



Long-Term Support  
World Class Quality

# 8Mb High Speed with ECC Async SRAM 32Mb High Speed Async SRAM

## 8Mb High Speed Low Power Asynchronous SRAM with Error Correction Code (ECC)

ISSI's latest Error Correction based 8Mb High Speed Low Power Asynchronous SRAM is in production. This innovative design reinforces ISSI's long-term commitment to SRAMs with the highest quality and performance. This industry's first Error Correction Code (ECC) based Asynchronous SRAM meets high quality requirements in automotive, industrial, military-aerospace, and other applications.

### Error Detection and Error Correction

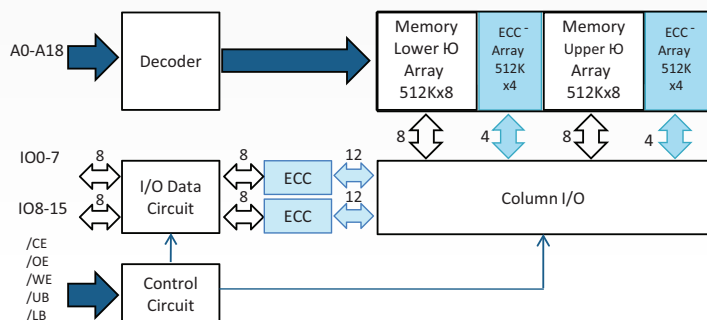
- Independent ECC with hamming code for each byte
- Detect and correct one bit error per each byte
- Better reliability than parity code schemes which can only detect an error but not correct an error
- Backward Compatible: Drop in replacement to current in industry standard devices (without ECC)

**Applications:** Automotive, Industrial/Medical, Telecom/Networking

**Additional ECC Async SRAMs:** 1Mb, 2Mb, 4Mb, 16Mb

### Key Features

	IS61WV51216EDBLL (I)	IS64WV51216EDBLL (A3)	Comments
Temperature Support	Industrial [-40°C to +85°C]	Automotive [-40°C to +125°C]	
Technology	65nm	65nm	
Standby Current	15mA	35mA	Typical value 2mA
Operating Current	50mA	65mA	Typical value 15mA
Data Retention Current	15mA	35mA	Typical value 2mA
Packaging	TSOP-II (44 pins) BGA (48 pins)	TSOP-II (44 pins) BGA (48 pins)	Pin compatible w/ industry standard 8Mb Async. SRAM
Speed	10ns	10ns	
Copper Leadframe	Yes	Yes	Improved thermal performance
Lead-free and Leaded	Yes	Yes	RoHS Compliant
Availability	Production	Production	



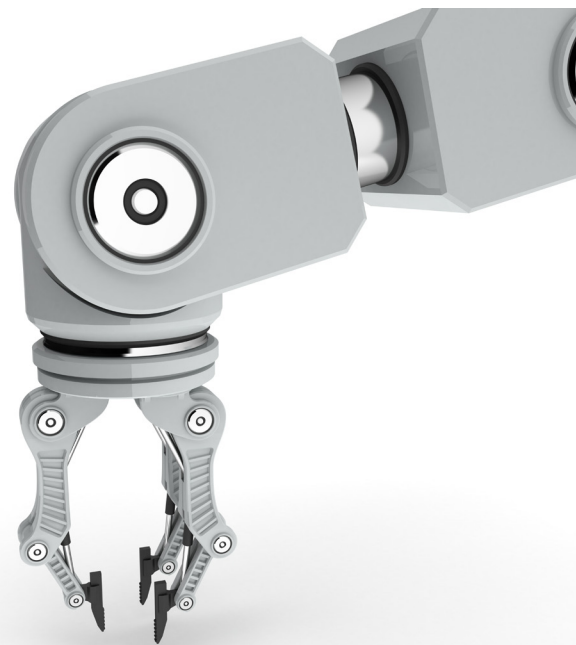
## 32Mb High Speed Low Power SRAM IS61/64WV204816BLL

ISSI is now sampling a 32Mb High Speed Low Power Asynchronous SRAM, the latest addition to our SRAM portfolio. This innovative design reinforces ISSI's longterm commitment to SRAMs with the highest quality and performance. 32Mb SRAM provides an access time of 10ns at Automotive, A3 temperature range [-40°C to +125°C].

**Applications:** Automotive, Industrial/Medical, Telecom/Networking

### Key Features

	IS61WV204816BLL (I)	IS64WV204816BLL (A3)	Comments
Temperature Support	Industrial [-40°C to +85°C]	Automotive [-40°C to +125°C]	
Technology	40nm	40nm	
Supply Voltage	2.4V ~ 3.6V	2.4V ~ 3.6V	
Operating Current [Max]	95mA	140mA	Typical value 60 mA
Standby Current [Typ]	4mA	4mA	
Packaging	TSOP-I (48 pins) BGA (48 balls)	TSOP-I (48 pins) BGA (48 balls)	Pin compatible w/ 16Mb Async. SRAM
Speed	10ns	12ns	
Copper Leadframe	Yes	Yes	
Lead-free PKG	Yes	Yes	RoHS Compliant
Availability	Sampling Now	Sampling Now	



## HyperRAM™ DRAM Based memory with HyperBus™ Interface

### Features:

- Hidden Refresh operation
- Very Low Bus Signal Count :
  - 12 pins for 1.8V [with CK,CK# ]
  - 11 pins for 3.0V [CK only]
- Max. Frequency :
  - 166MHz at VDD = 1.8V
  - 100MHz at VDD = 3.0V
- Low Power Consumption :
  - Burst Operation Current at 166MHz, 1.8V = 60mA [Max]
  - Standby Current @ 105°C, 1.8V = 300uA [Max]
  - Deep Power Down Current @ 105°C, 1.8V = 10uA [Max]

### Package:

- 24-pin BGA

### HyperRAM™ Pin-Outs (In evaluation):

- 24-pin [5 x 5 ball array]
- PKG Body Size : 6 mm x 8 mm
- Ball Pitch : 1.0mm

### Densities:

- 64Mb [8Mb x 8] , 32Mb [4Mb x8]
- 128Mb [16Mb x8], 256Mb [32Mb x8]

### Availability:

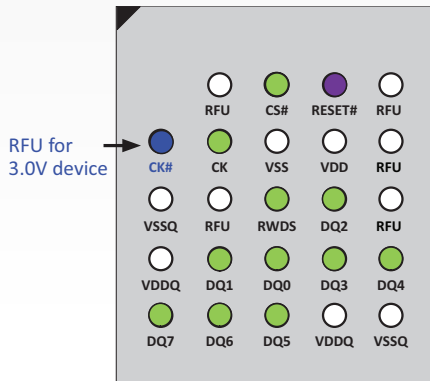
- 64Mb
  - Production Now!
- 128Mb
  - Samples Available Now!
- 32Mb, 256Mb
  - Call Factory

### Automotive Temperature Grades:

- Automotive, A1 [-40°C to 85°C]
- Automotive, A2 [-40°C to 105°C]

### Applications:

- Infotainment
- Advanced Driver Assistance Systems
- Smart Appliance
- Factory Automation
- Medical
- LED Projector
- D-SLR Camera
- Auto-Cluster



## 4Mbit Latched SRAM 256Kx16 High speed Asynchronous CMOS stat RAM with Latched Address & ECC

### Features:

- High-speed access time: 12ns, 15ns
- Single power supply
  - 2.4V-3.6V VDD
- Ultra Low Standby Current with ZZ# pin
  - IZZ = 80uA @ 125°C
- Error Detection and Correction per individual 8-bits [byte] with optional ERR1/ERR2 output pin:
  - ERR1 pin indicates 1-bit error detection and correction.
  - ERR2 pin indicates multi-bit error detection
- ALE# pin to latch Address & CS# signals.
- Industrial and Automotive temperature support
- Lead-free available

### BGA Pinout:

48-Pin mini BGA (6mm x 8mm) with ZZ# and ERR1/2

