



Target Markets

- FTTB
- FTTN

Applications

- A/VDSL2 17 MHz or 30 MHz bridges
- A/VDSL2 17MHz or 30 MHz gateways
- Wireless A/VDSL2 17 MHz or 30 MHz gateways
- A/VDSL2 17 MHz or 30 MHz voice gateways
- A/VDSL2 12 MHz pair bonded voice gateway

Features

- 8x, 12x, 17a and 30a profiles
- 2 pair VDSL2 bonding
- ADSL/ADSL2/ADSL2+ fallback capability
- Two VoIP channels running in internal voice DSP
- Supports up to 4 VoIP narrowband channels or 2 VoIP wideband channels
- ARM network processor core
- 16/32-bit DDR-1 interface
- 32-bit x 33MHz Peripheral Component Interconnect (PCI)
- Gigabit Media Independent Interface (GMII) with Ten-Bit Interface (TBI) and Media Independent Interface (MII) modes
- MII in master or slave mode
- ULPI interface for USB 2.0 host/device applications
- Serial and parallel flash support

Capri™ CX96xxx A/VDSL2 Chipset Family

Integrated A/VDSL2 Gateway Chipsets



The Capri™ CX96xxx chipset family enables next-generation, wireless A/VDSL2 gateways, A/VDSL2 VoIP Integrated Access Devices (IADs), and A/VDSL2 bridges.

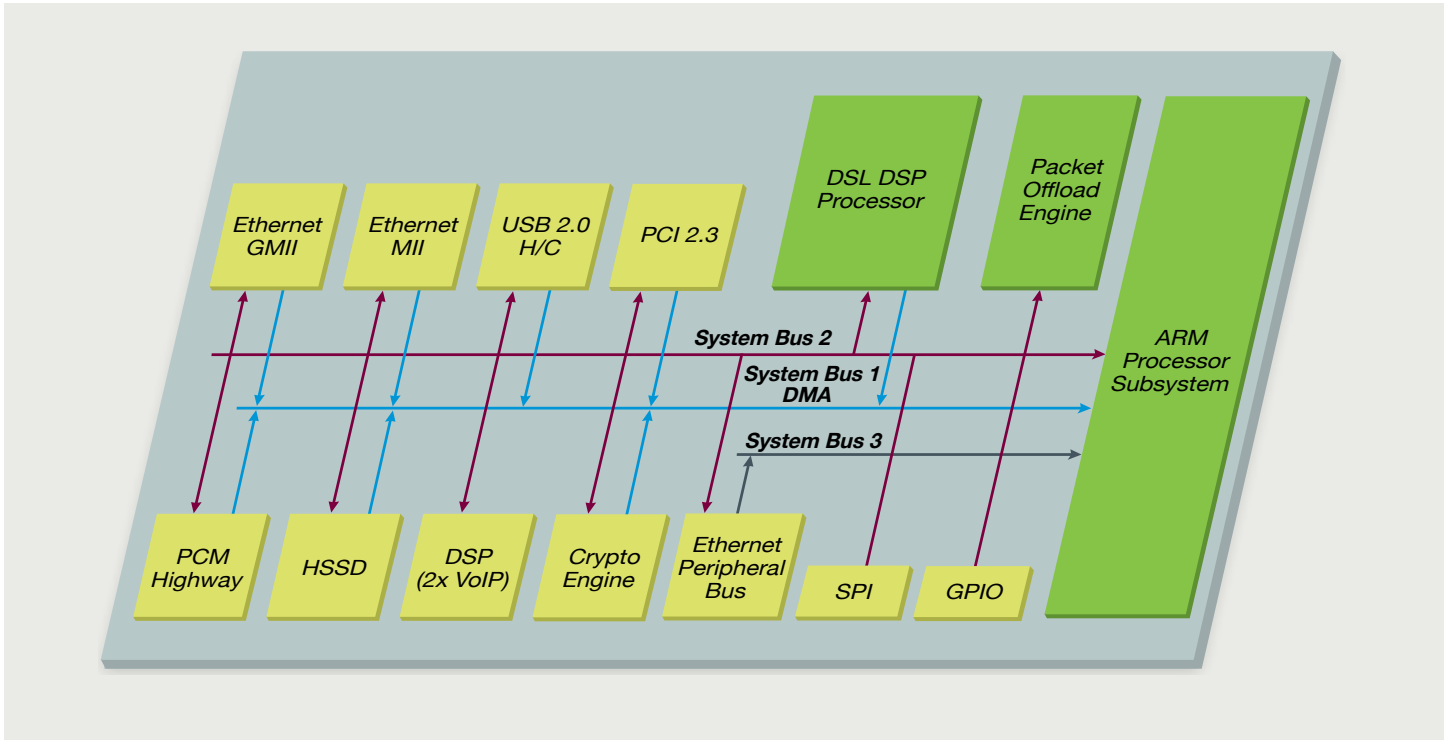
The Capri™ CX96xxx chipset includes a highly integrated analog front end (AFE) and a single chip ARM™-based network processor (NP), a flexible xDSL DSP core and a field-proven voice DSP engine.

Key features include:

- Integrated high performance ARM™ network processor core with routing and switching packet accelerator engine that enables up to one Gigabit per second data throughput
- Dedicated voice digital signal processor (DSP) which frees up processing power for other applications while supporting two complete VoIP channels
- Flexible xDSL DSP core architecture available in 30MHz, 17MHz bandwidth and 2-pair bonded configurations enabling cost-optimized products for fiber-to-the-building (FTTB), fiber-to-the-node (FTTN), and central office (CO) deployments, respectively
- Fully compatible with legacy ADSL/2/2+ applications enabling interoperable ADSL/2/2+ fallback capabilities

CX96xxx devices include a wide variety of interfaces that support complementary home networking technologies to provide a complete system solution for xDSL gateways. The CX96xxx SoCs seamlessly integrate with the Ikanos Subscriber Line Interface Cards (SLIC)/codec chipset, providing manufacturers a single-source solution for low-cost turnkey triple play applications. Interfaces such as PCI and GMII are also supported to enable emerging home distribution technologies such as Multimedia over Coax Alliance (MoCA®), HomePNA™ specification 3.0 and HomePlug® A/V.

Capri™ CX96xxx Block Diagram



Key Features

- Support for VDSL2 (G.993.2) with ADSL/ADSL2/ADSL2+ fallback (G.992.1, G.992.2, T1.413, G992.3, G.992.5)
- Integrated, field-proven xDSL DSP core architecture delivering profiles
- 8x, 12x, 17a, 30a, long reach and VDSL2 pair bonding
- 16/32-bit DDR-1 interface
- Integrated 10/100/1000 Gigabit Ethernet MAC with GMII, MII and TBI interfaces
- Integrated 10/100 Ethernet MAC with MII interface
- Integrated PCI interface with 32-bit x 33 MHz
- USB 2.0 interface via ULPI with host and device mode capability
- External Peripheral Bus (EPB) provides support for NAND flash devices along with host interface mode for external host control
- Support for parallel flash and serial flash
- Integrated Voice DSP engine supports up to two VoIP channels with HW echo cancellation
- PCM interface to external single- or dual channel industry standard SLIC/Codec (CX20560 & CX20559 and other commercially available devices)
- Optimized power management with support for dying gasp
- Support for DSLHome™ including WT-114, TR-064, TR-068, TR-069, TR-098, TR-104, TR-106, TR-110, TR-111, TR-124, TR-133HW VPN Engine supporting DES, 3DES, AES, SHA-1, SHA-256 and MD5 operations
- Memory and feature optimized binary and source software releases for targeted deployments
- Stateful Packet Inspection (SPI) firewall and Network Address Translation (NAT) security solution
- ATM SAR engine supporting Unspecified Bit Rate (UBR), Constant Bit Rate (CBR) and other service classes
- Common customer development environment and tools across ADSL to VDSL2 products

Chipset	Profile 30a	Profile 17a	Profile 12x	Profile 8x	Voice	Gateway	Bonding
CX96629			X	X	X	X	X
CX96429	X	X	X	X	X	X	
CX96420	X	X	X	X		X	

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