Product Brief



3G Basestation Processor

3GPP/UMTS Physical Channel Processing

The 3G basestation processor is a single-chip, physical channel processing solution for 3GPP/UMTS Macro, Micro and Pico cell Node B applications. It provides up to 64 customer programmable RAKE receivers and 364 downlink channel resources which may be individually controlled through a Virtual Machine interface.
Superior radio link performance can easily be attained with available firmware libraries or can be enhanced with customized implementations. The 3G basestation processor enables design of flexible, data-rate scalable Node B solutions embedding customer proprietary radio link, power control and measurement algorithms.

Features

- Supports 3GPP release 99 and release 4 physical channel processing requirements
- Data-rate scalable channel elements across all spreading factors
- Up to 64 uplink channel elements supporting a variety of receiver structures
  - Pool of 384 fingers, configurable as 6-16 finger RAKE receivers
- 9600 MOPS 16-bit embedded dataflow DSP array
- 96 multipath searchers
- 4096-tap access channel preamble detection engine
- 384 downlink channel resources
- Supports up to 12 uplink and downlink antenna ports

Software

- Object-oriented ANSI-C application programming interface for runtime configuration, management and control
  - Virtual machine interface (VMI)
- Embedded firmware development tools for customer proprietary radio link, power control and measurement algorithms
- Embedded firmware library of 3GPP reference algorithms
  - Channel estimation
  - Delayed-locked loop
  - Frequency-locked loop
  - RSCP estimation
  - ISCP estimation
  - UL and DL power control
  - Pilot BER measurement
  - Tx code-power measurement
  - Power-delay profile measurement

Type	Sales Code	Package
3G Basestation Processor	CBME V1.1 – PMB 9500	P-EBGA-600

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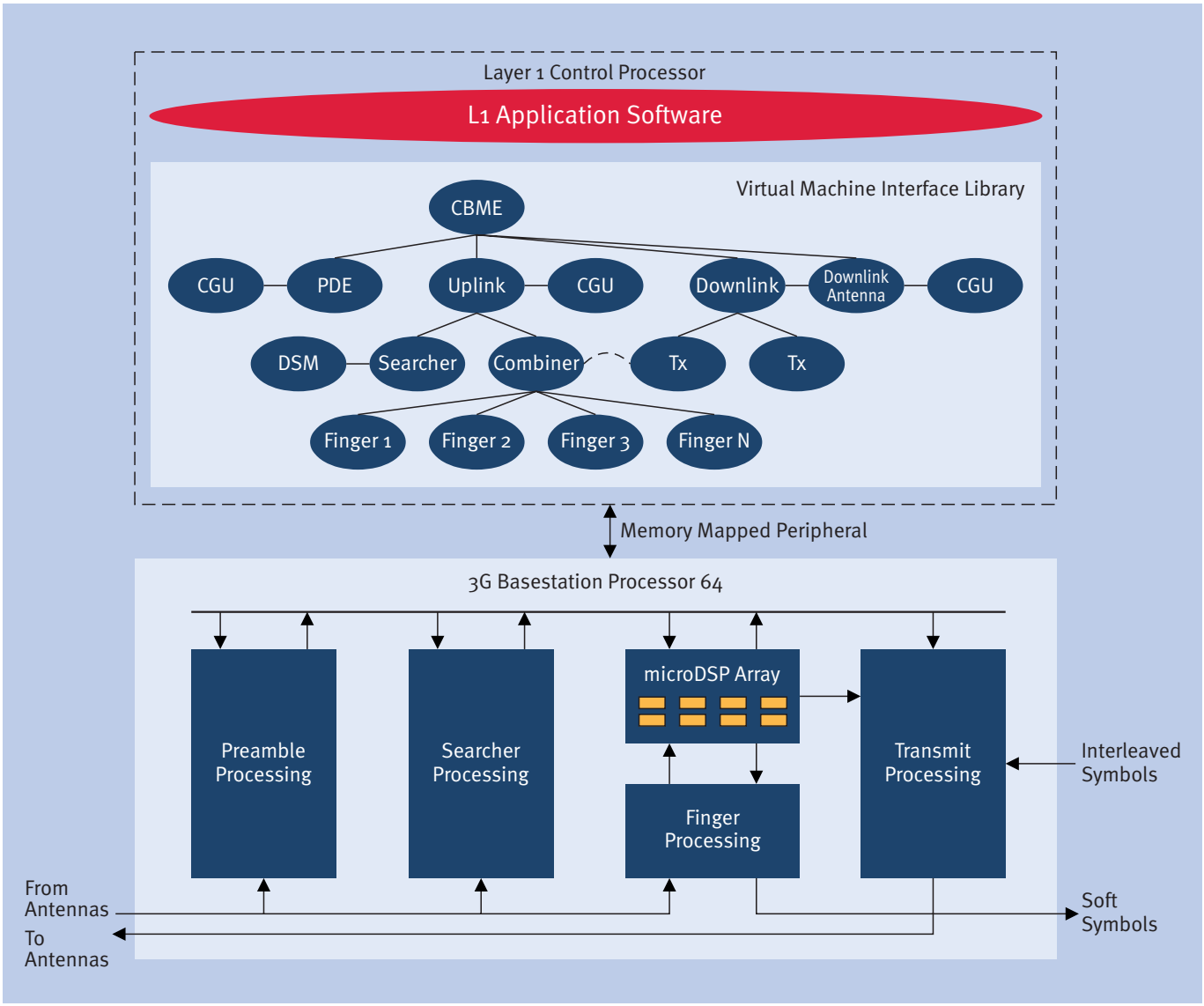
Wireless Communication

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Never stop thinking.

Block Diagram of CBME V1.1 with Associated VMI



Features

- Channel capacity maintained across:
  - Spreading factors
  - Compressed-mode operation
- Very low latency power control loop
- Pooled resources across antennas and sectors
- Supports N-antenna Rx and Tx diversity
- HSDPA ready

Development Tools

- VMI functional simulator
- microDSP development toolkit
- Hardware development platform

Ordering Information

Please contact Infineon Technologies Morphics, or your local Infineon sales office for additional information about our 3G basestation products

How to reach us:
http://www.infineon.com

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