

Commercial Products Overview



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Overview

- Long established (1983) supplier of innovative memory product solutions.
- Range of specialist memory packaging capabilities
- Limited standard product range
- Application / customer specific custom solutions focus
- Various memory technologies



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HMP is a brand name of Apta Group Ltd



Product Range

- Memory solutions.
- High density, wide data width, flexible solutions.
- Range of CSP based module products.
- Monolithic and Multichip Chip Size Package (CSP) products.
- Standard, upgradeable footprints.



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Product Lines

High density, wide data width, flexible solutions.

PUMA68 68 lead PLCC – SRAM, Flash and mixed technology.

PUMA84 84 lead PLCC – SRAM, Flash and mixed technology.

CSP based, high density solutions.

Monolithic and Multichip Chip Size Package (CSP) products.

Byte wide Flash and SRAM monolithic

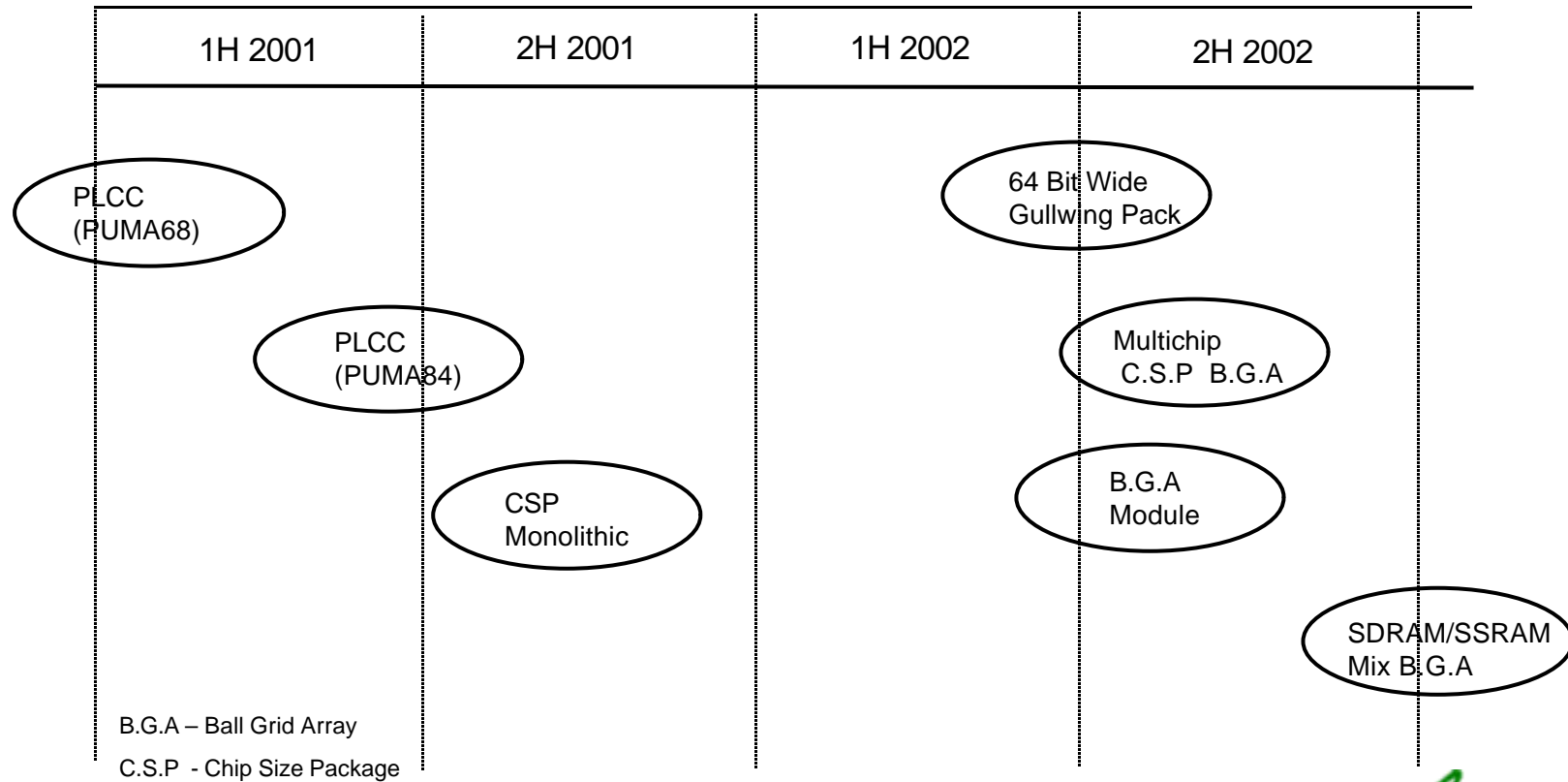
32 and 64 bit wide multichip product



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Development Timescales



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Product Highlights

- 1M x 32 Fast SRAM 68 pin PLCC (PUMA68SV32000X) - In development
- 2M x 32 Fast SRAM 84 pin PLCC (PUMA84SV64000) - In development
- 8M x 32 Flash 84 pin PLCC (PUMA84FV256006) - In production
- 512K x 8 Fast SRAM Chip Size Package (MSM8512C) - In production
- 512K x 32 Flash multichip Chip Size Package - In development
- 32M x 32 Flash (Intel) 84 pin PLCC - Planned
- 64 bit wide 160pin Gullwing Package - In development
- Very high density B.G.A module, C.S.P based - Planned



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Summary

- Limited Standard Product Range – Solution focus
- Range of innovative memory packaging techniques available
- Focus on customer / application specific memory solutions
- Extensive design / market experience
- Customer focussed, responsive approach
- Variety of advanced manufacturing capabilities



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