COM Express Type 6
Alder Lake-P

COM Express Type 6 Basic Size
Prototyping Kit based on Intel®
12th Gen Core™ i5-12600HE
4 P-core + 8 E-core SoC

Features

- Based on Intel® 12th Gen Core™ i5-12600HE 4 P-core + 8 E-core SoC with integrated GPU
- Equipped with COM Express R3.1 compliant Type 6 Basic size module, Express-ADP
- Equipped with COM Express R3.1 compliant Type 6 carrier at ATX dimension
- Industrial-grade quality and 10-year+ product availability
- Supports Windows 10, Linux, and Ubuntu OS

Specifications

Core System	SoC	Intel 12th Gen Core™ i5-12600HE 4P+8E-core SoC with GPU
	Architecture	x86
	Memory	64GB
	Embedded BIOS	AMI UEFI with CMOS backup in 32/16MB SPI BIOS
	IoT Security	TPM 2.0*, Intel® AES-NI, Secure Key, Execute Disable Bit, Intel® OS Guard, Intel® Boot Guard
Video	GPU Core	Intel® Iris Xe Graphics architecture (80 execution units)
	Video Decoding	HEVC/H.265 10-bit/8-bit, H.264, M/JPEG, MPEG2, VC1/WMV9, VP9, VP8, AV1
	Video Encoding	HEVC/H.265 10-bit/8-bit, H.264, M/JPEG, VP9
Audio	Chipset	Integrated on SoC
	Codec	Realtek ALC886
Ethernet	LAN	1x 2.5GbE

Specifications

Connectors/Headers	Display	1x DP 1x LVDS 30-pin header
	Audio	3-in-1 Mic/Line-in/Line-out
	Network	2x RJ45
	USB	4x USB 3.2 Gen2 Type A 2x USB 2.0 Type A
	SATA	2x SATA (with power for SATA device)
	Buttons	1x Reset 1x Power 1x Sleep 1x LID
	PCIe Slots	1x x16 (configurable 1 x8 and 2 x4) 1x x4 (configurable 1 x4, 2 x2, or 4 x1), 4x x1
	FAN	1x FAN 4-pin
	GPIO	8x GPIO 8-pin header
	Serial	2x UART, DB9
	Management Buses	SMBus, I2C, LPC headers
	Secondary BIOS	1x Socket for secondary SPI flash
LEDs	POST LED	Onboard diagnostics for BIOS POST code data
Power	Input	ATX: 12V ±5% / 5Vsb ±5%
		AT: 12V ±5%
Operating Systems	Standard Support	Windows 10 / Yocto / Ubuntu

Ordering Information

Development Kit	Description/Configuration
Express-ADP-i5-12600HE-Kit	COM Express Type 6 Prototype Kit with Express-ADP-i5-12600HE, Express-BASE R3.1 carrier, heatsink with fan, and necessary enabling parts

* optional, subject to the module used