SK515

COM Express Type 6 Carrier Board w/PCIe 104

- COM Express Type 6 / 7 Support 12th Alder Lake-H,11th Tiger Lake-H, 9th Coffee Lake-H, 6/7th Kaby/Sky Lake-H(Type6);Broadwell-DE D-1577/D-1559(Type7) Processor
- Standard MXM Type 3.1 Support NVIDIA® Quadro®and GeFore® GPUS
- PCI/104 Express Expansion Slot for Modular Open Stracture
- Multi-Expansion Slots include Dual Mini PCIe Express Slots,1 x M.2 Slot
- Extreme Temperature Support -40 to 85°C
- GPU can be targeted for 4 Display port outputs

Instructions

COM Express, a computer-on-module (COM) form factor, is a highly integrated and compact PC that canbe used in a design application much like an integrated circuit component. The COM Express Module integrates core CPU and memory functionality, the common I/O of a PC/AT, USB, Audio, Graphics (PEG),and Ethernet. SK515 feature a range of Intel processors, up to the latest Intel Core series. SK515 are built to operate in harsh environmental conditions, the operating temperatures as low as -40°C to as hot as 85°C. From low power consumption to high performance processing power, SK515 are built to suit a wide range of computing applications from signal processing to unmanned vehicles and more.

Specifications

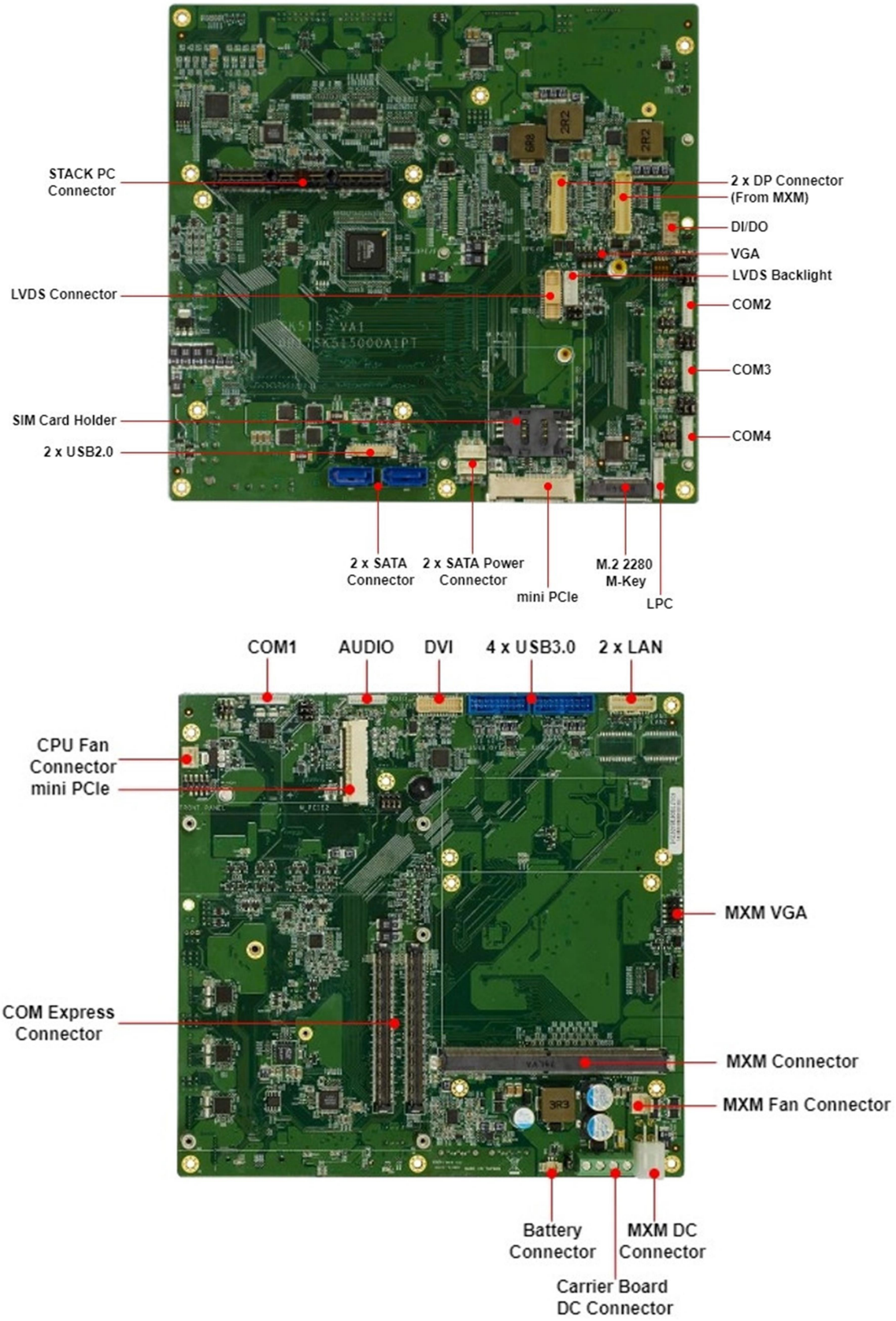
System

COM Express CPU Options(Type 6)	Intel® Core™ i7-12800HE 45W Alder Lake 12th Gen, 14C , Freq. 3.5 /4.6 GHz, 24MB cache Intel® Core™ i7-11850HE 45W Tiger Lake 11th Gen, 8C , Freq. 2.6 /4.7 GHz, 24MB cache Intel® Xeon® W-11865MLE 45W Coffee Lake 11th Gen, 8C , Freq. 1.5 /4.5 GHz, 12MB cache Intel® Xeon® E-2276ME 45W Coffee Lake 9th Gen, 6C , Freq. 2.8 /4.5 GHz, 12MB cache Intel® Xeon® E-2276ML 25W Coffee Lake 9th Gen, 6C , Freq. 2.0 / 4.2 GHz, 12MB cache Intel® Core™ i7-9850HE 45W Coffee Lake 9th Gen, 6C, Freq. 2.7 / 4.4 GHz, 9MB cache Intel® Core™ i7-9850HL 25W Coffee Lake 9th Gen, 6C, Freq. 1.9 / 4.1 GHz, 9MB cache Intel® Core™ i7-7820EQ 45W Kaby Lake 7th Gen, 4C, Freq. 3.0 / 3.7 GHz, 8MB cache Intel® Xeon® E3-1505L v6 25W Sky Lake 6th Gen, 4C, Freq. 2.2 / 3.0 GHz, 8MB cache
COM Express CPU Options(Type 7)	Intel®Xeon®-D1577 45W Broadwell-DE, 16C, Freq. 1.3 / 2.1 GHz, 24MB cache Intel®Xeon®-D1559 45W Broadwell-DE, 16C, Freq. 1.5 / 2.1 GHz, 18MB cache (eTEMP)
GPU Module Options	NVIDIA® GeForce™ GTX 1050Ti, 60W, 4GB GDDR5, 768 CUDA Cores NVIDIA® GeForce™ RTX 2060S, 175W, 8GB GDDR6, 2176 CUDA Cores NVIDIA® Quadro™ RTX 5000, 150W, 16GB GDDR6, 3072 CUDA Cores NVIDIA® Quadro™ RTX 3000, 80W, 6GB GDDR6,1920 CUDA Cores

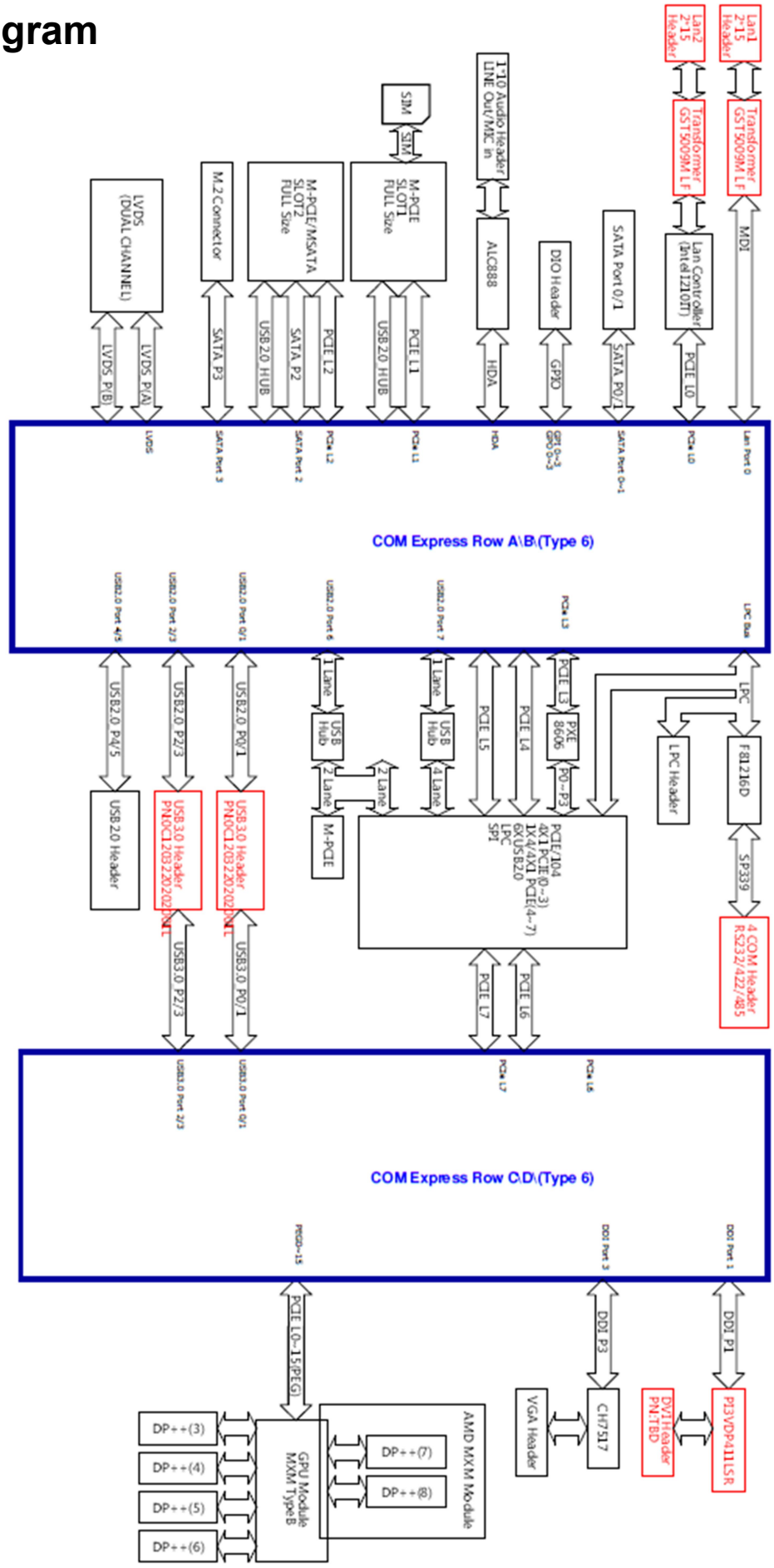
COM Express Compatibility	COM Express® Type 6/7
Expansion	
MiniPCIe Expansion	2 x Full-size mini PCIe (1 with mSATA supported)
M.2 Expansion	1 x 2280 M-key (SATA only)
PCIe/104 Expansion	4 x PCIe x 1、1 x PCIe x 4、5 x USB 2.0、1 x LPC、1 x SPI
SATAIII	2 x SATAIII
Display	
Display Port	4 x Display Port outputs from GPU(Port A/B/C/D) 2 x Display Port outputs from GPU(Port E/F)(By option)
VGA	1 x output from COM Express®, 1 x output from GPU
LVDS	1 x dual channel 18/24bit LVDS
DVI	1
Ethernet	
Gigabit Ethernet	2 x 10/100/1000 Ethernet Ports
I/O	
USB	4 x USB 3.0, 2 x USB 2.0
COM Port	4 x RS232/422/485(function select by jumper)
Audio	1 x Line-out, 1 x Mic-In
SATA Power	2 x SATA Power
DI/DO	1 x DI/DO (4 in / 4 out)
CPU FAN	1 x CPU FAN
MXM FAN	1 x MXM FAN
Battery	1 x Battery Header
Power System	
Input Power_SYS	9~36V (4P Terminal Block)
Input Power_MXM	12V (ATX 4P)
Power Consumption	Varies per COM Express/MXM with different CPU and GPU models
RTC Battery	3V CR2032
Mechanical and Environment	

Dimensions	190mm x 185mm
Operating Temperature	-40 to 85°C
Storage Temperature	-40 to 85°C
Relative Humidity	10% to 90%, non-condensing
Standard Compliance	
Standard Compliance	CE/FCC
OS	
OS Support	Windows®10 64bit Linux(Support by request)

Carrier Board Placement



Block Diagram



Ordering Information

CPU/GPU Table

All Operating Temperature meet from 0 to 55°C
Could Customize the Operating Temperature from -40 to 70°C

CPU Products List

CPU(Type6)	SPEC	
Intel® Core™ i7-12800HE	45W	Alder Lake 12th Gen, 14C , Freq. 3.5 /4.6 GHz, 24MB cache
Intel® Core™ i7-11850HE	45W	Tiger Lake 11th Gen, 8C , Freq. 2.6 /4.7 GHz, 24MB cache
Intel® Xeon® W-11865MLE	25W	Tiger Lake 11th Gen, 8C , Freq. 1.5 /4.5 GHz, 12MB cache
Intel®Xeon®E-2276ME	45W	Coffee Lake 9th Gen, 6C ,2.8 /4.5 GHz, 12MB cache
Intel®Xeon®E-2276ML	25W	Coffee Lake 9th Gen, 6C ,2.0 / 4.2 GHz, 12MB cache
Intel® Core™ i7-9850HE	45W	Coffee Lake 9th Gen, 6C, 2.7 / 4.4 GHz, 9MB cache
Intel® Core™ i7-9850HL	25W	Coffee Lake 9th Gen, 6C, 1.9 / 4.1 GHz, 9MB cache
Intel® Core™ i7-7820EQ	45W	Kaby Lake 7th Gen, 4C, 3.0 / 3.7 GHz, 8MB cache
Intel® Xeon® E3-1505L v6	25W	Sky Lake 6th Gen, 4C, 2.2 / 3.0 GHz, 8MB cache

CPU(Type7)	SPEC	
Intel®Xeon®-D1577	45W	Broadwell-DE, 16C, 1.3 / 2.1 GHz, 24MB cache
Intel®Xeon®-D1559	25W	Broadwell-DE, 16C, 1.5 / 2.1 GHz, 18MB cache (eTEMP)

GPU Products List

GPU	SPEC	
NVIDIA® GeForce™ GTX 1050Ti	60W	4GB GDDR5, 768 CUDA Cores
NVIDIA® GeForce™ RTX 2060S	175W	8GB GDDR6, 2176 CUDA Cores
NVIDIA® Quadro™ RTX 5000	150W	16GB GDDR6, 3072 CUDA Cores
NVIDIA® Quadro™ RTX 3000	80W	6GB GDDR6,1920 CUDA Cores