

# RES-3000 Series



**IP67 Rugged Embedded System with Intel® Core™ i7/i5/i3 U-series Processor  
High Performance, Fanless -30°C to 70°C Extended Temperature**

- Compact & Slim design, IP67 protection
- Fanless, -30°C to 70°C Operating Temperature
- 8th Generation Intel® Core™ i7/i5/i3 U-series SoC (Whiskey Lake) supports up to 40% greater productivity than former generation solution
- DDR4 2400MHz memory, up to 32GB
- Intel® UHD Graphics 620 supports DirectX 12, OpenGL 4.5 and OpenCL 2.1
- Dual X-coded M12 GigE LAN, iAMT 12.0 supported
- 2 M12 COM RS-232/422/485, 1 M12 for 2-port USB
- 9V to 48V DC Power Input, M12 Waterproof Connector
- Optional supports TPM 2.0
- One-stop customized Design and Manufacturing Services



Smart Factory



Rolling Stock



Robotic Control



Logging & Mining



## Specifications

### System

Processor	Intel® Core™ i7/i5/i3/Celeron® U-series Processor (Whiskey Lake)
Chipset	Intel® SoC (Cannon Lake)
BIOS	AMI
SIO	IT8786E
Memory	1 DDR4 2400MHz SO-DIMM, up to 32GB
OS	Windows 10, Linux

### I/O Interface

Serial	2 COM RS-232/422/485, A-coded M12 Connector
USB	1 supports 2-port USB 2.0, A-coded M12 Connector
LED	Power, HDD

### Graphics

Graphics Processor	Intel® UHD Graphics 620
Interface	IP67 Waterproof DVI-D Connector, up to 1920 x 1200 @60Hz

### Storage

SATA	1 SATA III (6Gbps)
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)
Storage Device	- 1 mSATA Socket - 1 Internal 2.5" SSD/HDD Bracket

### Ethernet

LAN 1	Intel® I219LM GigE LAN supports iAMT 12.0, X-coded M12 Connector
LAN 2	Intel® I210 GigE LAN, X-coded M12 Connector

### Power

Power Input	9V to 48V, DC-in
Power Interface	A-coded M12 Connector
Power Switch	IP67 Waterproof Power Button

### Others

TPM	Optional Infineon SLB9665 supports TPM 2.0
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Management	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

### Mechanical

Dimensions	250.0mm x 180.0mm x 44.0mm (9.8" x 7.1" x 1.7")
Weight	2.3 kg (5.07 lb)
Mounting	- Wallmount by mounting bracket - VESA Mount

### Environment

Operating Temp.	-30°C to 70°C (-22°F to 158°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 70°C
Shock	- IEC 60068-2-27 - SSD : 50G @ wallmount, Half-sine, 11ms
Vibration	- IEC 60068-2-64 - SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

## Order Information

Model Name	Processor	GigE LAN	COM	USB 2.0
RES-3000-8665U	Intel® Core™ i7-8665UE	2	2	2
RES-3000-8365U	Intel® Core™ i5-8365UE			
RES-3000-8145U	Intel® Core™ i3-8145UE			
RES-3000-4305U	Intel® Celeron® 4305UE			

### Accessories

DDR4 32G	Certified DDR4 32GB 2666MHz RAM
DDR4 16G	Certified DDR4 16GB 2666/2400/2133 MHz RAM
DDR4 8G	Certified DDR4 8GB 2666/2400/2133 MHz RAM
DDR4 4G	Certified DDR4 4GB 2666/2400/2133 MHz RAM
2.5" SATA HDD	Certified 2.5" SATA HDD
2.5" SATA SSD	Certified 2.5" SATA SSD
mSATA SSD	Certified mSATA MLC SSD 64GB
IP67 Rated DVI Cable	IP67 Rated DVI-D Cable, 200cm
IP67 Rated Ethernet Cable	IP67 Rated M12 to RJ45 Ethernet Cable, 200cm
IP67 Rated COM Cable	IP67 Rated M12 to COM Cable, 200cm
PWA-120W	120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block

## Dimensions & Drawing

Unit : mm (inch)

