ADVANTECH

DRAM Memory Module

Portfolio Introduction

PAPS Product Management
Q3 / 2013

Enabling an Intelligent Planet

PART I.

ADVANTECH QUALIFIED DIMM

(AQD)

ADVANTECH QUALIFIED DIMM

Built to Last ---

The toughest memory module for rigorous applications

QUALITY

RELIABILITY

COMPATIBILITY

LONGEVITY

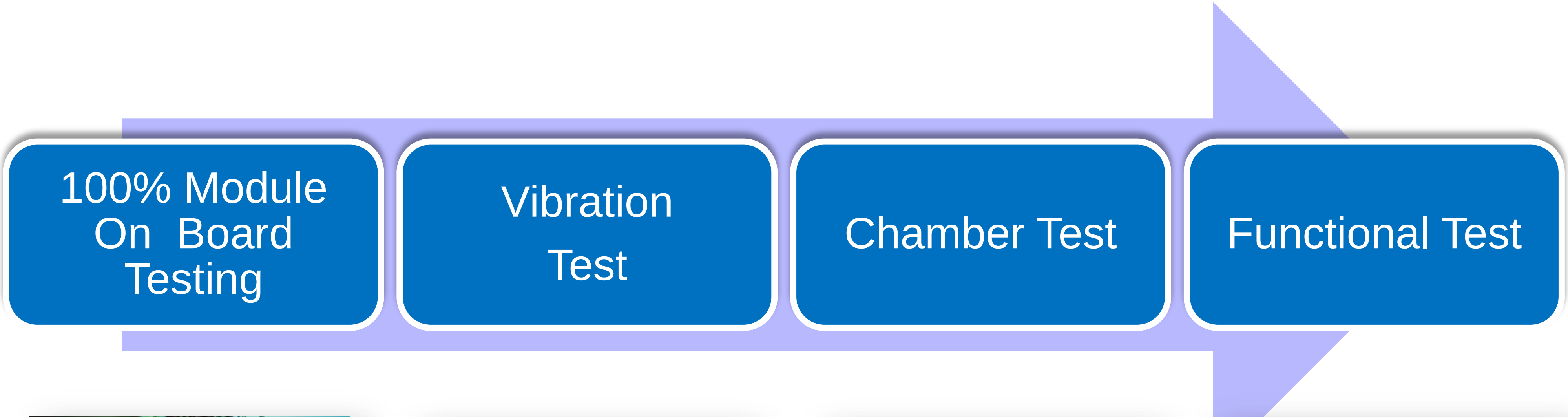
LIFE-TIME WARRANTY

Quality Assurance Program

Carefully Selected Premium Materials

ISO-9000 Manufacturing Process

Industrial Testing Standard

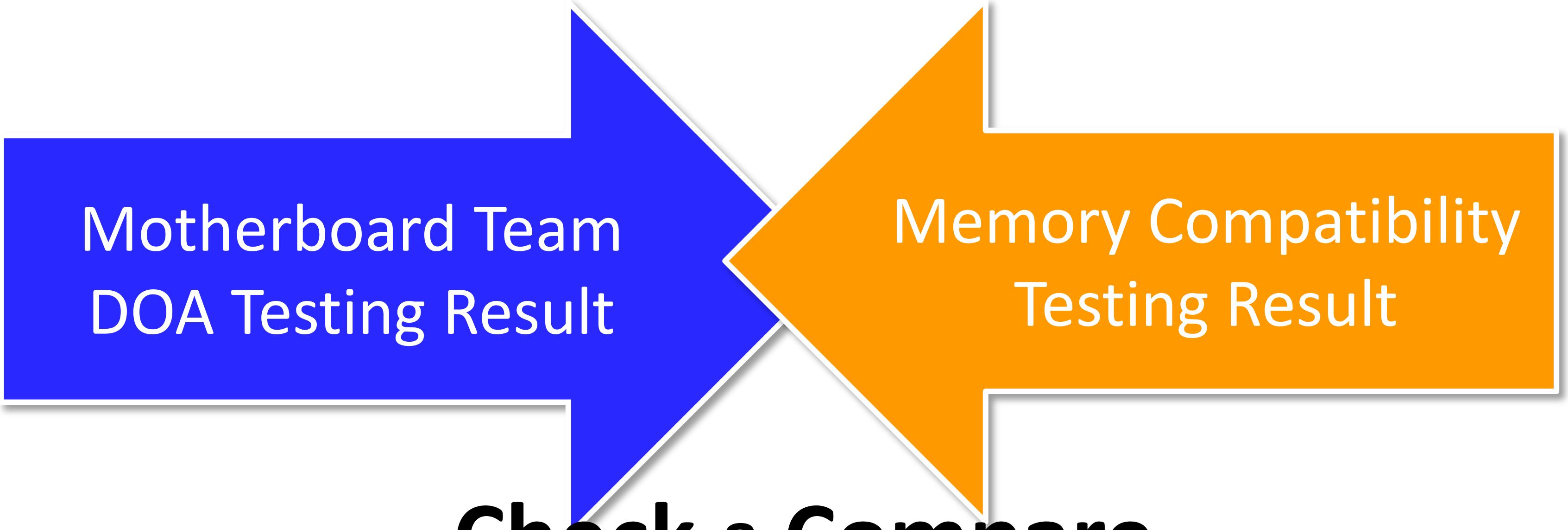


100% Module On Board Testing

Vibration Test

Chamber Test

Functional Test

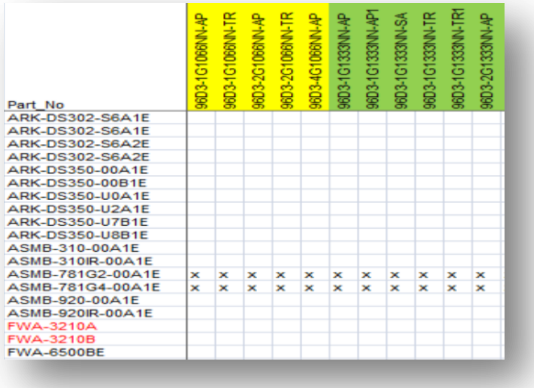


Motherboard Team DOA Testing Result

Memory Compatibility Testing Result

Check & Compare

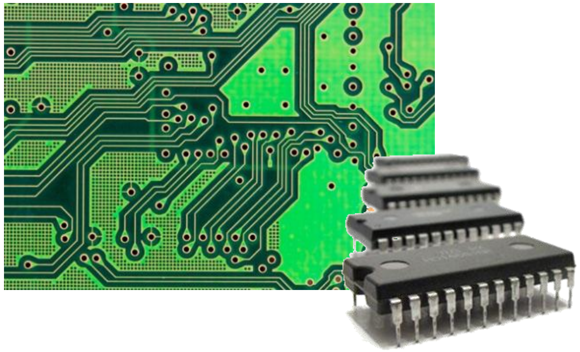
Both Teams Testing Result to Ensure M/B vs. Memory Compatibility



Part_No	96D3-1G1066NN-AP	96D3-1G1066NN-TR	96D3-2G1066NN-AP	96D3-2G1066NN-TR	96D3-4G1066NN-AP	96D3-1G1333NN-AP	96D3-1G1333NN-AP1	96D3-1G1333NN-SA	96D3-1G1333NN-TR	96D3-1G1333NN-TR1	96D3-2G1333NN-AP
ARK-DS302-S6A1E											
ARK-DS302-S6A1E											
ARK-DS302-S6A2E											
ARK-DS302-S6A2E											
ARK-DS350-00A1E											
ARK-DS350-00B1E											
ARK-DS350-U0A1E											
ARK-DS350-U2A1E											
ARK-DS350-U7B1E											
ARK-DS350-U8B1E											
ASMB-310-00A1E											
ASMB-310IR-00A1E											
ASMB-781G2-00A1E	x	x	x	x	x	x	x	x	x	x	x
ASMB-781G4-00A1E	x	x	x	x	x	x	x	x	x	x	x
ASMB-920-00A1E											
ASMB-920IR-00A1E											
FWA-3210A											
FWA-3210B											
FWA-6500BE											

Locked BOM

- **IC Spec**
- **PCB Layout**



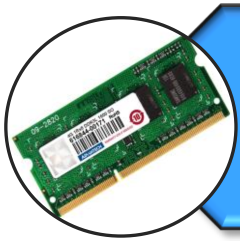
Minimum

3 Years Longevity

Every ADVATECH QUALIFIED DIMM (AQD) is back up by life-time warranty.

LifeTime Warranty

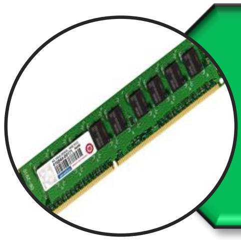
AQD Product Portfolio



Unbuffered DIMM

* General IPC Applications

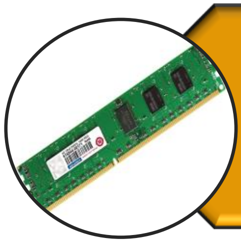
* 1GB, 2GB, 4GB & 8GB



ECC Unbuffered DIMM

* Improve system productivity and efficiency

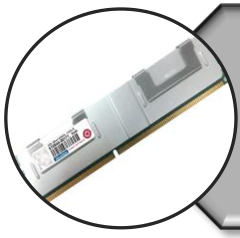
* 4GB & 8GB



Registered DIMM

* Providing the best solution for capacity and performance requirement.

* 8 GB & 16GB



Load Reduce DIMM

* Providing the biggest capacity per server with the lowest energy costs

* 32GB

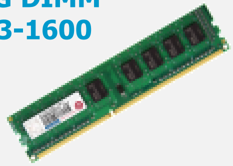
AQD Products Offering

LONG & SHORT Unbuffered DIMM

LONG DIMM
DDR3-1333
1G

AQD-D31GN13-SX

LONG DIMM
DDR3-1600
2G



AQD-D3L2GN16-SQ

LONG DIMM
DDR3-1600
4G

AQD-D3L4GN16-SQ

LONG DIMM
DDR3-1600
8G

AQD-D3L8GN16-SQ

SHORT DIMM
DDR3-1333
1G

AQD-SD31GN13-SX

SHORT DIMM
DDR3-1600
2G

AQD-SD3L2GN16-SQ

SHORT DIMM
DDR3-1600
4G

AQD-SD3L4GN16-SG

SHORT DIMM
DDR3-1600
8G

AQD-SD3L8GN16-SG

ECC Unbuffered DIMM

LONG DIMM
DDR3-1600
4G

AQD-D3L4GE16-SG

LONG DIMM
DDR3-1600
8G

AQD-D3L8GE16-SG

Registered DIMM

LONG DIMM
DDR3-1600
8G

AQD-D3L8GRV16-SG

LONG DIMM
DDR3-1600
16GB

AQD-D3L16RV16-SM

Load Reduce DIMM

DDR3-1333
32G

AQD-D3L32L13-SM

Part Number Decoder

A Q D – S D 3 L 2 G N V 1 6 – S G

PRODUCT NAME	TYPE	VOLTAGE	CAPACITY	ADVNCED FEATURE	Height	SPEED	FAB	VERSION
A Q D	S D 3	L	2 G	N	V	1 6	S	G
A=Advantech Q=Qualified D=DIMM	DM=SDRAM DIMM DR=DDR D2=DDR2 D3=DDR3 SS=SDRAM SO-DIMM SD=DDR SO-DIMM SD2=DDR2 SO-DIMM SD3=DDR3 SO-DIMM	Blank= 1.5V L=1.35V U=1.25V	1G=1GB 2G=2GB 4G=4GB 8G=8GB 16 =16GB 32 =32GB 64= 64GB	N= NON-ECC and NON REGISTER R= REGISTER E= ECC ONLY L=Load reduce	V= VLP	40=400Mt/s 53=533Mt/s 66=667Mt/s 80=800Mt/s 10=1066Mt/s 13=1333Mt/s 16=1600Mt/s 18=1866Mt/s	S=Samsung H=Hynix M=Micron /Elpida N=Nanya	X=1Gb(128Mx8) T=1Gb(256Mx4) Q=2Gb(256Mx8) Y=2Gb(512Mx4) G=4Gb(512Mx8) Z= 4Gb(1Gbx4) M=8Gb(2Gbx4)

Color / Symbol Key

🟨 **Available** ⬜ **Phasing-out** 🟧 **Planning**

E **ECC** **R** **Registered** **F** **Fully Buffered** **N** **New**

LR **Load-Reduce** **V** **Very Low-Profile** **W** **Wide Temperature** **LV** **Low-Voltage**

AQD DDR3 Memory Modules Portfolio

DDR3
1.35 Low Voltage

		1333		1600	
		LONG	SHORT	LONG	SHORT
U-DIMM	1GB (128X8)	AQD-D31GN13-SX (1.5V)	AQD-SD31GN13-SX (1.5V)		
	2GB (256MX8)			AQD-D3L2GN16-SQ	AQD-SD3L2GN16-SQ
	4GB (512MX8)			AQD-D3L4GN16-SG	AQD-SD3L4GN16-SG
	8GB (512MX8)			AQD-D3L8GN16-SG	AQD-SD3L8GN16-SG
ECC U-DIMM	4GB (512MX8)			AQD-D3L4GE16-SG	
	8GB (512MX8)			AQD-D3L8GE16-SG	
R-DIMM	4GB (512MX8)				
	8GB (512MX8)			AQD-D3L8GRV16-SG	
	16GB(2Gbx4)			AQD-D3L16RV16-SM	
LOAD REDUCE	32GB (2GbX4)	AQD-D3L32L13-SM			

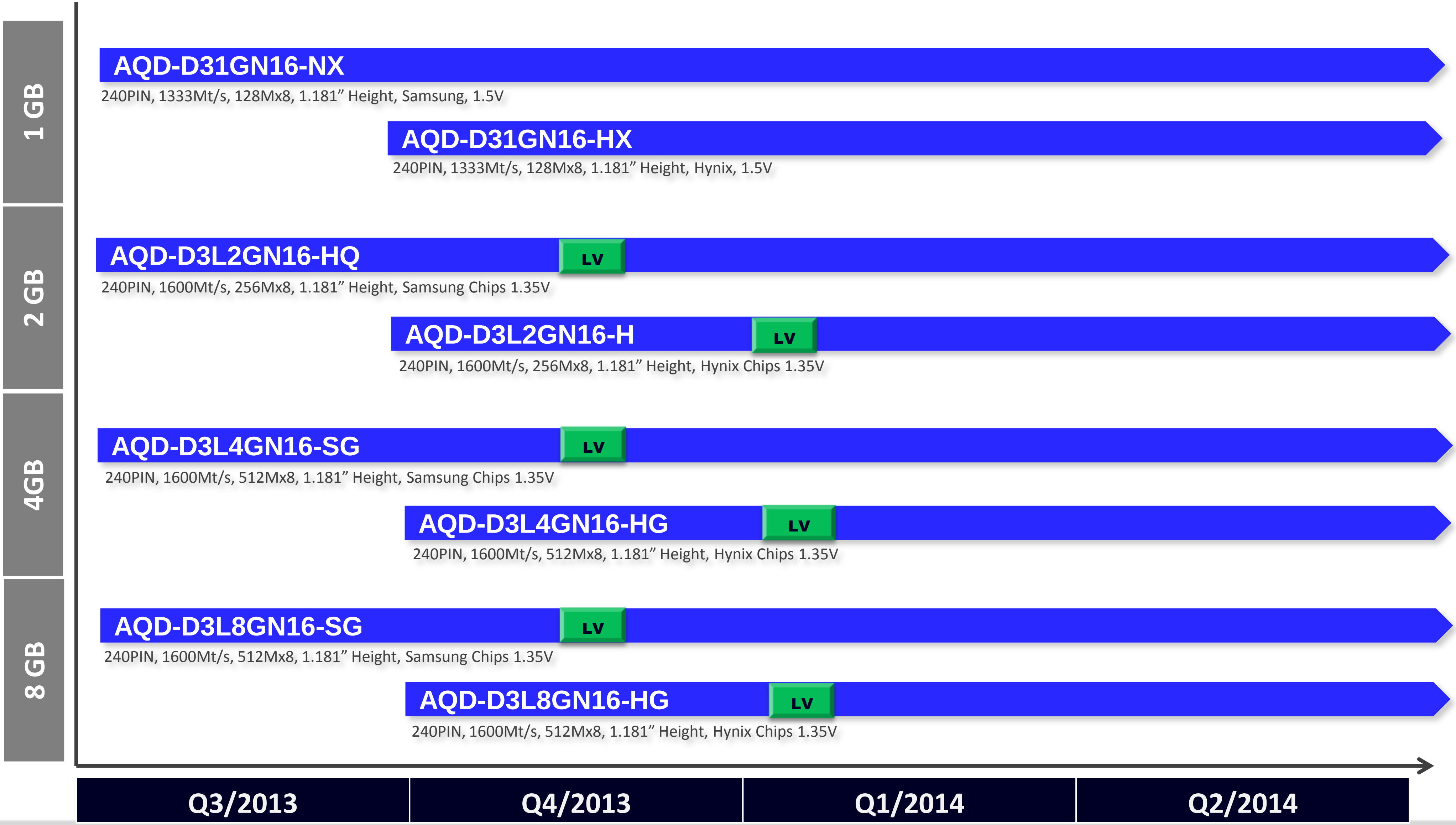
Enabling an Intelligent Planet

ADVANTECH

U-DIMM | ECC U-DIMM | R-DIMM | Load Reduce

DDR3 DIMM

🟨 Available ▨ Phasing-out 🟨 Planning
E ECC R Registered F Fully Buffered N New
LR Load-Reduce V Very Low-Profile W Wide Temperature LV Low-Voltage



1 GB

AQD-D31GN16-NX
240PIN, 1333Mt/s, 128Mx8, 1.181" Height, Samsung, 1.5V

AQD-D31GN16-HX
240PIN, 1333Mt/s, 128Mx8, 1.181" Height, Hynix, 1.5V

2 GB

AQD-D3L2GN16-HQ LV
240PIN, 1600Mt/s, 256Mx8, 1.181" Height, Samsung Chips 1.35V

AQD-D3L2GN16-H LV
240PIN, 1600Mt/s, 256Mx8, 1.181" Height, Hynix Chips 1.35V

4GB

AQD-D3L4GN16-SG LV
240PIN, 1600Mt/s, 512Mx8, 1.181" Height, Samsung Chips 1.35V

AQD-D3L4GN16-HG LV
240PIN, 1600Mt/s, 512Mx8, 1.181" Height, Hynix Chips 1.35V

8 GB

AQD-D3L8GN16-SG LV
240PIN, 1600Mt/s, 512Mx8, 1.181" Height, Samsung Chips 1.35V

AQD-D3L8GN16-HG LV
240PIN, 1600Mt/s, 512Mx8, 1.181" Height, Hynix Chips 1.35V

🟨 Available ▨ Phasing-out ▢ Planning

E ECC
R Registered
F Fully Buffered
N New
LR Load-Reduce
V Very Low-Profile
W Wide Temperature
LV Low-Voltage

DDR3 SO-DIMM

1 GB

AQD-SD31GN16-SX
204PIN, 1333Mt/s, 128Mx8, 1.181" Height, Samsung Chips 1.5V

AQD-SD31GN16-HX
204PIN, 1333Mt/s, 128Mx8, 1.181" Height, Hynix Chips 1.5V

2 GB

AQD-SD3L2GN16-SQ LV
204PIN, 1600Mt/s, 256Mx8, 1.181" Height, Samsung Chips 1.35V

AQD-SD3L2GN16-HQ LV
204PIN, 1600Mt/s, 256Mx8, 1.181" Height, Hynix, Chips 1.35V

4GB

AQD-SD3L4GN16-SG LV
204PIN, 1600Mt/s, 512Mx8, 1.181" Height, Samsung Chips 1.35V

AQD-SD3L4GN16-HG LV
204PIN, 1600s, 512Mx8, 1.181" Height, Hynix Chips 1.35V

8 GB

AQD-SD3L8GN16-SG LV
204PIN, 1600Mt/s, 512Mx8, 1.181" Height, Samsung, Chips 1.35V

AQD-SD3L8GN16-HG LV
204PIN, 1600Mt/s, 512Mx8, 1.181" Height, Hynix, Chips 1.35V

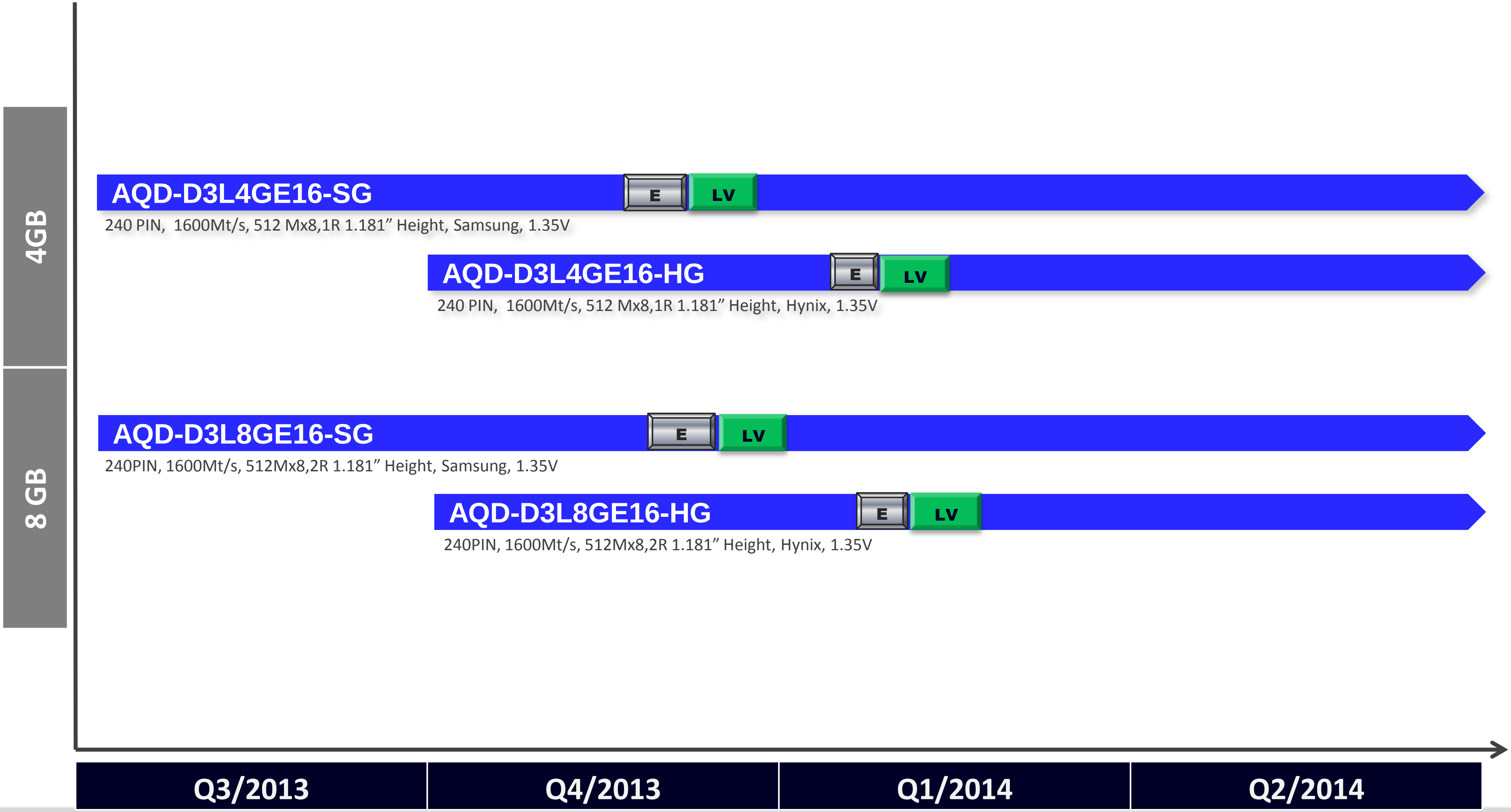
DDR3 DIMM **Advance Feature**

🟨 Available ▨ Phasing-out 🟨 Planning

E ECC R Registered F Fully Buffered N New

LR Load-Reduce V Very Low-Profile W Wide Temperature LV Low-Voltage

ECC



AQD-D3L4GE16-SG

240 PIN, 1600Mt/s, 512 Mx8,1R 1.181” Height, Samsung, 1.35V

AQD-D3L4GE16-HG

240 PIN, 1600Mt/s, 512 Mx8,1R 1.181” Height, Hynix, 1.35V

AQD-D3L8GE16-SG

240PIN, 1600Mt/s, 512Mx8,2R 1.181” Height, Samsung, 1.35V

AQD-D3L8GE16-HG

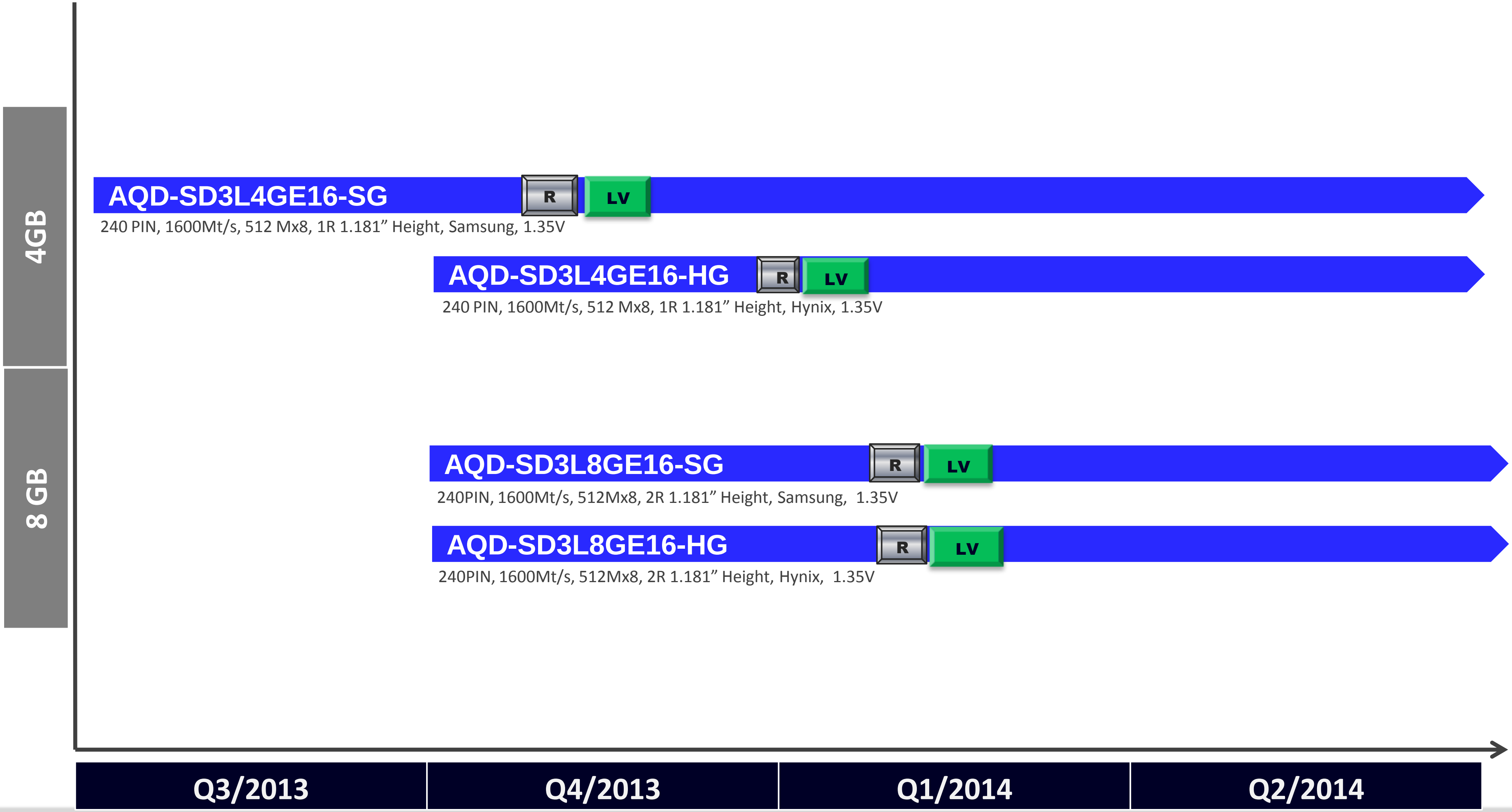
240PIN, 1600Mt/s, 512Mx8,2R 1.181” Height, Hynix, 1.35V

🟨 Available ▨ Phasing-out 🟧 Planning

E ECC
R Registered
F Fully Buffered
N New
LR Load-Reduce
V Very Low-Profile
W Wide Temperature
LV Low-Voltage

DDR3 SO DIMM Advance Feature

ECC



AQD-SD3L4GE16-SG
240 PIN, 1600Mt/s, 512 Mx8, 1R 1.181” Height, Samsung, 1.35V

AQD-SD3L4GE16-HG
240 PIN, 1600Mt/s, 512 Mx8, 1R 1.181” Height, Hynix, 1.35V

AQD-SD3L8GE16-SG
240PIN, 1600Mt/s, 512Mx8, 2R 1.181” Height, Samsung, 1.35V

AQD-SD3L8GE16-HG
240PIN, 1600Mt/s, 512Mx8, 2R 1.181” Height, Hynix, 1.35V

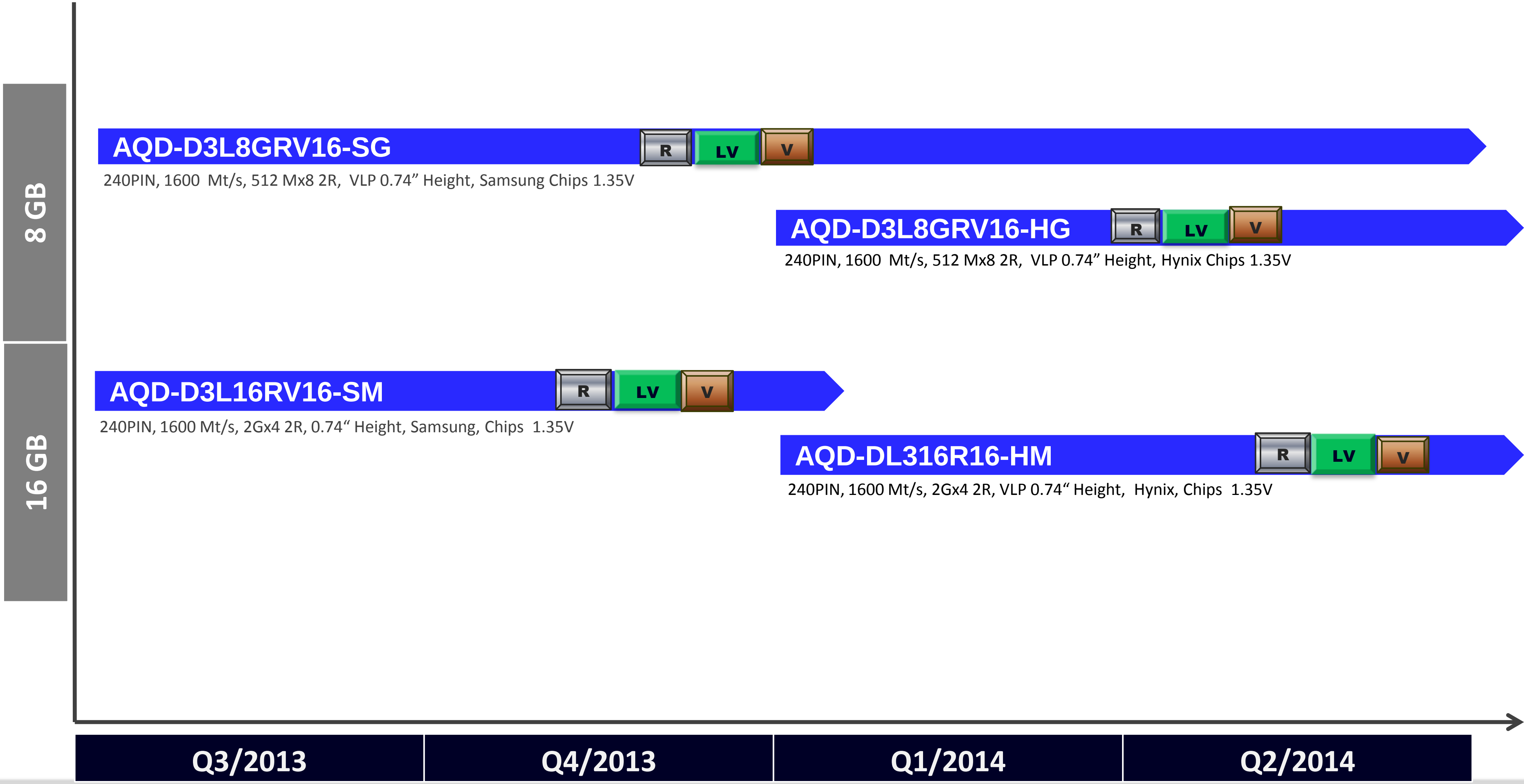
🟨 Available ▨ Phasing-out ▢ Planning

E ECC R Registered F Fully Buffered N New

LR Load-Reduce V Very Low-Profile W Wide Temperature LV Low-Voltage

DDR3 DIMM Advance Feature

ECC and Registered



AQD-D3L8GRV16-SG

240PIN, 1600 Mt/s, 512 Mx8 2R, VLP 0.74” Height, Samsung Chips 1.35V

AQD-D3L8GRV16-HG

240PIN, 1600 Mt/s, 512 Mx8 2R, VLP 0.74” Height, Hynix Chips 1.35V

AQD-D3L16RV16-SM

240PIN, 1600 Mt/s, 2Gx4 2R, 0.74“ Height, Samsung, Chips 1.35V

AQD-DL316R16-HM

240PIN, 1600 Mt/s, 2Gx4 2R, VLP 0.74“ Height, Hynix, Chips 1.35V

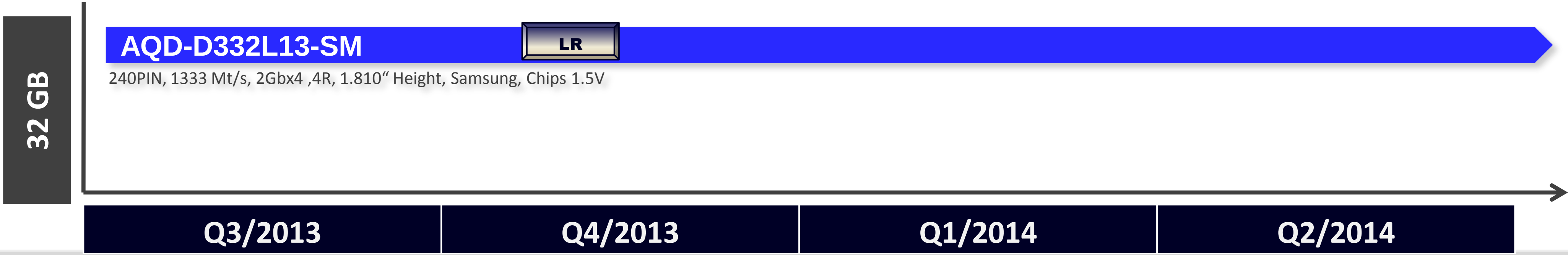
U-DIMM | ECC U-DIMM | R-DIMM | **Load Reduce**

🟨 Available ⬜ Phasing-out 🟨 Planning

E ECC
R Registered
F Fully Buffered
N New
LR Load-Reduce
V Very Low-Profile
W Wide Temperature
LV Low-Voltage

DDR3 DIMM Advance Feature

Load Reduce



AQD-D332L13-SM

240PIN, 1333 Mt/s, 2Gbx4 ,4R, 1.810“ Height, Samsung, Chips 1.5V

PART II,

96 PARTS MEMORY MODULE

Part Number Decoder

9 6 D M – 6 4 M 1 0 0 N N – A P

Memory Type

DM=SDRAM DIMM
DR=DDR
DRI=INDUSTRIAL GRADE DDR
D2=DDR2
D2I=INDUSTRIAL GRADE DDR2
D3=DDR3
SS=SDRAM SO-DIMM
SD=DDR SO-DIMM
SDI=INDUSTRIAL GRADE SO-DDR
SD2=DDR2 SO-DIMM
SD2I=INDUSRIAL GRADE SO-DDR2
SD3=DDR3 SO-DIMM
SD3I=INDUSTRIAL GRADE SO-DDR3

Capacity

64M=64MB
128M=128MB
256M=256MB
512M=512MB
1G=1GB
2G=2GB
4G=4GB
8G=8GB

Speed

100=100Mb/s
133=133Mb/s
266=266Mb/s
333=333Mb/s
400=400Mb/s
533=533Mb/s
667=667Mb/s
800=800Mb/s
1066=1066Mb/s
1333=1333Mbs

Advance Feature

NN=
NON-ECC and NON-REGISTER
ER=
ECC AND REGISTER
E=
ECC ONLY

Manufacturer

AP=APACER
ATL=ATP
DA=DATA
IK=INNODISK
KI=KINGSTON
MI=MIRCON
SB=SWISSBIT
TR=TRANSCEND
VI=VIRTIUM

Color / Symbol Key

■ Available ▨ Phasing-out □ Planning

E ECC R Registered F Fully Buffered N New

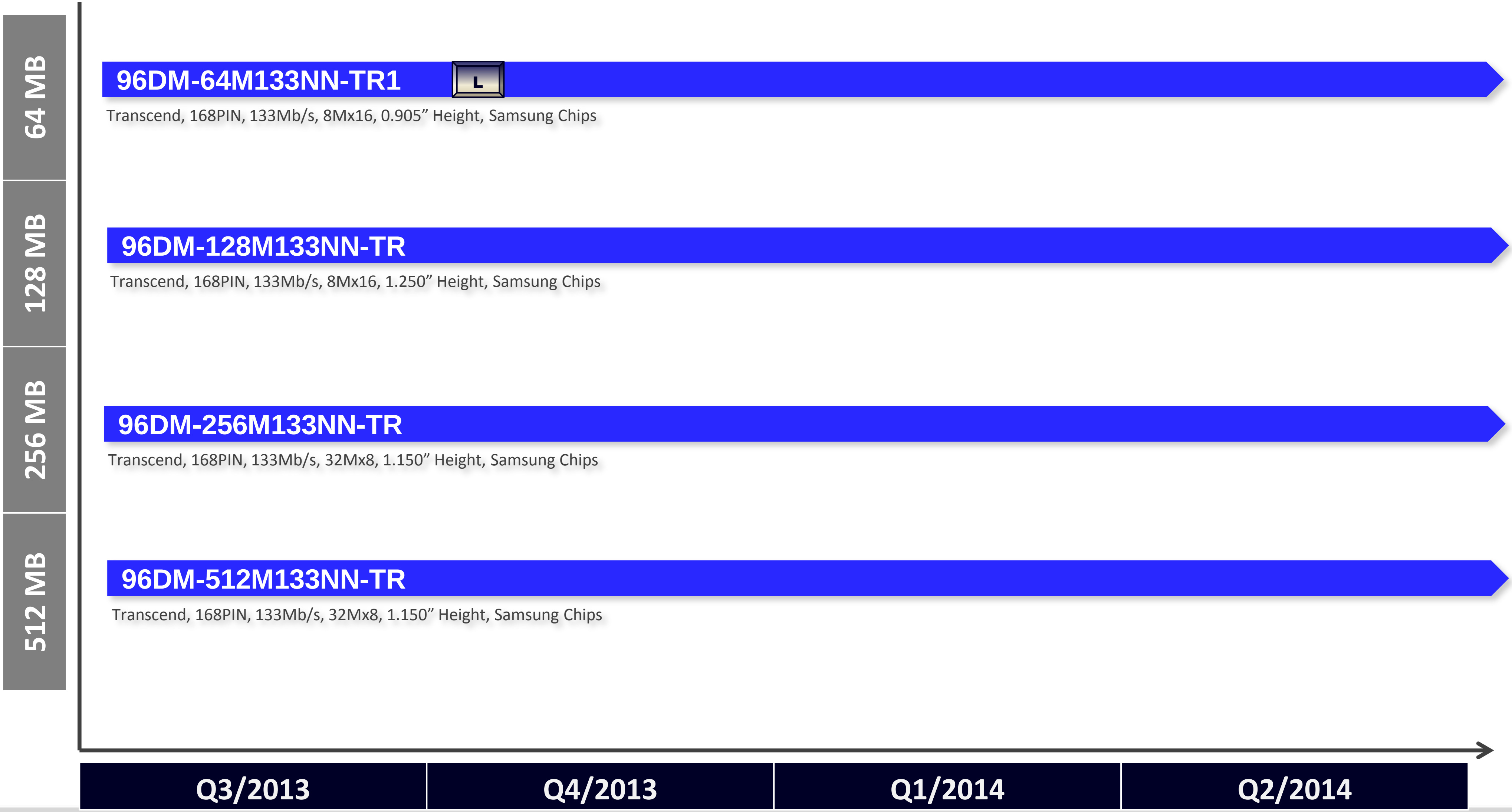
L Low-Profile V Very Low-Profile W Wide Temperature

SDRAM DIMM

🟦 Available ▨ Phasing-out 🟦 Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



96DM-64M133NN-TR1

Transcend, 168PIN, 133Mb/s, 8Mx16, 0.905” Height, Samsung Chips

96DM-128M133NN-TR

Transcend, 168PIN, 133Mb/s, 8Mx16, 1.250” Height, Samsung Chips

96DM-256M133NN-TR

Transcend, 168PIN, 133Mb/s, 32Mx8, 1.150” Height, Samsung Chips

96DM-512M133NN-TR

Transcend, 168PIN, 133Mb/s, 32Mx8, 1.150” Height, Samsung Chips

SDRAM SO-DIMM

▬ Available ▬ Phasing-out ▬ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature

64 MB

96SS-64M133NN-TR L

Transcend, 144PIN, 133Mb/s, 8Mx16, 0.945” Height, Samsung Chips

128 MB

96SS-128M133NN-TR

Transcend, 144PIN, 133Mb/s, 8Mx16, 1.150” Height, Samsung Chips

96SS-128M133NN-TR1 L

Transcend, 144PIN, 133Mb/s, 16Mx16, 0.945” Height, Samsung Chips

256 MB

96SS-256M133NN-TR

Transcend, 144PIN, 133Mb/s, 16Mx16, 1.250” Height, Samsung Chips

96SS-256M133NN-TR3

Transcend, 144PIN, 133Mb/s, 32Mx8, 1.150” Height, Samsung Chips

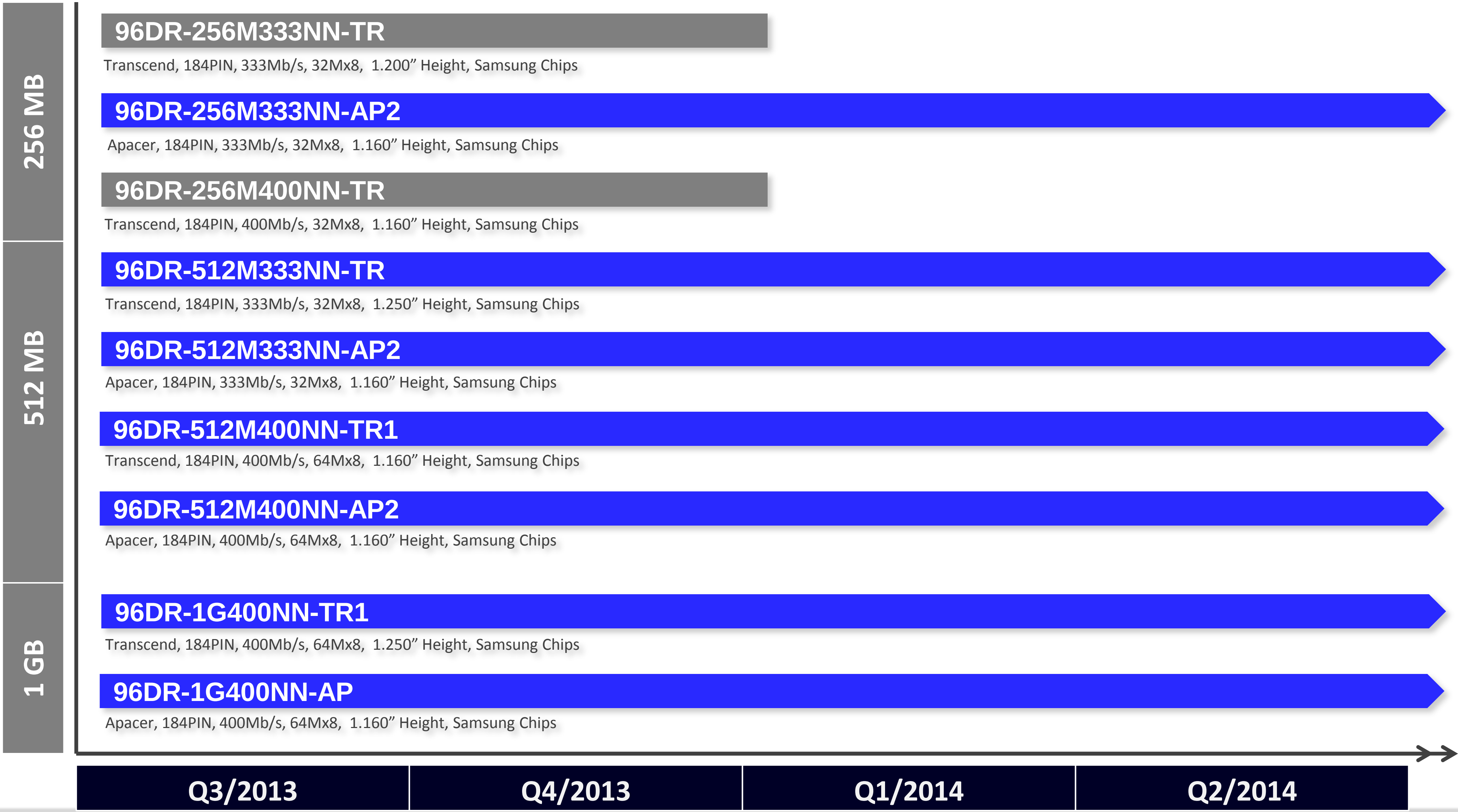
Q3/2013	Q4/2013	Q1/2014	Q2/2014

DDR DIMM

▬ Available ▬ Phasing-out ▬ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



256 MB

96DR-256M333NN-TR

Transcend, 184PIN, 333Mb/s, 32Mx8, 1.200" Height, Samsung Chips

96DR-256M333NN-AP2

Apacer, 184PIN, 333Mb/s, 32Mx8, 1.160" Height, Samsung Chips

96DR-256M400NN-TR

Transcend, 184PIN, 400Mb/s, 32Mx8, 1.160" Height, Samsung Chips

512 MB

96DR-512M333NN-TR

Transcend, 184PIN, 333Mb/s, 32Mx8, 1.250" Height, Samsung Chips

96DR-512M333NN-AP2

Apacer, 184PIN, 333Mb/s, 32Mx8, 1.160" Height, Samsung Chips

96DR-512M400NN-TR1

Transcend, 184PIN, 400Mb/s, 64Mx8, 1.160" Height, Samsung Chips

96DR-512M400NN-AP2

Apacer, 184PIN, 400Mb/s, 64Mx8, 1.160" Height, Samsung Chips

1 GB

96DR-1G400NN-TR1

Transcend, 184PIN, 400Mb/s, 64Mx8, 1.250" Height, Samsung Chips

96DR-1G400NN-AP

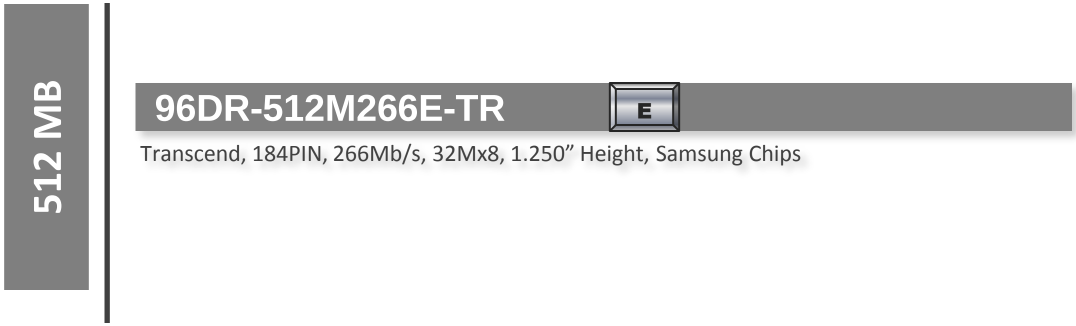
Apacer, 184PIN, 400Mb/s, 64Mx8, 1.160" Height, Samsung Chips

DDR DIMM Advance Feature

🟦 Available ▨ Phasing-out ☐ Planning

E ECC R Registered F Fully Buffered N New
L Low-Profile V Very Low-Profile W Wide Temperature

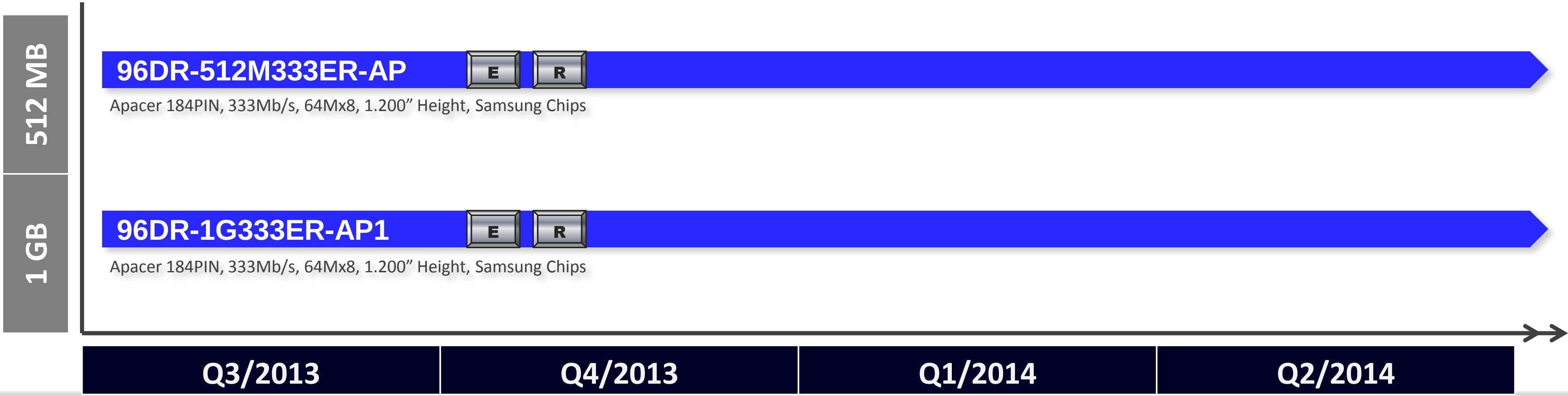
ECC


512 MB

96DR-512M266E-TR E

Transcend, 184PIN, 266Mb/s, 32Mx8, 1.250" Height, Samsung Chips

ECC and Registered


512 MB

96DR-512M333ER-AP E R

Apacer 184PIN, 333Mb/s, 64Mx8, 1.200" Height, Samsung Chips

1 GB

96DR-1G333ER-AP1 E R

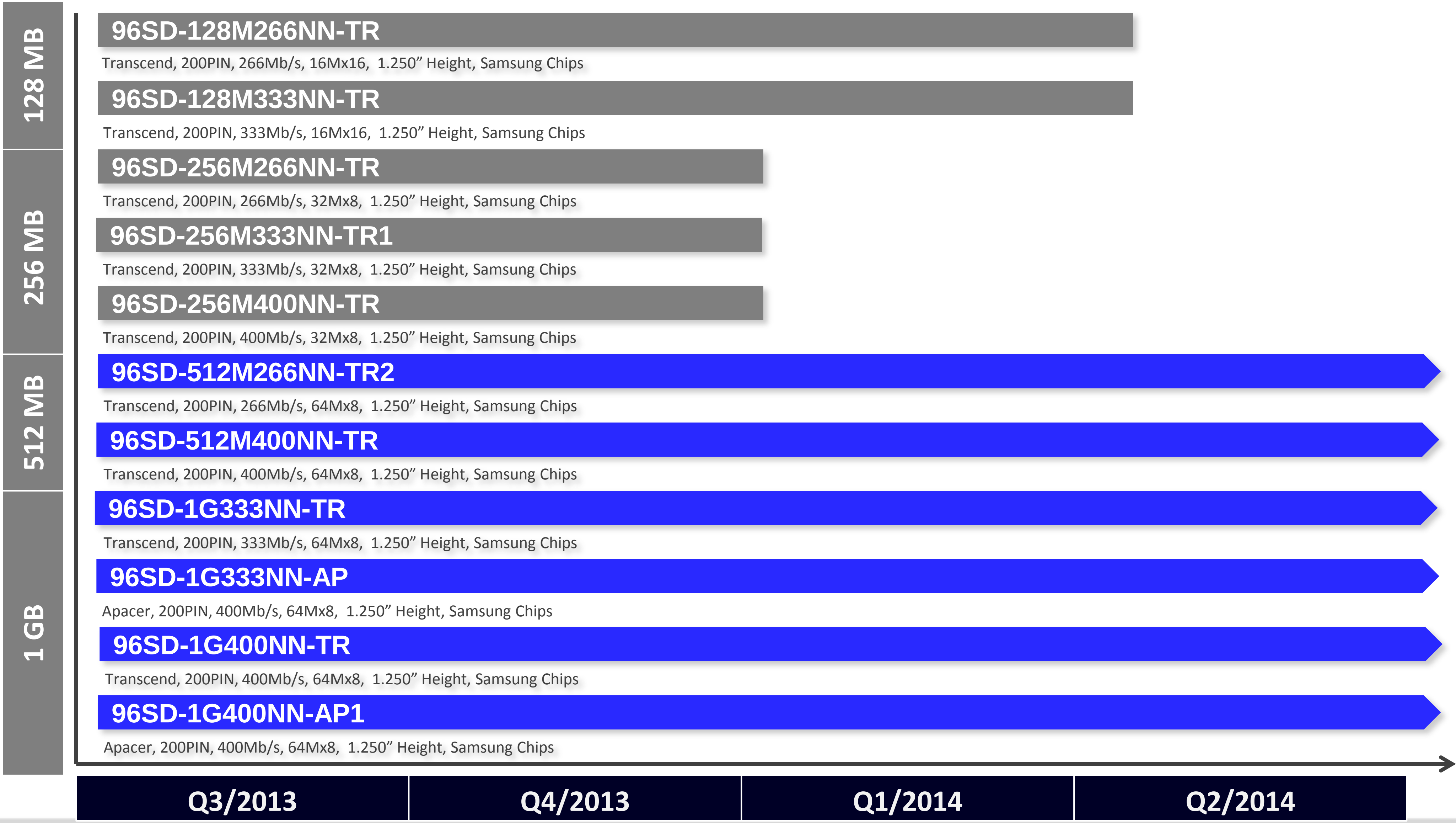
Apacer 184PIN, 333Mb/s, 64Mx8, 1.200" Height, Samsung Chips

Q3/2013 Q4/2013 Q1/2014 Q2/2014

🟦 Available ⬜ Phasing-out 🟦 Planning

DDR SO-DIMM

E ECC R Registered F Fully Buffered N New
L Low-Profile V Very Low-Profile W Wide Temperature



96SD-128M266NN-TR
Transcend, 200PIN, 266Mb/s, 16Mx16, 1.250” Height, Samsung Chips

96SD-128M333NN-TR
Transcend, 200PIN, 333Mb/s, 16Mx16, 1.250” Height, Samsung Chips

96SD-256M266NN-TR
Transcend, 200PIN, 266Mb/s, 32Mx8, 1.250” Height, Samsung Chips

96SD-256M333NN-TR1
Transcend, 200PIN, 333Mb/s, 32Mx8, 1.250” Height, Samsung Chips

96SD-256M400NN-TR
Transcend, 200PIN, 400Mb/s, 32Mx8, 1.250” Height, Samsung Chips

96SD-512M266NN-TR2
Transcend, 200PIN, 266Mb/s, 64Mx8, 1.250” Height, Samsung Chips

96SD-512M400NN-TR
Transcend, 200PIN, 400Mb/s, 64Mx8, 1.250” Height, Samsung Chips

96SD-1G333NN-TR
Transcend, 200PIN, 333Mb/s, 64Mx8, 1.250” Height, Samsung Chips

96SD-1G333NN-AP
Apacer, 200PIN, 400Mb/s, 64Mx8, 1.250” Height, Samsung Chips

96SD-1G400NN-TR
Transcend, 200PIN, 400Mb/s, 64Mx8, 1.250” Height, Samsung Chips

96SD-1G400NN-AP1
Apacer, 200PIN, 400Mb/s, 64Mx8, 1.250” Height, Samsung Chips

DDR2 DIMM

▬ Available ▬ Phasing-out ▬ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature

512 MB

96D2-512M400NN-TR

Transcend, 240PIN, 400Mb/s, 64Mx8, 0.720" Height, Samsung Chips

96D2-512M667NN-TRL V

Transcend, 240PIN, 667Mb/s, 64Mx8, 0.720" Height, Samsung Chips

1 GB

96D2-1G533NN-TR1

Transcend, 240PIN, 533Mb/s, 64Mx8, 0.720" Height, Samsung Chips

96D2-1G667NN-TRL V Hot

Transcend, 240PIN, 667Mb/s, 64Mx8, 0.720" Height, Samsung Chips

96D2-1G800NN-TRL1 V Hot

Transcend, 240PIN, 800Mb/s, 128Mx8, 0.720" Height, Samsung Chips

96D2-1G800NN-AP3

Apacer, 240PIN, 800Mb/s, 128Mx8, 1.181" Height, Samsung Chips

2 GB

96D2-2G800NN-KI Hot

Kingston, 240PIN, 800Mb/s, 128Mx8, 1.181" Height, Kingston Chips

96D2-2G667NN-TRL V

Transcend, 240PIN, 667Mb/s, 128Mx8, 0.720" Height, Samsung Chips

96D2-2G667-AP

Apacer, 240PIN, 667Mb/s, 128Mx8, 1.181" Height, Samsung Chips

96D2-2G800NN-TRL1 V Hot

Transcend, 240PIN, 800Mb/s, 128Mx8, 0.720" Height, Samsung Chips

96D2-2G800NN-AP

Apacer, 240PIN, 800Mb/s, 128Mx8, 1.181" Height, Samsung Chips

Q3/2013	Q4/2013	Q1/2014	Q2/2014

🟦 Available ▨ Phasing-out ▭ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature

DDR2 DIMM Advance Feature

ECC

1 GB

96D2-1G533E-TR E

Transcend, 240PIN, 533Mb/s, 64Mx8, 1.181” Height, Samsung Chips

2 GB

96D2-2G800E-AP1 E

Apacer, 240PIN, 800Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96D2-2G800E-TR1 E

Transcend, 240PIN, 800Mb/s, 128Mx8, 1.181” Height, Samsung Chips

ECC and Registered

1 GB

96D2-1G400ER-TR E R

Transcend, 240PIN, 400Mb/s, 64Mx8, 1.181” Height, Samsung Chips

2 GB

96D2-2G667ER-TR E R

Transcend, 240PIN, 667Mb/s, 128Mx8, 1.181” Height, Samsung Chips

4 GB

96D2-4G667ER-TR1 E R

Transcend, 240PIN, 667Mb/s, 256Mx4, 1.181” Height, Samsung Chips

Q3/2013	Q4/2013	Q1/2014	Q2/2014

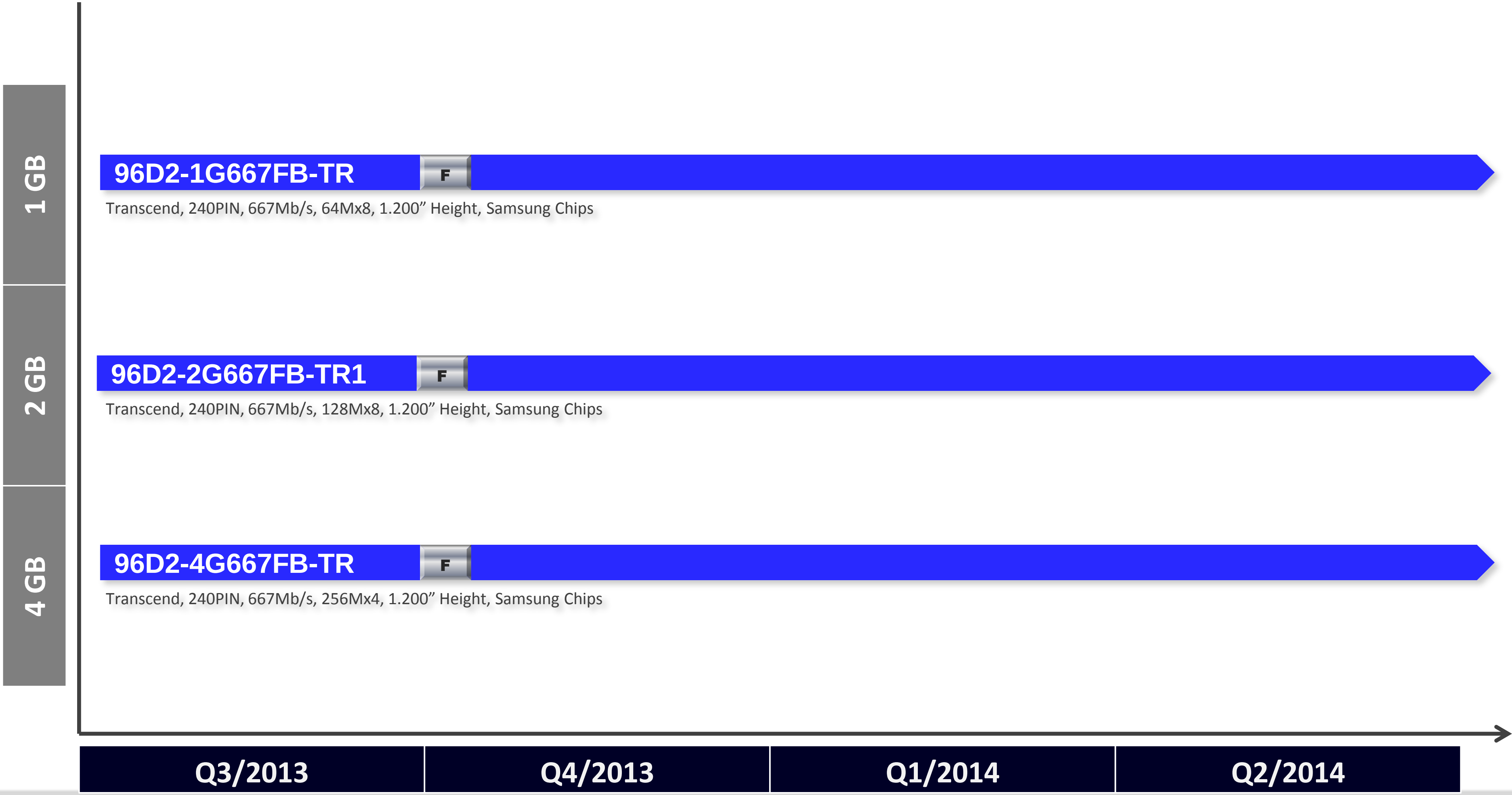
🟦 Available ▨ Phasing-out 🟦 Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature

DDR2 DIMM Advance Feature

Fully Buffered



1 GB

96D2-1G667FB-TR F

Transcend, 240PIN, 667Mb/s, 64Mx8, 1.200" Height, Samsung Chips

2 GB

96D2-2G667FB-TR1 F

Transcend, 240PIN, 667Mb/s, 128Mx8, 1.200" Height, Samsung Chips

4 GB

96D2-4G667FB-TR F

Transcend, 240PIN, 667Mb/s, 256Mx4, 1.200" Height, Samsung Chips

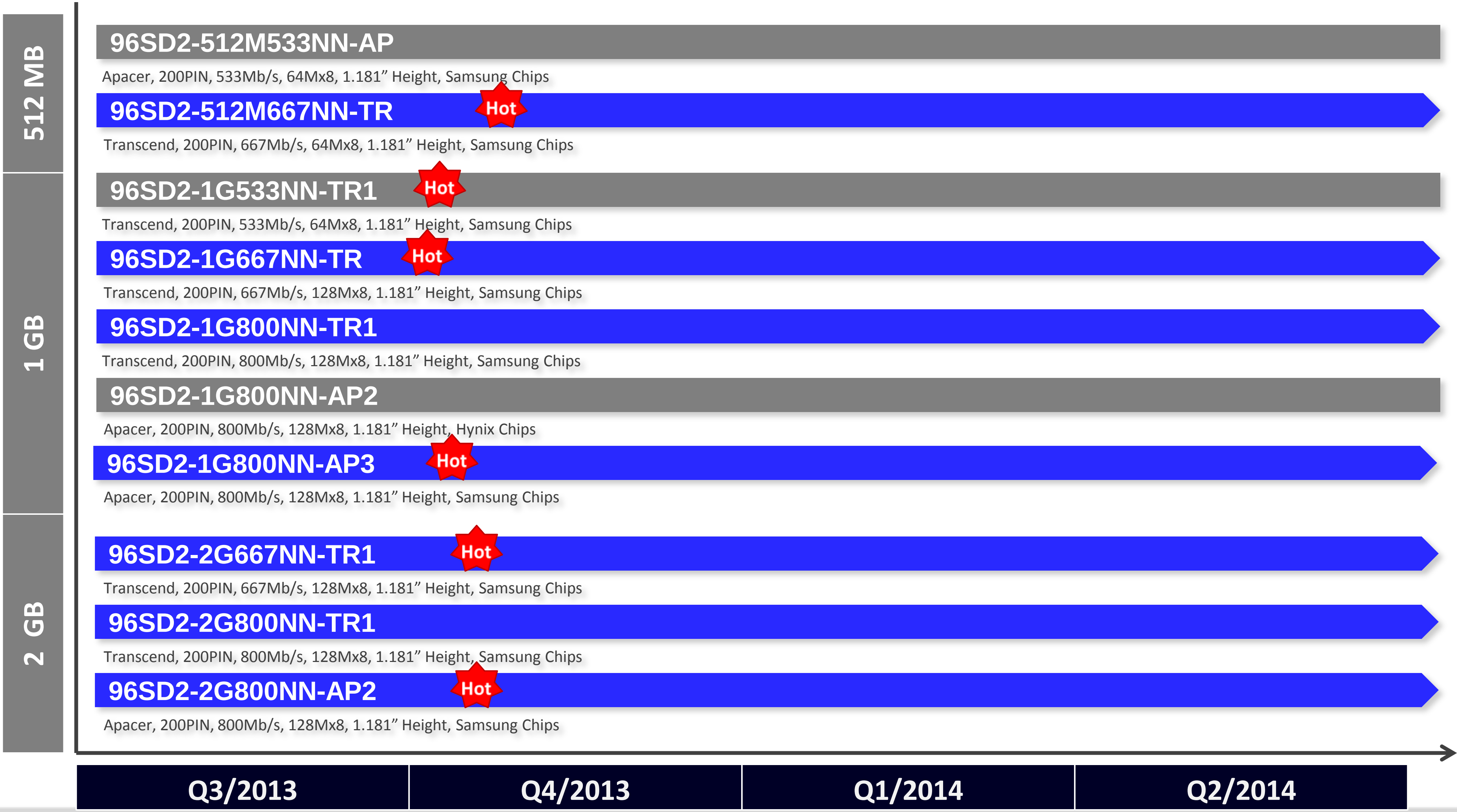
Q3/2013 Q4/2013 Q1/2014 Q2/2014

DDR2 SO-DIMM

🟦 Available ▨ Phasing-out ▭ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



512 MB

96SD2-512M533NN-AP

Apacer, 200PIN, 533Mb/s, 64Mx8, 1.181” Height, Samsung Chips

96SD2-512M667NN-TR Hot

Transcend, 200PIN, 667Mb/s, 64Mx8, 1.181” Height, Samsung Chips

1 GB

96SD2-1G533NN-TR1 Hot

Transcend, 200PIN, 533Mb/s, 64Mx8, 1.181” Height, Samsung Chips

96SD2-1G667NN-TR Hot

Transcend, 200PIN, 667Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96SD2-1G800NN-TR1

Transcend, 200PIN, 800Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96SD2-1G800NN-AP2

Apacer, 200PIN, 800Mb/s, 128Mx8, 1.181” Height, Hynix Chips

96SD2-1G800NN-AP3 Hot

Apacer, 200PIN, 800Mb/s, 128Mx8, 1.181” Height, Samsung Chips

2 GB

96SD2-2G667NN-TR1 Hot

Transcend, 200PIN, 667Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96SD2-2G800NN-TR1

Transcend, 200PIN, 800Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96SD2-2G800NN-AP2 Hot

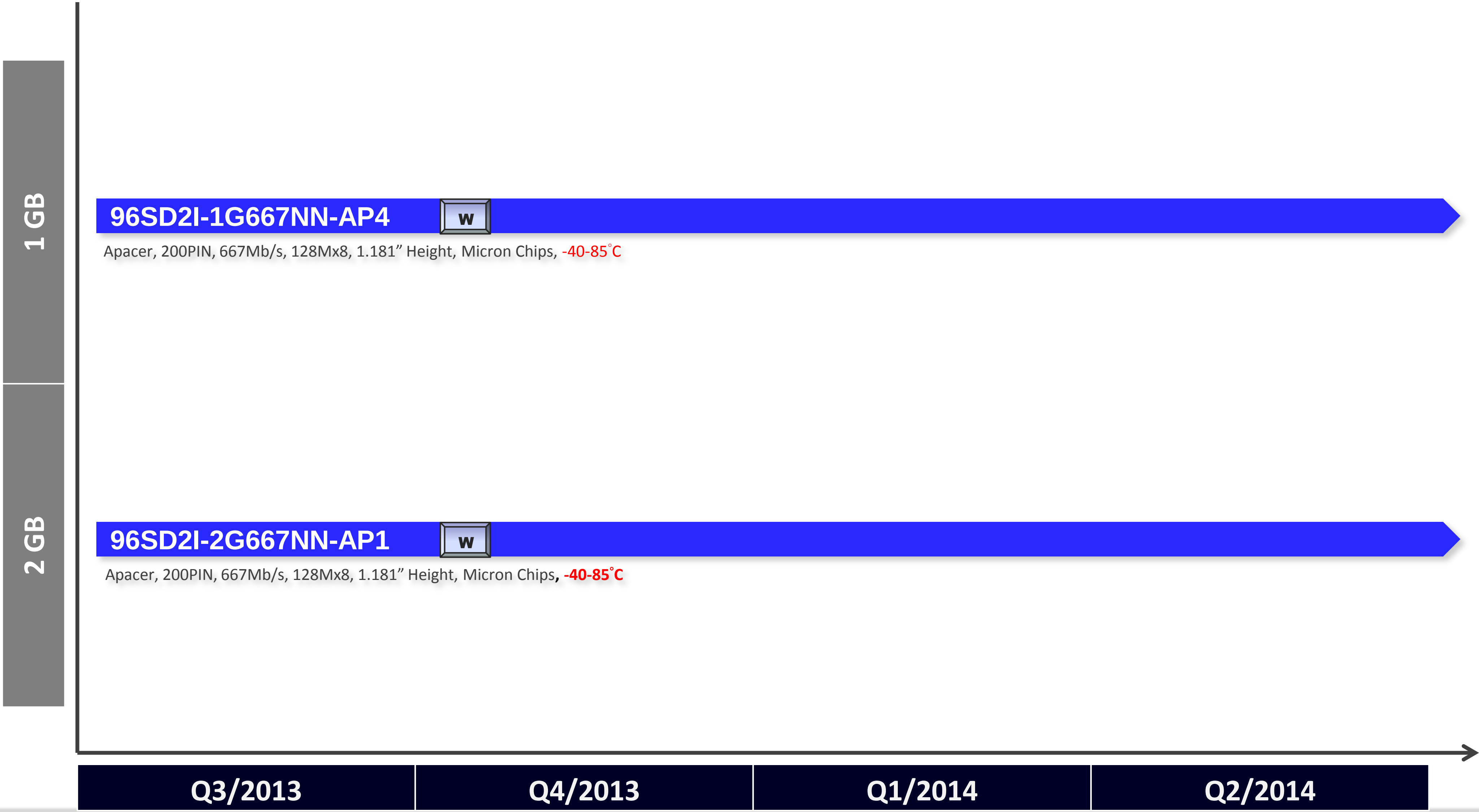
Apacer, 200PIN, 800Mb/s, 128Mx8, 1.181” Height, Samsung Chips

DDR2 SO-DIMM Wide Temp.

■ Available ■ Phasing-out ■ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



96SD2I-1G667NN-AP4

Apacer, 200PIN, 667Mb/s, 128Mx8, 1.181” Height, Micron Chips, -40-85˚C

96SD2I-2G667NN-AP1

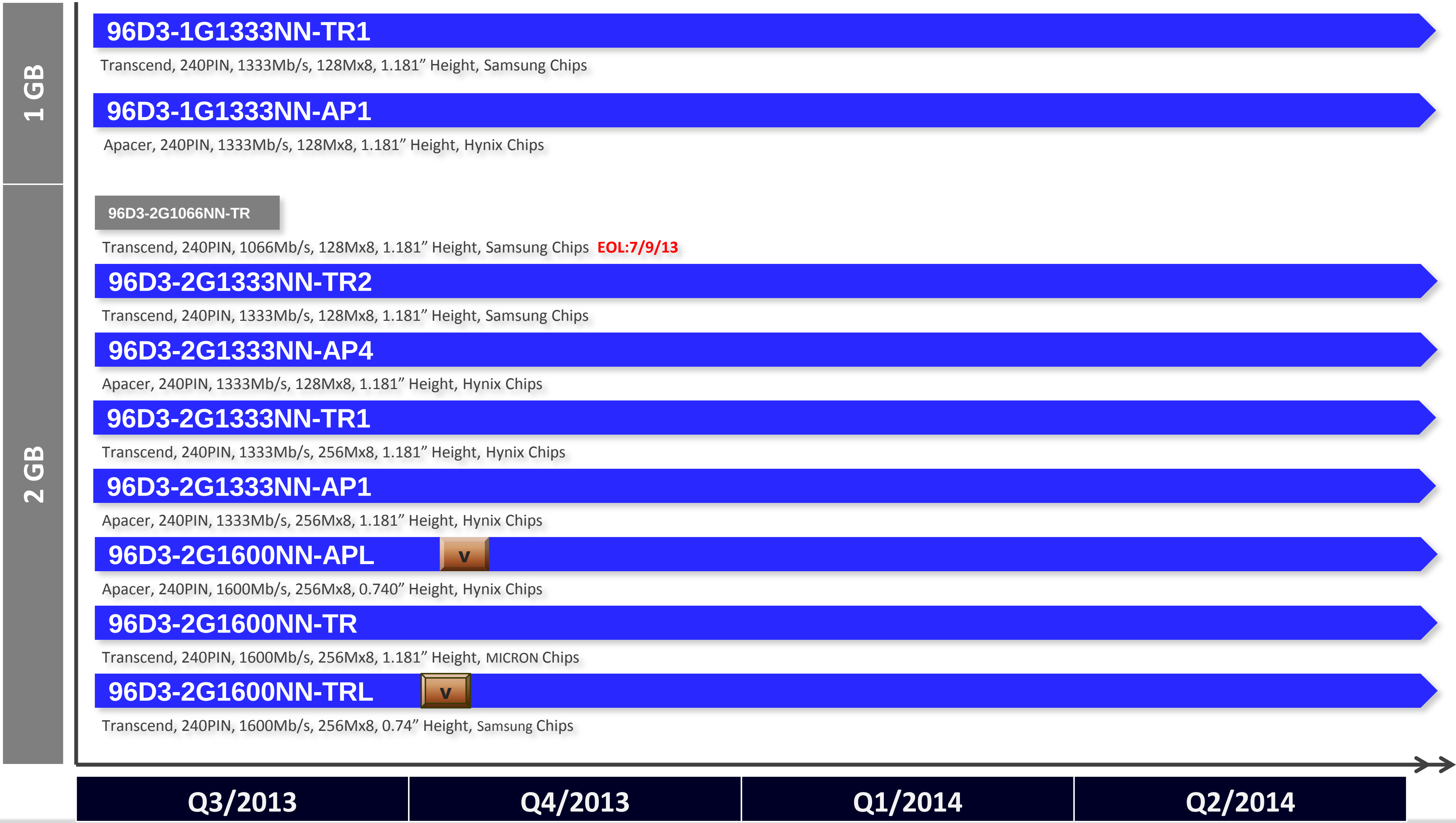
Apacer, 200PIN, 667Mb/s, 128Mx8, 1.181” Height, Micron Chips, **-40-85˚C**

DDR3 DIMM

🟦 Available ▨ Phasing-out ▭ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



1 GB

96D3-1G1333NN-TR1

Transcend, 240PIN, 1333Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96D3-1G1333NN-AP1

Apacer, 240PIN, 1333Mb/s, 128Mx8, 1.181” Height, Hynix Chips

2 GB

96D3-2G1066NN-TR

Transcend, 240PIN, 1066Mb/s, 128Mx8, 1.181” Height, Samsung Chips **EOL:7/9/13**

96D3-2G1333NN-TR2

Transcend, 240PIN, 1333Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96D3-2G1333NN-AP4

Apacer, 240PIN, 1333Mb/s, 128Mx8, 1.181” Height, Hynix Chips

96D3-2G1333NN-TR1

Transcend, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96D3-2G1333NN-AP1

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96D3-2G1600NN-APL V

Apacer, 240PIN, 1600Mb/s, 256Mx8, 0.740” Height, Hynix Chips

96D3-2G1600NN-TR

Transcend, 240PIN, 1600Mb/s, 256Mx8, 1.181” Height, MICRON Chips

96D3-2G1600NN-TRL V

Transcend, 240PIN, 1600Mb/s, 256Mx8, 0.74” Height, Samsung Chips

DDR3 DIMM

🟦 Available ▨ Phasing-out 🟦 Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature

4 GB

96D3-4G1333NN-TR Hot

Transcend, 240PIN, 1333Mb/s, 256Mx8, 1.181" Height, Hynix Chips

96D3-4G1333NN-AP Hot

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181" Height, Hynix Chips

96D3-4G1600NN-APL V

Apacer, 240PIN, 1600Mb/s, 256Mx8, 0.740" Height, Hynix Chips

96D3-4G1600NN-TR

Transcend, 240PIN, 1600Mb/s, 256Mx8, 1.181" Height, Micron Chips EOL:7/9/2013

96D3-4G1600NN-TR

Transcend, 240PIN, 1600Mb/s, 256Mx8, 1.181" Height, Samsung Chips

8 GB

96D3-8G1333NN-APL V N

Apacer, 240PIN, 1333Mb/s, 512Mx8, 0.740" Height, Micron Chips

96D3-8G1600NN-APL V

Apacer, 240PIN, 1600Mb/s, 512Mx8, 0.740" Height, Micron Chips

96D3-8G1600NN-TR

Transcend, 240PIN, 1600Mb/s, 512Mx8, 1.181" Height, Micron Chips

Q3/2013	Q4/2013	Q1/2014	Q2/2014

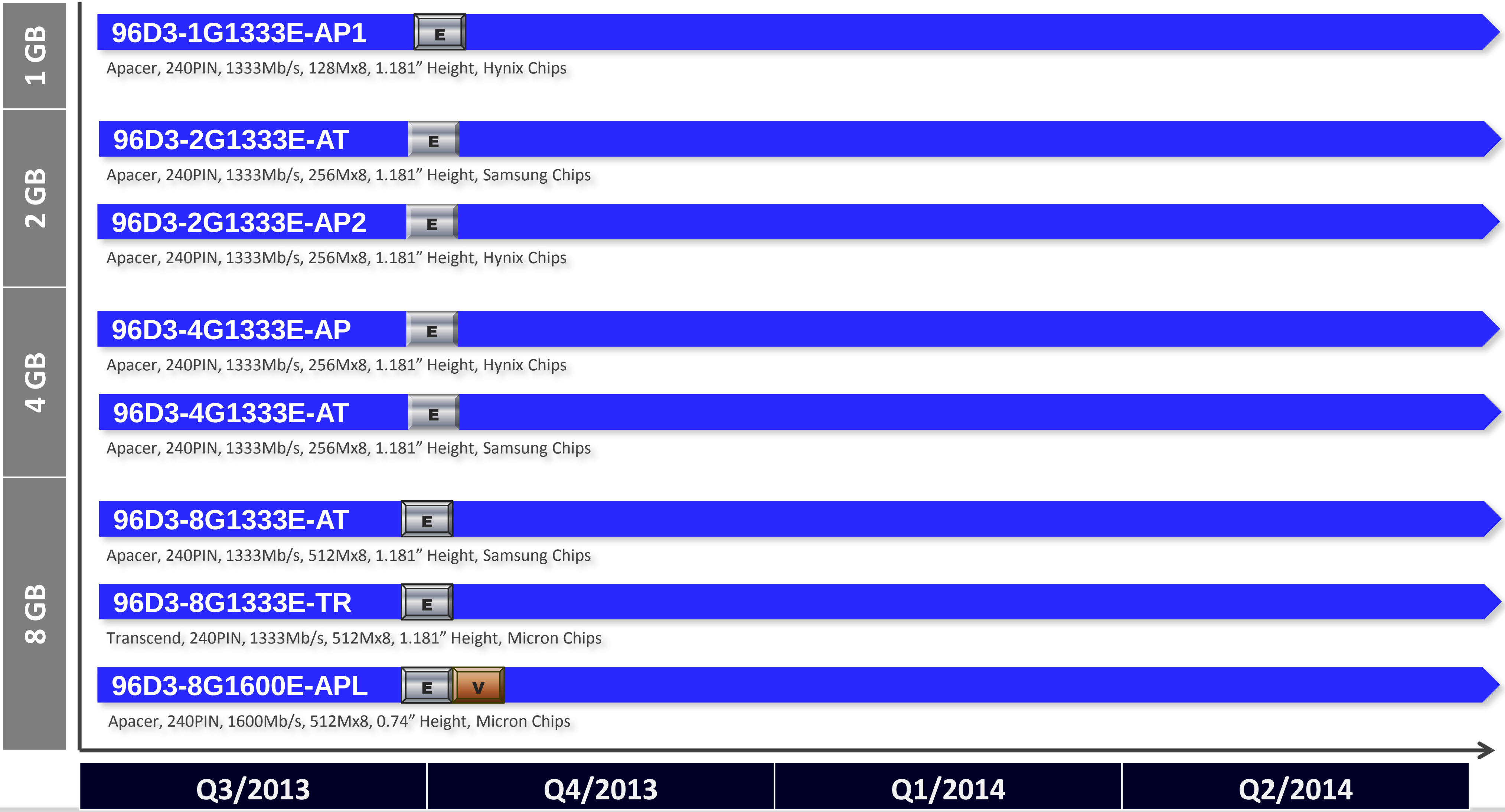
DDR3 DIMM Advance Feature

🟦 Available ▨ Phasing-out ▭ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature

ECC



1 GB

96D3-1G1333E-AP1 E

Apacer, 240PIN, 1333Mb/s, 128Mx8, 1.181” Height, Hynix Chips

2 GB

96D3-2G1333E-AT E

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Samsung Chips

96D3-2G1333E-AP2 E

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

4 GB

96D3-4G1333E-AP E

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96D3-4G1333E-AT E

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Samsung Chips

8 GB

96D3-8G1333E-AT E

Apacer, 240PIN, 1333Mb/s, 512Mx8, 1.181” Height, Samsung Chips

96D3-8G1333E-TR E

Transcend, 240PIN, 1333Mb/s, 512Mx8, 1.181” Height, Micron Chips

96D3-8G1600E-APL E V

Apacer, 240PIN, 1600Mb/s, 512Mx8, 0.74” Height, Micron Chips

Enabling an Intelligent Planet

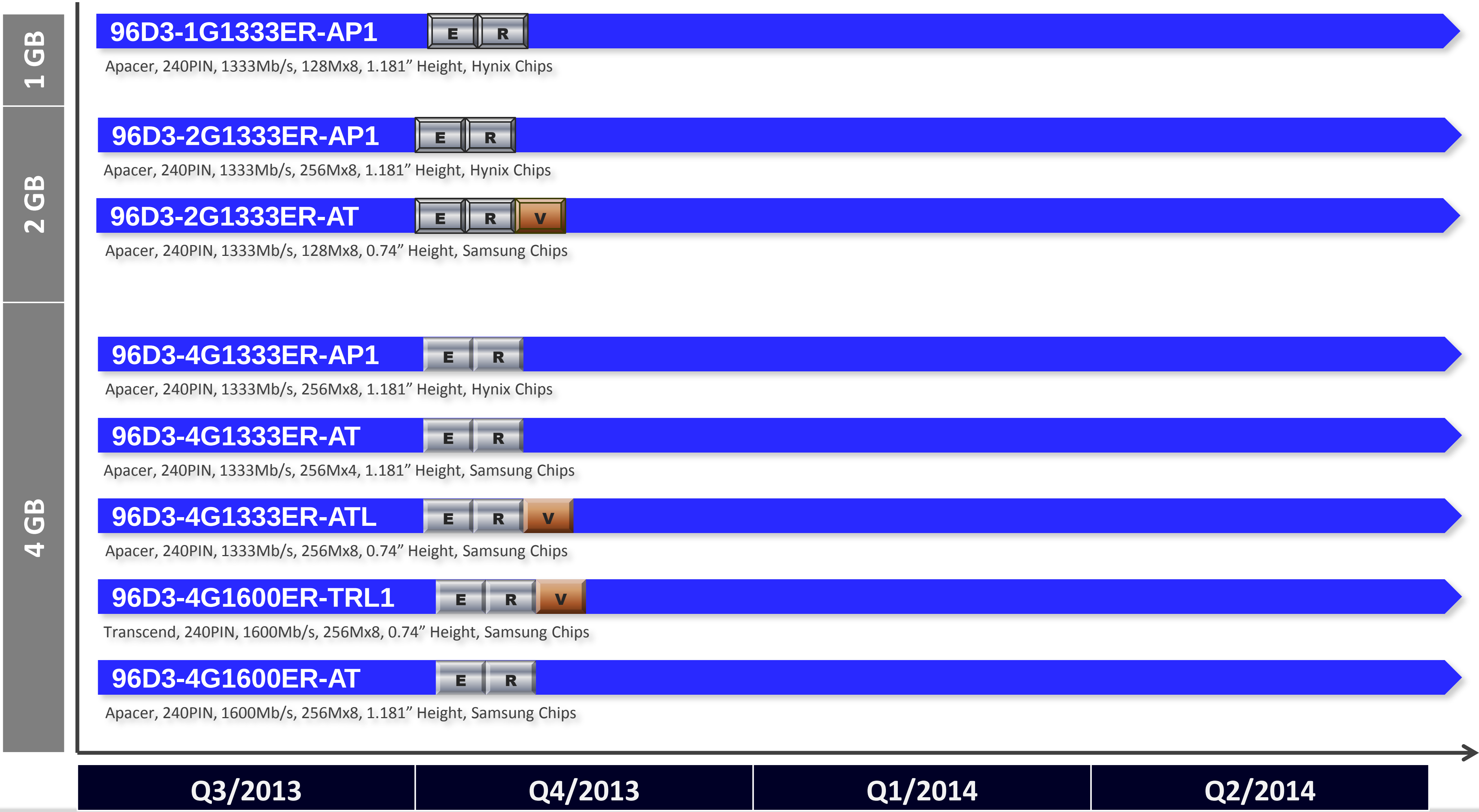
DDR3 DIMM Advance Feature

ECC and Registered

🟦 Available ▨ Phasing-out 🟦 Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



1 GB

96D3-1G1333ER-AP1 E R

Apacer, 240PIN, 1333Mb/s, 128Mx8, 1.181” Height, Hynix Chips

2 GB

96D3-2G1333ER-AP1 E R

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96D3-2G1333ER-AT E R V

Apacer, 240PIN, 1333Mb/s, 128Mx8, 0.74” Height, Samsung Chips

4 GB

96D3-4G1333ER-AP1 E R

Apacer, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96D3-4G1333ER-AT E R

Apacer, 240PIN, 1333Mb/s, 256Mx4, 1.181” Height, Samsung Chips

96D3-4G1333ER-ATL E R V

Apacer, 240PIN, 1333Mb/s, 256Mx8, 0.74” Height, Samsung Chips

96D3-4G1600ER-TRL1 E R V

Transcend, 240PIN, 1600Mb/s, 256Mx8, 0.74” Height, Samsung Chips

96D3-4G1600ER-AT E R

Apacer, 240PIN, 1600Mb/s, 256Mx8, 1.181” Height, Samsung Chips

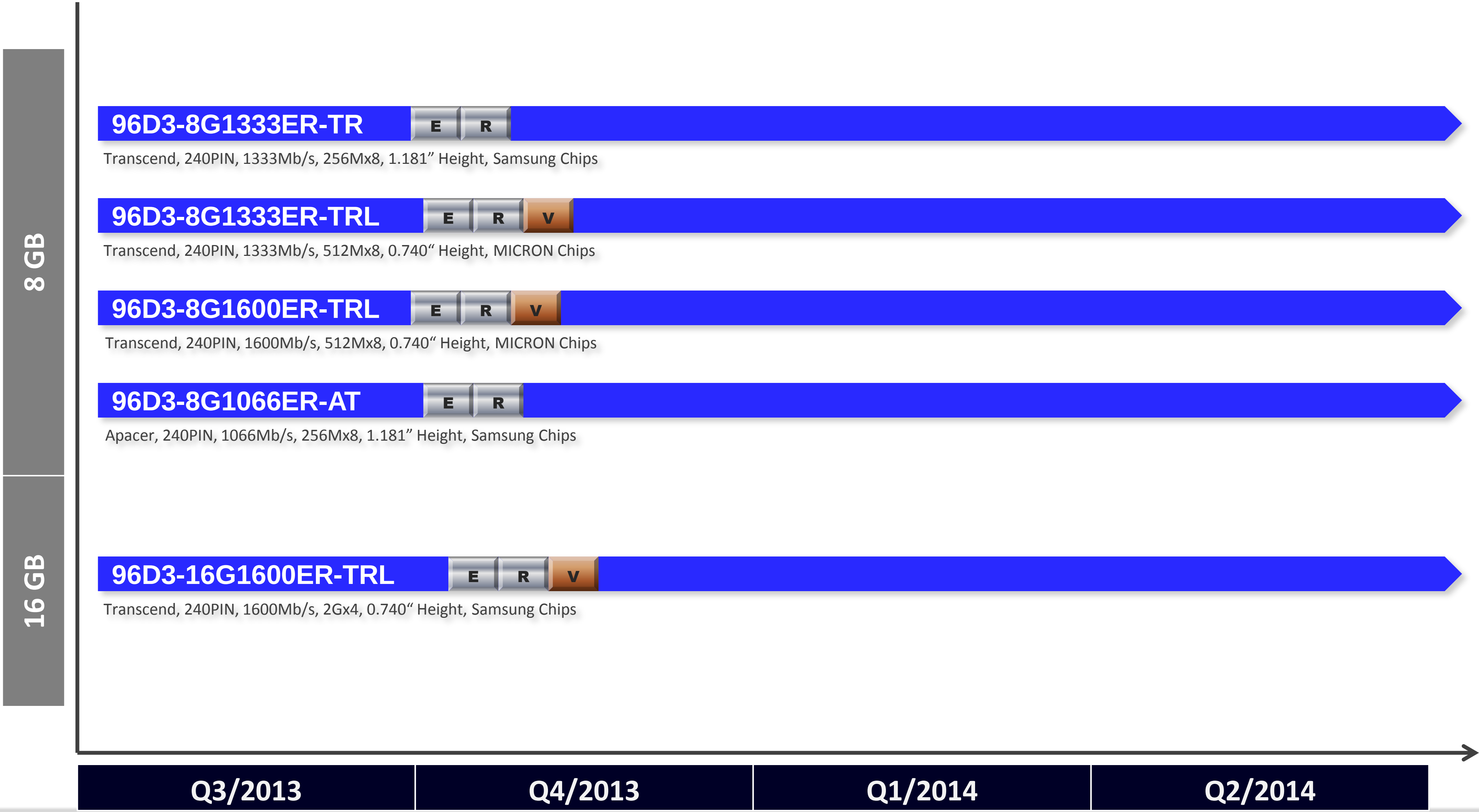
DDR3 DIMM Advance Feature

■ Available ■ Phasing-out □ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature

ECC and Registered



8 GB

96D3-8G1333ER-TR E R

Transcend, 240PIN, 1333Mb/s, 256Mx8, 1.181” Height, Samsung Chips

96D3-8G1333ER-TRL E R V

Transcend, 240PIN, 1333Mb/s, 512Mx8, 0.740“ Height, MICRON Chips

96D3-8G1600ER-TRL E R V

Transcend, 240PIN, 1600Mb/s, 512Mx8, 0.740“ Height, MICRON Chips

96D3-8G1066ER-AT E R

Apacer, 240PIN, 1066Mb/s, 256Mx8, 1.181” Height, Samsung Chips

16 GB

96D3-16G1600ER-TRL E R V

Transcend, 240PIN, 1600Mb/s, 2Gx4, 0.740“ Height, Samsung Chips

Q3/2013 Q4/2013 Q1/2014 Q2/2014

Enabling an Intelligent Planet

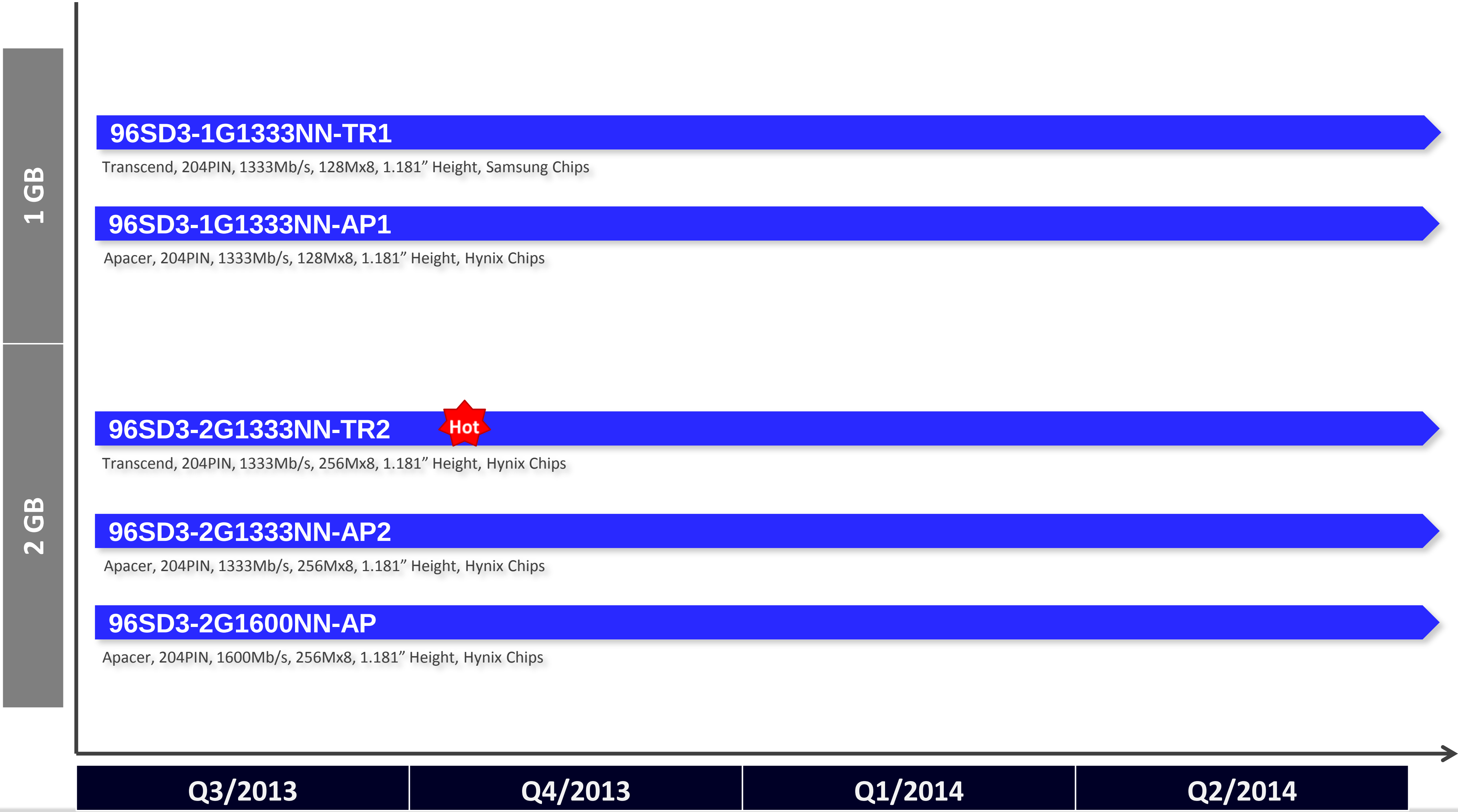
ADVANTECH

DDR3 SO-DIMM

🟦 Available ▨ Phasing-out 🟦 Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



1 GB

96SD3-1G1333NN-TR1

Transcend, 204PIN, 1333Mb/s, 128Mx8, 1.181” Height, Samsung Chips

96SD3-1G1333NN-AP1

Apacer, 204PIN, 1333Mb/s, 128Mx8, 1.181” Height, Hynix Chips

2 GB

96SD3-2G1333NN-TR2 Hot

Transcend, 204PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96SD3-2G1333NN-AP2

Apacer, 204PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96SD3-2G1600NN-AP

Apacer, 204PIN, 1600Mb/s, 256Mx8, 1.181” Height, Hynix Chips

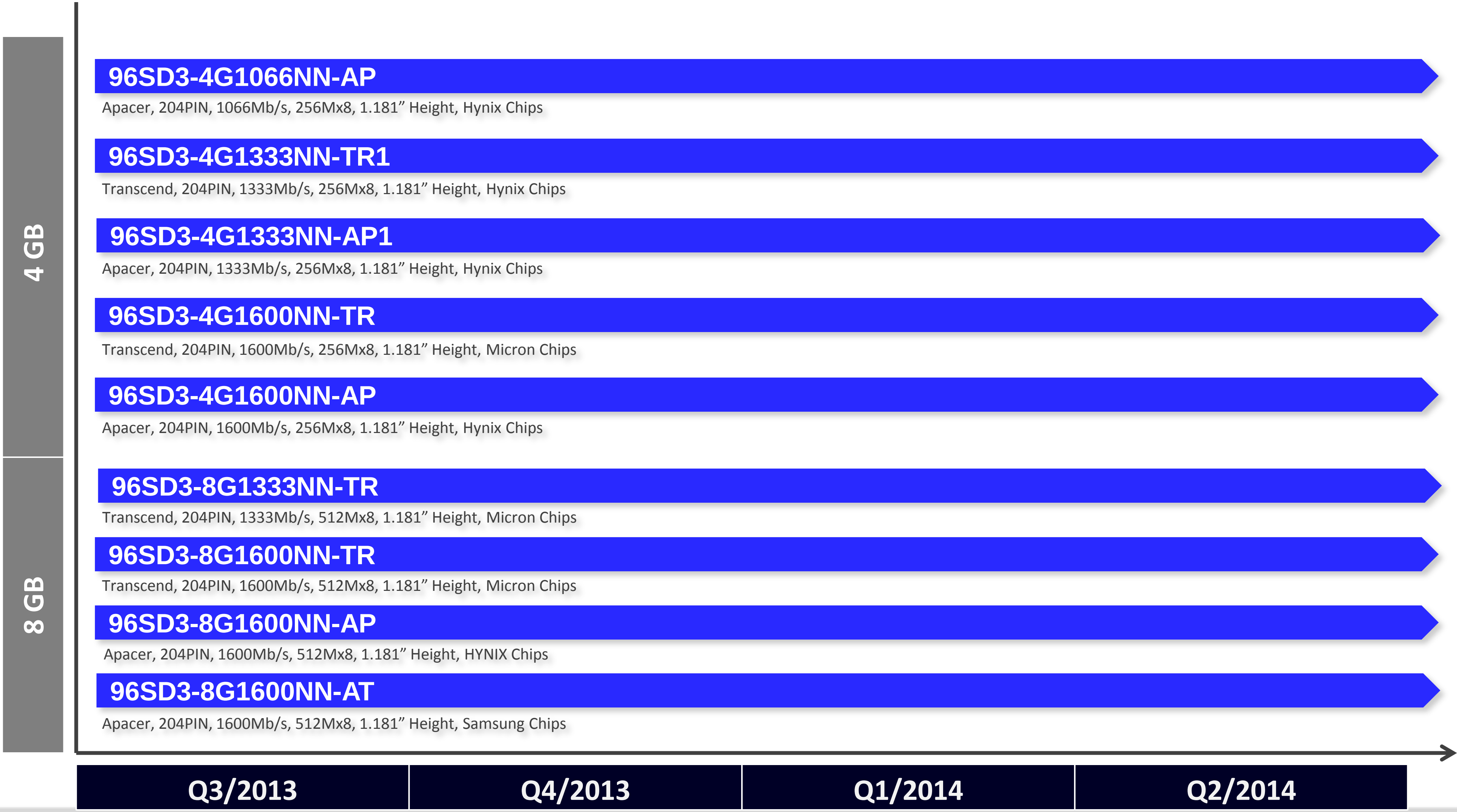
Q3/2013 Q4/2013 Q1/2014 Q2/2014

DDR3 SO-DIMM

▬ Available ▬ Phasing-out ▬ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



96SD3-4G1066NN-AP
Apacer, 204PIN, 1066Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96SD3-4G1333NN-TR1
Transcend, 204PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96SD3-4G1333NN-AP1
Apacer, 204PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96SD3-4G1600NN-TR
Transcend, 204PIN, 1600Mb/s, 256Mx8, 1.181” Height, Micron Chips

96SD3-4G1600NN-AP
Apacer, 204PIN, 1600Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96SD3-8G1333NN-TR
Transcend, 204PIN, 1333Mb/s, 512Mx8, 1.181” Height, Micron Chips

96SD3-8G1600NN-TR
Transcend, 204PIN, 1600Mb/s, 512Mx8, 1.181” Height, Micron Chips

96SD3-8G1600NN-AP
Apacer, 204PIN, 1600Mb/s, 512Mx8, 1.181” Height, HYNIX Chips

96SD3-8G1600NN-AT
Apacer, 204PIN, 1600Mb/s, 512Mx8, 1.181” Height, Samsung Chips

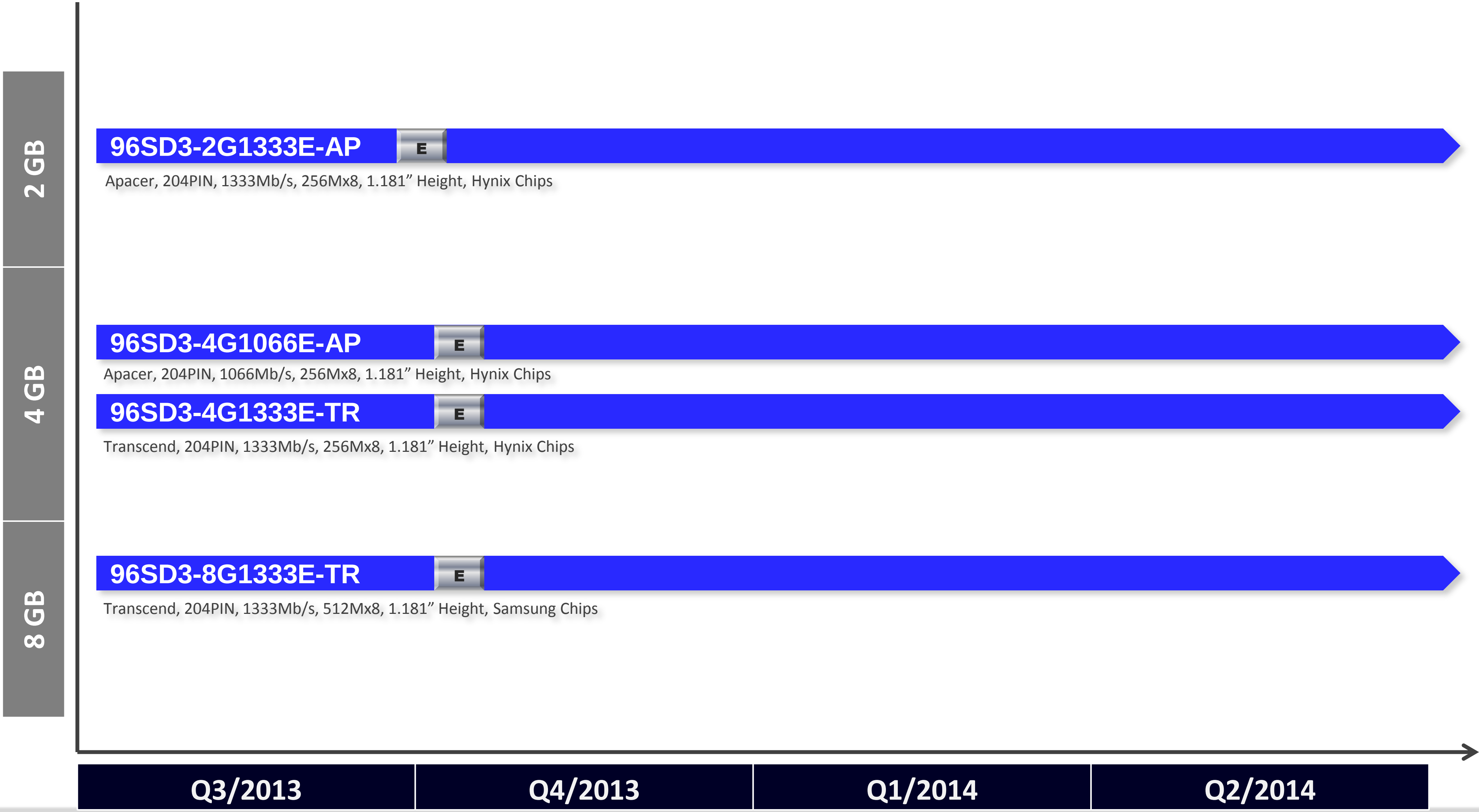
DDR3 SO-DIMM

Advance Feature - ECC

🟦 Available ▨ Phasing-out 🟦 Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



2 GB

96SD3-2G1333E-AP E

Apacer, 204PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

4 GB

96SD3-4G1066E-AP E

Apacer, 204PIN, 1066Mb/s, 256Mx8, 1.181” Height, Hynix Chips

96SD3-4G1333E-TR E

Transcend, 204PIN, 1333Mb/s, 256Mx8, 1.181” Height, Hynix Chips

8 GB

96SD3-8G1333E-TR E

Transcend, 204PIN, 1333Mb/s, 512Mx8, 1.181” Height, Samsung Chips

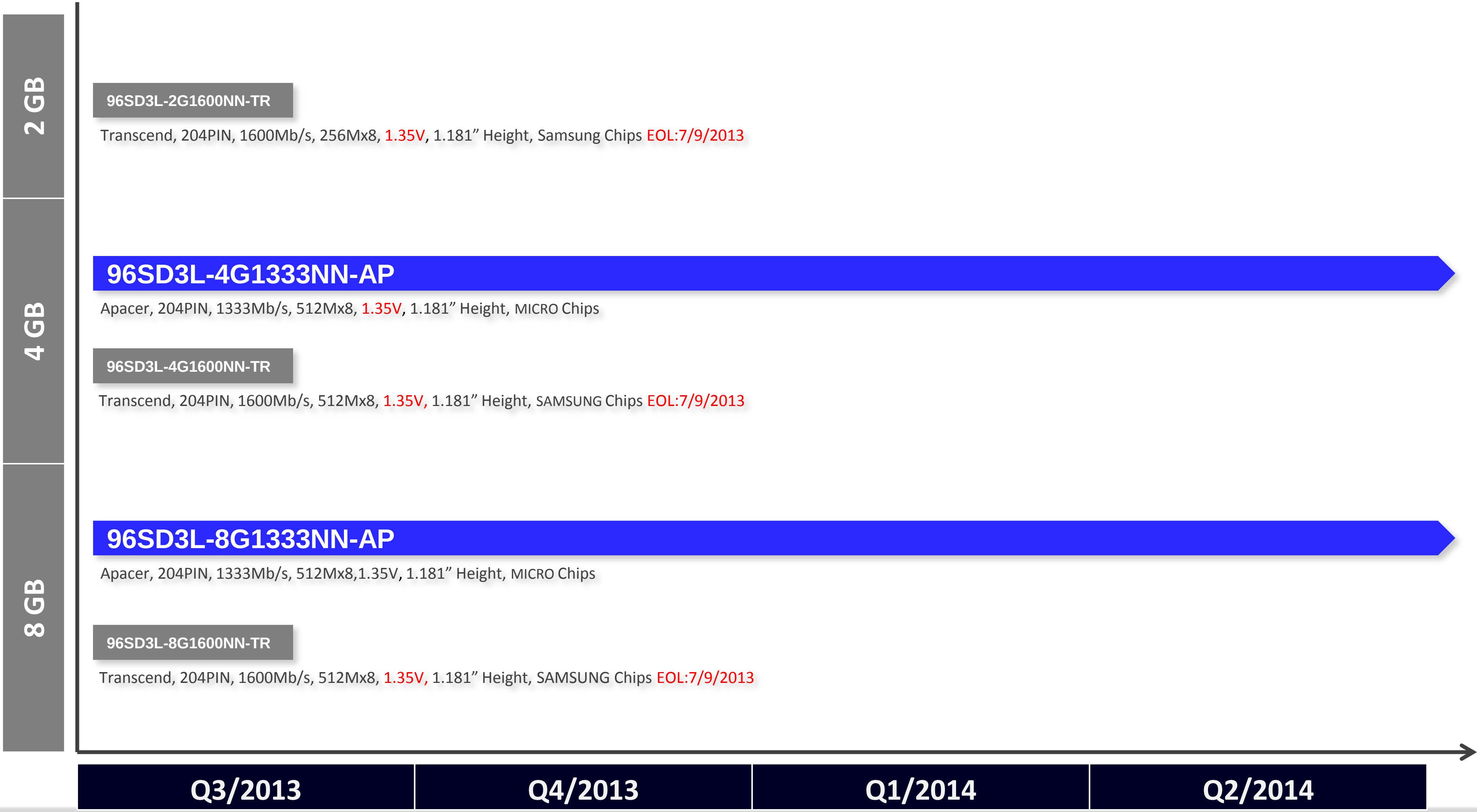
DDR3 SO-DIMM

Low Voltage.

🟦 Available ▨ Phasing-out ▭ Planning

E ECC R Registered F Fully Buffered N New

L Low-Profile V Very Low-Profile W Wide Temperature



2 GB

96SD3L-2G1600NN-TR

Transcend, 204PIN, 1600Mb/s, 256Mx8, 1.35V, 1.181” Height, Samsung Chips EOL:7/9/2013

4 GB

96SD3L-4G1333NN-AP

Apacer, 204PIN, 1333Mb/s, 512Mx8, 1.35V, 1.181” Height, MICRO Chips

96SD3L-4G1600NN-TR

Transcend, 204PIN, 1600Mb/s, 512Mx8, 1.35V, 1.181” Height, SAMSUNG Chips EOL:7/9/2013

8 GB

96SD3L-8G1333NN-AP

Apacer, 204PIN, 1333Mb/s, 512Mx8,1.35V, 1.181” Height, MICRO Chips

96SD3L-8G1600NN-TR

Transcend, 204PIN, 1600Mb/s, 512Mx8, 1.35V, 1.181” Height, SAMSUNG Chips EOL:7/9/2013

Memory EOL Procedure

- **For support and product management optimization, PAPS will follow the Memory phase-out procedure as below.**

2 Month

1 Month

Official EOL Announcement

Last Time Buy Order

EOL

Replacement and Evaluation Approval

Thank you