CAST Digital IP Cores & Subsystems

Application-Area Experts Develop the Best IP Possible

CAST's engineering team develops cores, subsystems, and reference designs with experience gained from helping hundreds of customers solve their IP and system challenges. We also cultivate enduring relationships with technology experts around the world, and work with them to give you the very best IP in every application area we cover.

The Most Experienced IP Sales and Support Team in the World

The sales and support pros within CAST have helped customers choose and successfully deploy IP for over twenty years. Together with our regional sales partners, this team will make sure you have an excellent IP experience, from your first consideration of what core you might need through IP integration and testing and on to the successful completion and shipping of your finished product.

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June 2017

CAST

Digital IP Cores & Subsystems

High-Quality, Cost-Effective, Reusable IP

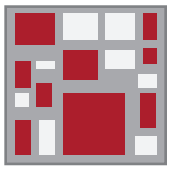
Low-Power Solutions for IoT, Automotive, & more

Royalty-Free Licensing

Proven in Millions of Shipping Customer Products

System IP

Build with Processors, Peripherals, & Interconnects



BA2x 32b
CAN FD
SHA-3
8051 MCU
80251 MCU
SPI 8x
AMBA IP
Net-work Stacks

Compression IP

Integrate Image, Video & Data Codecs

GZIP IP
H.264 IP
JPEG IP
Motion JPEG

www.cast-inc.com

CAST Digital IP Cores & Subsystems

CAST focuses completely on semiconductor intellectual property. We bring high-value digital IP to system designers by:

- Developing cores and integrating IP subsystems,
- Partnering with select IP and verification IP (VIP) providers, and
- Sourcing IP from application area experts.

We employ IP product standards and business practices refined twenty-three years of successful operation, and have helped hundreds of customers ship millions of product units.

Our product line features low-power, high-performance processors and microcontrollers; popular peripherals and interconnects; and the widest array of image, video, and data compression cores available anywhere.

These are available in synthesizable RTL for ASICs, or as netlists targeting popular FPGA and structured ASIC devices.

Deliverables include high-quality code, documentation, and development aids like simulation models, test cases, and for processors debug interfaces and IDEs.

Verification IP (VIP) is also available for a growing number of cores.

Learn more at our website, or contact us any time.

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Processors & System IP

BA2x™ 32-bit Processors

- Geon™ Secure Execution

Application Processors

- BA25 Full
- BA22-AP Basic

Cache-Enabled Embedded

- BA22-CE

Embedded

- BA22-DE Deeply Embedded
- BA21 Low-Power Deeply Emb.
- BA20 PipelineZero™ Embedded

Peripherals & Platforms

- AMBA AHB/APB & AXI

IDE, Debug Key, Boards

8051 Microcontrollers

- S8051XC3 super-fast, advanced
- T8051XC3 tiny, fast
- R8051XC2 fast, mature
- L8051XC1 legacy-configurable

16-bit, with new compiler:

- S80251XC3 super-fast
- T80251XC3 tiny

Interconnects

CAN Controller

- 2.0 and CAN FD & TTCAN; VIP
- Ref. Design; PHY Daughter Card

LIN

- LIN Controller

SENT/SAE J2716

- Tx/Rx Controller

Automotive Ethernet

- IEEE802.1AS Hardware Stack

Avionics/DO-254 Buses

- MIL-STD 1553
- ARINC 429
- ARINC 825 CAN

Ethernet MAC

- 1G eMAC Controller

I2C - SMBUS 3.0

- Master, Slave, VIP

PCI

- Target, Master, Host Bridges

SPI

- Octal/AHB & Quad/AHB/AXI with XIP; M/S; AHB-Lite Bridge

Peripherals

Network Stacks

- 40G UDP/IP; RTP for H.264 & JPEG; MPEG Transport Stream

Controllers

- Smart Card Reader; TFT LCD; Parallel NOR Flash; Data Link: SDLC, HDLC

Legacy Peripherals

- DMA Control; UARTs; Timers

AMBA® IP

Processor-Based Subsystems

- Low-Power, Performance, & Custom

Bus-Compatible Cores

- AHB & AXI Infrastructure; DMAs; Bridges; Cache Controller

Security & Encryption

Hash Functions

- SHA-3, SHA-256, SHA-1, MD5

AES

- CCM, GCM; Key Expander

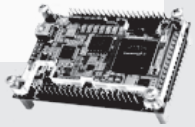
DES

- DES Single, DES Triple

Compression IP

Data Compression

- GZIP/ZLIB/Deflate Compressor
- GZIP Reference Design
- GUNZIP/ZLIB/Inflate Decompressor



Video Compression

- H.264/AVC Encoders: Low-Power through High-Performance, Scalable 1080p & UHD/4K-8K Intra-Only options
- H.264/AVC Baseline Decoders
- H.265/HEVC Decoder
- Hardware RTP Stack for H.264
- Video Over IP Subsystems

Image Compression

JPEG & Motion JPEG

- Encoders: Low-Power, Extended, Ultra-Fast
- Decoders: Low-Power, Extended, Ultra-Fast
- JPEG Over IP Subsystem
- Reference Designs