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Prelaunch Intel® 700 Series Chipset Brief

Embedded on the motherboard, chipsets control the interaction between a CPU and every other peripheral system on the mother-board, including RAM, storage, and I/O components. They are a crucial part of your PC, defining not only the connectivity that your PC can support, but also what CPU features you have access to.

The Intel® Z790 Chipset with Unlocked 13th Gen Intel® Core™ Desktop Processors

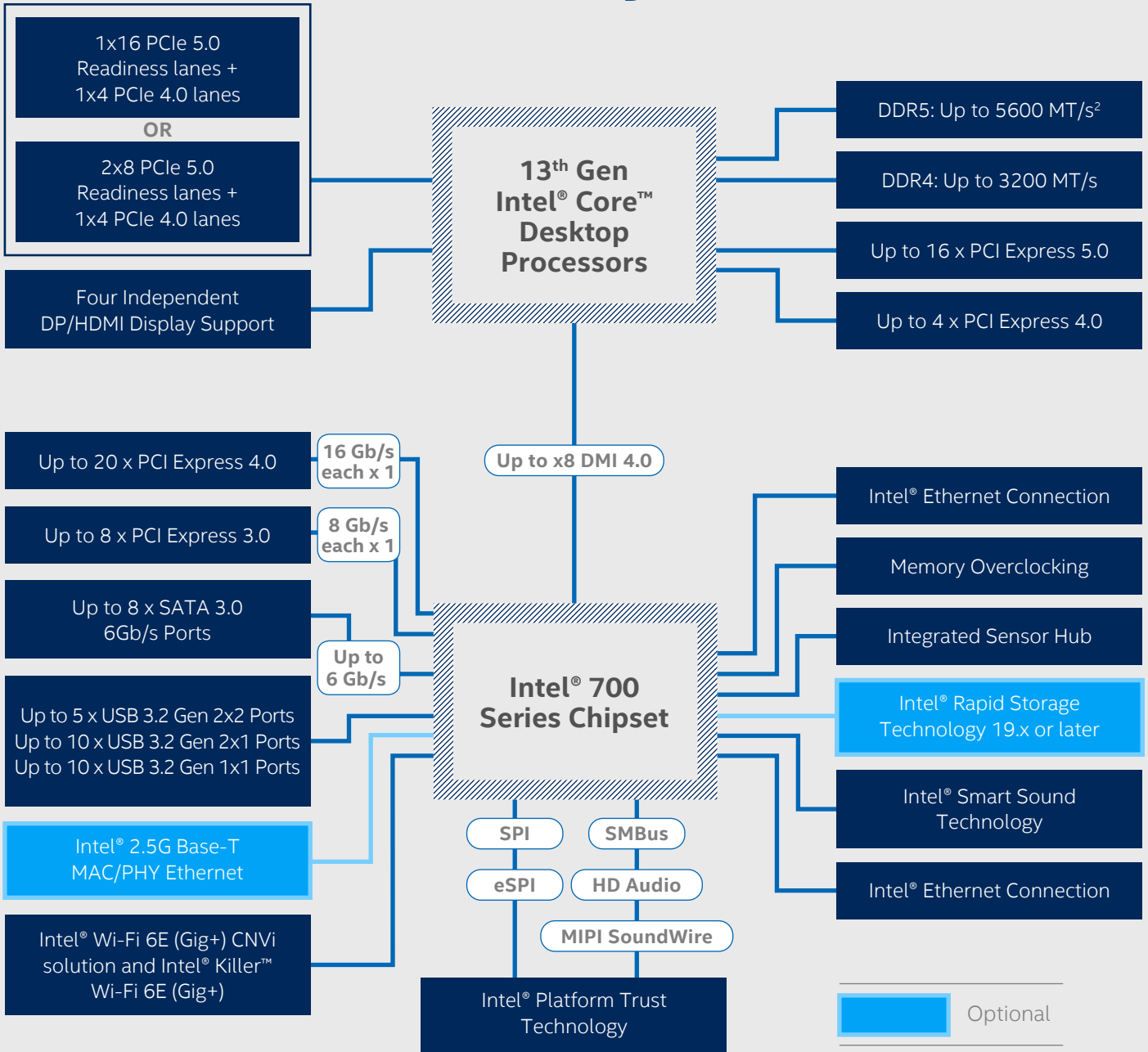## Z790 Chipset: Delivering a Supercharged Experience for Enthusiasts

The 13th Gen Intel® Core desktop processors, when paired with the Z790 chipset, deliver the breakthrough performance and features that gamers, creators, and professionals need to work at their best. Optimized for overclocking[1] and precision tuning when paired with an unlocked processor, the Z790 chipset empowers you with the control and confidence to choose the best performance and thermal characteristics for the task at hand. Harness the processing power, responsiveness, and connectivity of up to 38 high-speed I/O lanes—including 20 PCIe 4.0 lanes, 8 PCIe 3.0 lanes, and 5 USB 3.2 Gen 2x2 (20G) ports—as well as Intel® Killer™ Wi-Fi 6E (Gig+) to take your gaming, content creation, and productivity to the next level.

The Intel® H770 and B760 Chipsets with Unlocked 13th Gen Intel® Core™ Desktop Processors

Pick the Modern Performance You Need

Intel's comprehensive chipset portfolio also includes the Intel® H770 and B760 chipsets that, when paired with Intel's 13th Gen Intel® Core desktop processors deliver dynamic capabilities and accelerated connectivity. Both chipsets support memory over-clocking[1] but offer distinct I/O and PCIe processor configurations. The H770 chipset accelerates multi-tasking with greater data throughput capabilities of up to 16 PCIe 4.0 lanes, 8 PCIe 3.0 lanes, bifurcation of the CPU PCIe lanes, and support for SATA and PCIe RAID. The B760 brings up to 10 PCIe 4.0 lanes and 4 PCIe 3.0 lanes for the speed and performance to power modern work needs. Choose the features you need to get the most from your everyday gaming, creating, and productivity.

Intel® 700 Series Chipset
Block Diagram

1x16 PCIe 5.0
Readiness lanes +
1x4 PCIe 4.0 lanes

OR

2x8 PCIe 5.0
Readiness lanes +
1x4 PCIe 4.0 lanes

Four Independent
DP/HDMI Display Support

**13th Gen
Intel® Core™
Desktop
Processors**

DDR5: Up to 5600 MT/s[2]

DDR4: Up to 3200 MT/s

Up to 16 x PCI Express 5.0

Up to 4 x PCI Express 4.0

Up to 20 x PCI Express 4.0

16 Gb/s each x 1

Up to 8 x PCI Express 3.0

8 Gb/s each x 1

Up to 8 x SATA 3.0
6Gb/s Ports

Up to 6 Gb/s

Up to 5 x USB 3.2 Gen 2x2 Ports
Up to 10 x USB 3.2 Gen 2x1 Ports
Up to 10 x USB 3.2 Gen 1x1 Ports

Intel® 2.5G Base-T
MAC/PHY Ethernet

Intel® Wi-Fi 6E (Gig+) CNVi
solution and Intel® Killer™
Wi-Fi 6E (Gig+)

Up to x8 DMI 4.0

**Intel® 700
Series Chipset**

SPI

eSPI

SMBus

HD Audio

MIPI SoundWire

Intel® Platform Trust
Technology

Intel® Ethernet Connection

Memory Overclocking

Integrated Sensor Hub

Intel® Rapid Storage
Technology 19.x or later

Intel® Smart Sound
Technology

Intel® Ethernet Connection

Optional

*Lane count and PCIe lane support varies by chipset.

Prelaunch Chipset Brief The Intel® 700 Series Chipset with 13th Gen Intel® Core™ Desktop Processors

FEATURE	BENEFIT
Support for 12th and 13th Gen Intel® Core™ desktop processors	Cross-generation compatibility with additional PCIe lanes and USB ports.
Volume Management Device (Intel® VMD)[3]	User-friendly way to manage your storage devices that allows direct control and management of NVMe SSDs from the PCIe bus without additional hardware adaptors.
Memory Overclocking[1] Support	Enables memory overclocking so that new and experienced users can get more from their unlocked processors.
Intel® Rapid Storage Technology 19.x or later	With additional SSDs and hard drives added, helps provide quick access to digital photo, video, and data files, and data protection against a hard disk drive failure with RAID 0, 1, 5, and 10.
Intel® Wi-Fi 6E Support	Integrated Intel® Wi-Fi 6E (Gig+) through CNVi and Intel® Killer™ Wi-Fi 6E (Gig+) so that you can enjoy uninterrupted, best-in-class wired and wireless connectivity at Gigabit Wi-Fi speeds.[7]
Intel® Smart Sound Technology	Integrated digital signal processor (DSP) for audio offload and audio/voice features.
USB 3.2 Gen 2x2	Integrated USB 3.2 Gen 2x2 support provides data transfer performance with a design data rate of up to 20 Gb/s.
USB 3.2 Gen 2x1	Integrated USB 3.2 Gen 2x1 support provides data transfer performance with a design data rate of up to 10 Gb/s.
USB 3.2 Gen 1x1	Integrated USB 3.2 Gen 1x1 support provides data transfer performance with a design data rate of up to 5 Gb/s.
Serial ATA (SATA) 6 Gb/s	High-speed storage interface that supports up to 6 Gb/s transfer rates for optimal data access.
Intel® Platform Trust Technology	Integrated chipset hardware and firmware solution that delivers a trusted element of the platform execution to provide enhanced security against viruses and malicious SW attacks.
PCI Express 4.0 Interface	Up to 20 PCI Express 4.0 lanes of 16 GT/s for fast access to peripheral devices and networking.
PCI Express 3.0 Interface	Up to 8 PCI Express 3.0 lanes of 8 GT/s for fast access to peripheral devices and networking.

INTEL® 700 SERIES CHIPSETS FEATURES AT A GLANCE

	Intel® Z790 Series Chipset[3]	Intel® H770 Series Chipset[3]	Intel® B760 Series Chipset[3]
Chipset PCIe Express4 3.0 Lanes[5]	Up to 8	Up to 8	Up to 4
Chipset PCIe Express4 4.0 Lanes[5]	Up to 20	Up to 16	Up to 10
Processor PCIe Lane Configuration Support	1x16+1x4 or 2x8+1x4	1x16+1x4 or 2x8+1x4	1x16+1x4
DMI	x8 Gen4	X8 Gen4	X4 Gen4
SATA 3.0 (6 Gb/s) Ports[3]	Up to 8	Up to 8	4
USB 3.2 Gen 1x1 (5G) Ports	10	8	6
USB 3.2 Gen 2x1 (10G) Ports	10	4	4
USB 3.2 Gen 2x2 (20G) Ports[6]	5	2	2

Document Under Embargo until Launch