

# **RS-S3H** CERBERUS TACTICAL COMPUTER SYSTEM



# ABOUT

The RS-S3H Cerberus Tactical Computer System was designed with direct input from America's elite warfighters. The system packages the most powerful 6th generation Quad Core™ Intel<sup>®</sup> Skylake processors into a rugged, lightweight Peilcan<sup>™</sup> brand 1525 Air Case that is ready to deploy in the harshest operating environments. Cerberus features three Hi-Bright backlit LCD displays at 1000 nits mounted to an innovative internal armature that isolates shock and vibration, and guickly folds open or closed for rapid transit. The internal PC is a fanless design with an extra large heat sink for exceptional thermal performance. The Cerberus is available with up to 32 Gb RAM, 6 external USB ports, and 16 GPIO. Cerberus offers configurable ignition power control, 12-36 volts DC power input with 80 volt surge protection, standard MIL-type connectors, and a -40°C to 75°C operating temperature range. In real-world tactical operations, SWAP is always a top concern; at 25 lbs. Cerberus systems are among the lightest and most powerful tactical computer sytems available.

# **FEATURES**

- Rugged design for harsh environments
- Lightweight only 25 lbs.
- Pelican<sup>™</sup> brand 5125 Air Case enclosure
- 3 Hi-Bright LCD displays 16.7M colors/1000 nits
- Ruggedized, water-resistant keyboard
- LGA 1151 Socket with Quad Core 6th Generation Intel<sup>®</sup> Core<sup>™</sup> i7/i5/i3 Processor (Skylake-S)
- 2 DDR4 2133MHz Memory, up to 32GB
- Fanless, -40°C to 75°C Operating Temperature
- **12V to 36V DC-in with 80V Surge Protection**
- Configurable Ignition Power Control

### **CERBERUS** TECHNICAL SPECIFICATIONS

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### System

System	
Processor	Intel <sup>®</sup> Xeon <sup>®</sup> E3-1505M v5 (Skylake-H)
Chipset	Intel® CM236
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2133/ 1866 MHz SO-DIMM, up to 64GB
I/O Interface	
Serial	4 COM RS-232/422/485
USB	6 USB 3.0 (PC external) 1 USB 2.0 (PC internal)
Isolated DIO	16 isolated DIO - 8 DI, 8 DO
LED	Power, HDD
SIM Card	4 sockets - (3 PC external, 1 PC internal)
Expansion	
Mini PCle	4 Mini PCIe Socket : • 3 Full-size for PCIe/ USB/ External SIM Card/ mSATA • 1 Full-size for PCIe/ Internal SIM Card/ mSATA
PCI/PCIe	1 PCI/PCIe x 16 slot
SUMIT A, B	2 slots (optional)
Graphics	
GPU	Intel <sup>®</sup> HD Graphics P530
Interface	DVI-I: 1920 x 1200 @ 60Hz Display Port 1: 4096 x 2304 @ 60Hz Display Port 2: 4096 x 2304 @ 60Hz
Storage	
SATA	4 SATA III support S/W RAID 0, 1, 5, 10 - 3 SATA III (6GBps) - 1 SATA III co-lay w/Mini PCIe (6GBps)
mSATA	4 mSATA connection: - 3 SATA III (Mini PCIe Type, 6GBps) - 1 SATA III co-lay w/SATA (Mini PCIe Type, 6GBps)
Storage Device	
j	4 2.5" SSD, 1TB ea., RAID 1 configuration
Audio	4 2.5" SSD, 1TB ea., RAID 1 configuration
-	4 2.5" SSD, 1TB ea., RAID 1 configuration Realtek ALC892, 5.1 Channel HD Audio
Audio	
Audio Codec	Realtek ALC892, 5.1 Channel HD Audio
Audio Codec Interface	Realtek ALC892, 5.1 Channel HD Audio
Audio Codec Interface Ethernet	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out
Audio Codec Interface Ethernet LAN 1	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out Intel <sup>®</sup> 1219LM gigabit LAN (supports iAMT 11.0)
Audio Codec Interface Ethernet LAN 1 LAN 2	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out Intel <sup>®</sup> 1219LM gigabit LAN (supports iAMT 11.0) Intel <sup>®</sup> 1210 Gigabit LAN
Audio Codec Interface Ethernet LAN 1 LAN 2 LAN 5-6	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out Intel <sup>®</sup> 1219LM gigabit LAN (supports iAMT 11.0) Intel <sup>®</sup> 1210 Gigabit LAN
Audio Codec Interface Ethernet LAN 1 LAN 2 LAN 5-6 Power	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out Intel® 1219LM gigabit LAN (supports iAMT 11.0) Intel® 1210 Gigabit LAN Gigabit IEEE 802.3at (25.5W/48V) PoE by Intel® 1210
Audio Codec Interface Ethernet LAN 1 LAN 2 LAN 5-6 Power Input	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out Intel® 1219LM gigabit LAN (supports iAMT 11.0) Intel® 1210 Gigabit LAN Gigabit IEEE 802.3at (25.5W/48V) PoE by Intel® 1210 6-36V, DC-in
Audio Codec Interface Ethernet LAN 1 LAN 2 LAN 5-6 Power Input Interface	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out Intel® 1219LM gigabit LAN (supports iAMT 11.0) Intel® 1210 Gigabit LAN Gigabit IEEE 802.3at (25.5W/48V) PoE by Intel® 1210 6-36V, DC-in 3-pin Terminal Block: V+, V-, Frame Ground
Audio Codec Interface Ethernet LAN 1 LAN 2 LAN 5-6 Power Input Interface Remote Switch	Realtek ALC892, 5.1 Channel HD Audio 1 Mic-in, 1 Line-out Intel® 1219LM gigabit LAN (supports iAMT 11.0) Intel® 1210 Gigabit LAN Gigabit IEEE 802.3at (25.5W/48V) PoE by Intel® 1210 6-36V, DC-in 3-pin Terminal Block: V+, V-, Frame Ground 3-pin Terminal Block

### **Processor Performance**

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No. of Cores	4
No. of Threads	8
Base Frequency	2.80 GHz
Max Frequency	3.50 GHz
Cache	8 MB Smart Cache
Bus Speed	8 GT/s DMI3
TDP	45 W
Software Support	
OS	Windows 10, Windows 8.1, Windows 7, Linux
Other	
ТРМ	Optional Infineon SLB9665 supports TPM 2.0, LPC
Watchdog Timer	Reset: 1 to 255 sec./min. per step
Smart Management	Wake on LAN, PXE supported
HW Monitor	Temp. & Voltage - Auto throttle on CPU overheat
Mechanical	
Dimensions	21 x 13 x 7 (L x W x H - inches)
Weight	25 lbs.
Carrying Case	
Model	Pelican <sup>®</sup> 1525 Air
Construction	Proprietary HPX <sup>2</sup> Polymer
Other	Air Pressure Purge Valve
Environmentals	
Operating Temp.	-25° to 70° C (-13 to 158° F)
StorageTemp.	-40° to 85° C (-40 to 185° F)
Humidity	5% to 95% non-condensing
Relative Humidity	95% at 70° C
Shock	Designed to Meet: MIL-STD-810
Vibration	Designed to Meet: MIL-STD-810
EMI	Designed to Meet: MIL-STD-461
Displays	
Input Voltage	10 to 12V DC-input
Input Current	3mA (low brightness) .706A (high brightness)
LED Current	0.0A (low brightness) ,308A (high brightness)
Working Frequency	900-1000 KHz
PWM Frequency	180-200 Hz
	0.5 - 4.8 V
Brightness Control	
Brightness Control ON/OFF Control	2-5 V
	2-5 V 20.375 - 20.368 V

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