma16	48n22	ep241	415	ep512	ep1200	

Table 9: Size b JEDEC Models

6l16	16p8	18n8	20rs10	gaz23sv8	167
8l14	16pe8	18p8	20rs4	23s8	168
10h16p8	16r4	18u8q	20rs8	24l10	173
10h20eg8	16r6	18v10	20s10	24r10	179
10h20ev8	16r8	18v8z	20v8	24r4	204e
10h20p8	16ra8	19l8	20v8a	24r8	253
10h8	ric16p8b	19r4	20vp8	24v10	273
10l8	ric16rp4b	19r6	20x10	26cv12	ep310
12h6	ric16rp6b	19r8	20x4	26v12	ep320
12l10	ric16rp8b	20c1	20x8	32vx10	333
12l6	16rp4	20cg10	20xrp10	85c22v10	plx448
14h4	16rp6	20g10	20xrp4	85c508	473
14l4	16rp8	20l10	20xrp6	100	ep600
14l8	sig16v8	20l2	20xrp8	103	839
16a4	16v8	20l8	20xv10	105	1016c4
16c1	16v8a	20r4	22ap10	151	1016ld8
16h2	16v8h	20r6	22cv10p	153	1016p4
16hd8	16vp8	20r8	22cv10z	155	1016rd8
16l2	16x4	20ra10	22p10	157	2605
16l6	16z8	20rp10	22rx8a	159	2678
16l8	18cv8	20rp4	22v10	161	9800
16ld8	18g8	20rp6	22vp10	162	
16n8	18l4	20rp8	22xp10	163	

Table 10: Size a JEDEC Models