



**CEVA SERVICES**

**Service Highlights**

- › Customer support from design specification to GDSII delivery
- › Rich deployment heritage including strong R&D skills
- › Complex SoC design capabilities
- › Project management using gate-based design and deployment
- › Proven design flow and methodology
- › Over 50 major developments completed

**Introduction**

CEVA Services is the consulting and integration division of CEVA, established to help our customers move efficiently and effectively from IP to silicon.

CEVA Services helps to reduce the cost of, and speed the time-to-market for, our customers' advanced integrated circuit (IC) and complex System-On-A-Chip (SoCs) solutions for wireless, digital multimedia, communications and storage markets.

By providing complete support from concept to silicon incorporating CEVA IP, CEVA Services mitigates much of the risk involved in complex design projects, enabling its customers to leverage the vast expertise and knowledge that CEVA has amassed as a leading licensor of semiconductor IP.

## Inside CEVA Services

CEVA Services provides its knowledge to its customers in four key areas:

### CEVA Services Consultation

#### › Consultation and Engagement

The engagement process with CEVA Services can begin with customers and CEVA co-developing the environmental requirements, power, performance, gate count and test coverage target of the desired chip.

Once in place, CEVA Services will provide the roadmap for ASIC function, hardware & software interfaces, the device architecture, verification strategy, design flow, DFT strategy, clock & reset architecture, power management strategy and a comprehensive development schedule and resources estimate.

#### › Systems Architectural Design

These services include system level analysis of product feature set requirements, computing and communications bandwidth analysis, hardware & software partitioning, cost, schedule and usability.

#### › ASIC and SoC Design

This incorporates micro-architectural design, behavioral design, RTL design, logic synthesis, power management, DFT, timing analysis and closure, formal verification and physical design.

#### › Customization of IP

In addition to providing off-the-shelf IP, CEVA Services also tailors IP according to customer requirements.

### DSP Core Hardening

CEVA Services also provides a specification for the complete customization and physical implementation of any of the DSP cores in the CEVA product suite, each customized to a specific library and process. With each particular customized and hardened IP, the core is optimized for a specific technology, per single set of area/ timing/ power parameters

### IP Sourcing

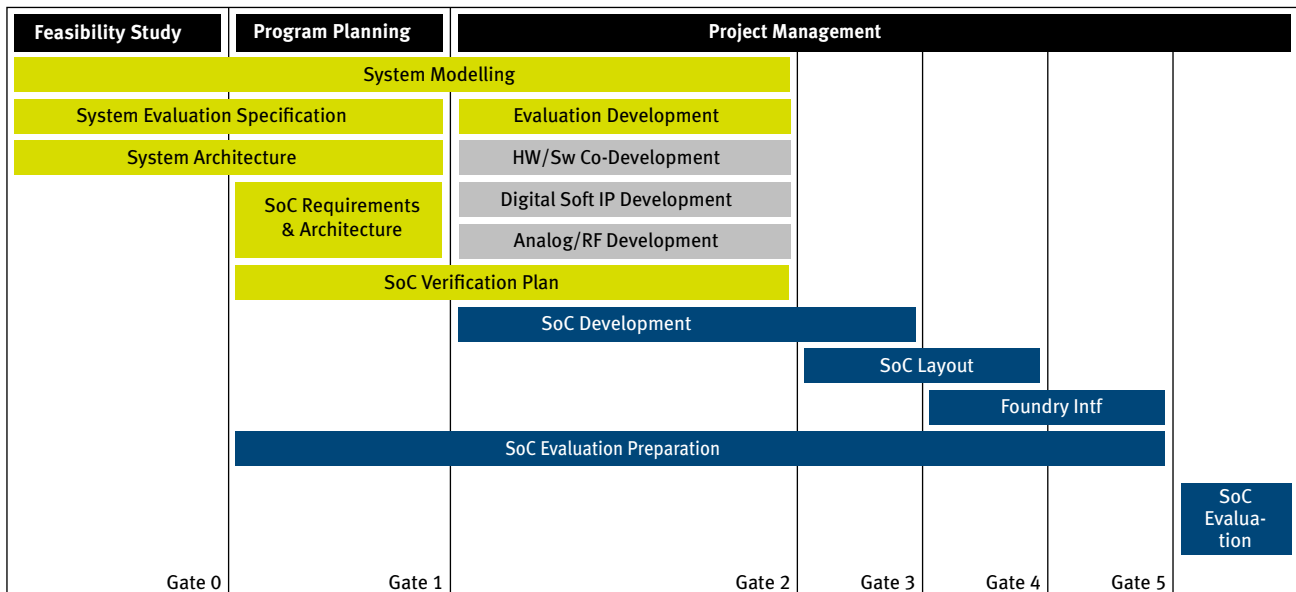
CEVA offers its IP sourcing & integration services for its customers IP and/or 3rd party IP: CEVA Services assists customers in sourcing and integrating third-party IP into the CEVA Services design flow. As a leading provider of IP, CEVA maintains relationships with many other IP suppliers, thus making it easy to facilitate a relationship between these suppliers and customers of CEVA Services.

### SoC Implementation

CEVA Services engages with its customers at any level of abstraction from specification to GDSII delivery.

The two most common forms of engagement are:

- Specification to GDSII
- RTL to GDSII



- Rigorous project management | • Proven tool chain methodology

## The CEVA Services Value Chain



CEVA Services' engineers possess expertise in multiple disciplines, enabling the delivery of superior technical support and comprehensive solutions for each customer.

### › Leading DSP IP

CEVA's industry leading IP cores, including the reusable architecture environment – CEVA-X, and the company's other acclaimed cores – CEVA-Teak and CEVA-TeakLite are a strong base for CEVA's solutions. CEVA can also help customers to create complete subsystems by offering peripheral blocks, system interconnect solutions and working with systems buses.

CEVA's IP expertise extends to the arena of application software, with extensive audio, video and VoIP libraries, GPS & Bluetooth DSP solutions and a proprietary operating system – CEVA OS – and application composer.

### › Communications IP Breadth and Depth

CEVA understands the requirement for high-speed communications within the silicon environment, working with various connectivity standards including low power serial ATA I or II, SAS, PHY and link transport, high performance SerDes and support for multiple foundry processes. Industry standard connectivity using either serial interface (SGMII) or memory interface (DDR2) is also supported by the CEVA Services team.

In addition, CEVA provides its customers with an extensive PLL offering for multiple input clocks.

### › Domain Knowledge

As well as comprehensive DSP IP and communications IP know-how, CEVA Services division adopts a "Total Solutions Approach" to system applications. These key areas include Communications, Cellular, Storage, Digital Multimedia and Location. CEVA's ability to address common architectural trade-offs enables the services team to combine disciplines and achieve optimal designs.

### › Design and Deployment Expertise

Members of the senior design team at CEVA possess an average of over ten years of DSP design experience, coupled with a rich blend of R&D skills including digital design, mixed signal, software and VLSI capabilities and have over fifty major deployments and global projects to their name.

The CEVA Services team is one of the market leaders in providing services for next generation technologies and semiconductor designs, offering world-class support and solutions for tomorrow's OEMs and electronics companies.

## CEVA Services Advantages

- Enabling the "Path to Silicon" for customers – CEVA Services provides a robust integration and implementation team to reduce the time to market, cost and fixed cost overhead of our customers.
- CEVA's knowledge of its DSP architectures enables customers to tailor and customize the IP licensed from CEVA to produce optimized semiconductor solutions.
- CEVA's optimized solutions for specific end markets such as cellular communications, digital multimedia and storage gives customers a proven system for their end-user devices.
- Familiarity with home-grown and third party IP enables engineers at CEVA Services to integrate varied IP blocks into a unified design flow for seamless execution of the chip design.
- Broad experience with DSP cores, subsystems and SoCs mitigates customers' risk by offering complete solutions rather than building blocks.

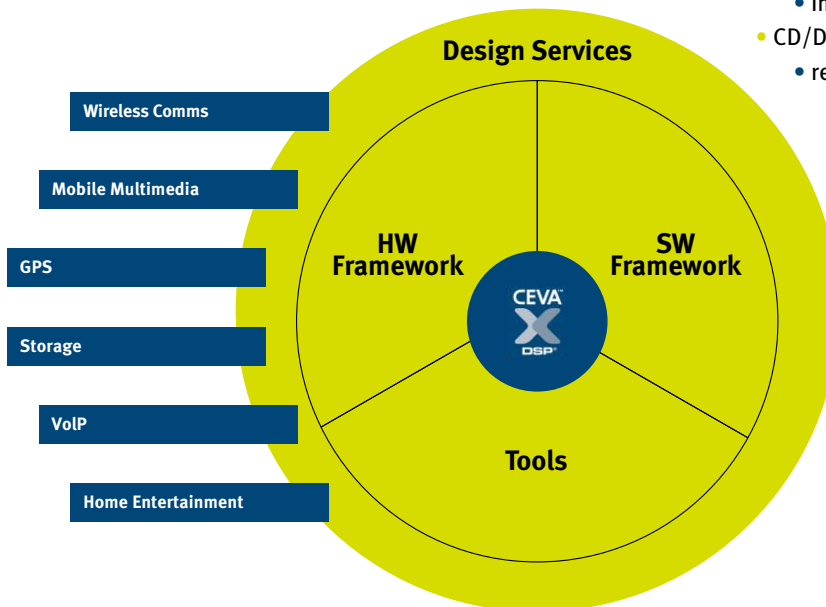
## Key Benefits

- › Provides customized deployments of our DSP and Communications IP
- › Leverages the CEVA-XS platform approach to DSP IP
- › Leverages our expertise in providing solutions for vertical markets
  - Cellular
  - Digital Multimedia
  - Wireless
  - Storage
- › Reduces the integration risks faced by customers
- › Speeds customer's time to market
- › Improves customer's financial and business flexibility through outsourcing of designs

## CEVA Services – Expertise in Multiple Markets

CEVA Services division has successfully completed over 50 discrete design and integration projects for multiple markets. Its precedent designs include markets such as:

- Wireless
  - Modem platforms
  - GPS BB/RF
  - Bluetooth BB/RF
  - WiFi BB
  - Digital Radio
- Serial Communications
  - SATA 1.5G PHY/MAC
  - SGMI I PHY/MAC
  - SAS PHY/MAC
  - SCUSI PHY/MAC
  - Fibre Channel PHY/MAC
- Digital Multimedia
  - Audio Processor
    - › Home HiFi
    - › Automotive
- Video
  - MPEG4 Encode
- Digital Camera
  - Image processor
- CD/DVD
  - read/write



HEADQUARTERS  
USA  
2033 Gateway Place, Suite 150, San Jose, CA 95110-1002,  
Tel: +1 (408) 514 2900 Fax: +1 (408) 514 2995

PRINCIPAL OFFICES  
Israel  
2 Maskit Street, POBox 2068, Herzelia, 46120, Israel  
Tel: +972 9 961 3700 Fax: +972 9 961 3800

Ireland  
32-34 Harcourt Street, Dublin 2, Ireland  
Tel: +353 1 402 5700 Fax: +353 1 402 5711