

Features

- ✚ **3 CPU options**
Celeron, i5 and i7 CPU options provide a range in price and processing power to match client requirements.
- ✚ **Intelligent Vehicle Ignition Interface**
SoC-based monitoring reacts to turn on/off the system according to predefined on/off delays based on ignition status with a broad voltage input range of 8-35VDC.
- ✚ **Certification**
E-Mark, CE/FCC Class A, EMC-EN 55022 & 55024, Shock-IEC600858-2-27 and Vibration IEC60068-2-64 certificates for in-vehicle usage.
- ✚ **Versatile I/O Functions**
Triple Monitor Output, Up to 4 x Gigabit Ethernet Ports, Digital Inputs and Outputs, Multiple Serial Ports and USB Ports provide a host of functionalities.
- ✚ **Dual mPCIe and USIM sockets**
Sockets support 3G, 4G, LTE, WLAN and GPS cards.
- ✚ **Solid State mSATA drive**
Operating System and applications run on Solid Status vibration proof internal mSATA disk drive.
- ✚ **Dual 2.5" HDD**
One (1) internal and one (1) removable HDD with hardware RAID 1 configuration enabling quick removal of evidence data.
- ✚ **Broad Temperature Range**
-25C~70C depending on CPU Processing level setting and HDD temperature specifications. Utilizing a PGA-type CPU allows CPU throttling in BIOS for a range of temperatures.
- ✚ **Compact Size**
210 mm (W) x 165 mm (D) x 59 mm (H)
- ✚ **POE+**
Four (4) POE+ Ports 25.4W each
- ✚ **Vehicle Application Specific Recording Software**
Patronus Labs **Concert II Hybrid DVR/NVR Software** supports two User Interfaces with vehicle specific functionalities such as: Touch Screen Interface, Multi-channel Instant Playback, Mutli-channel playback speed adjust, Multi-Channel Audio Monitoring, simple archiving, etc.
- ✚ **Power on Record Mode**
The **Concert II Hybrid DVR/NVR Software** supports Power on record mode to prevent operator error. When the system is powered it is recording with no operator interaction required. This guarantees recording without failure.

FIRMUS II RUGGED

PC 4-POE Series

...From Patronus Labs



Applications

The 4 POE model *FIRMUS II RUGGED PC* is one in a series of 11 *FIRMUS II RUGGED PC* models. The series can be used for any application fixed or mobile where high reliability, high vibration or broad temperatures are required.

Patronus Labs typically uses this series as: Rugged DVR/NVR servers, Rugged Work Stations, High-End Digital Signage appliances, GPS tracking device, Wi-Fi, 3G/4G/LTE gateway or a combination of all the above.

Custom software development is available to meet customer specific needs. Contact us for more details.

Models

Part Number	Description
CSRU0954	Rugged PC, Intel® Celeron™, Fanless, 4 POE Ports, 2x2.5" HDD, ignition control, 8-35 V DC
CSRU0955	Rugged PC, Intel® Core™i5, Fanless, 4 POE Ports, 2x2.5" HDD, ignition control, 8-35 V DC
CSRU0956	Rugged PC, Intel® Core™i7, Fanless, 4 POE Ports, 2x2.5" HDD, ignition control, 8-35 V DC

Options

Part Number	Description
CCCC0957	4GB DDR3 RAM, 0°C to 85°C
CCCC1294	8GB DDR3 RAM, 0°C to 85°C
CCSD1311	32GB mSATA MLC, 0°C to 70°C for Operating System
CCSD1312	64GB mSATA MLC, 0°C to 70°C for Operating System
CCCC0270	110/220VAC to 12VDC, 120W Power Supply
CCSW0178	Windows 7-Pro 64-bit
CCSW0267	Windows Embedded Standard 64-bit

Image



Specifications

Model	CSRU0954	CSRU0955	CSRU0956
Audio	1x mic-in and speaker-out		
Certification	CE/FCC Class A, according to EN 55022 & EN 55024 & E-Mark for vehicle applications		
Chipset	Intel® QM77 PCH with AMT & RAID support		
DC Input	8~35V DC input via 3-pin pluggable terminal block		
Dimension	210 mm (W) x 165 mm (D) x 59 mm (H)		
Ethernet	1x Gigabit Ethernet port by Intel® 82579LM and 3x Gigabit Ethernet ports by Intel® i210		
Graphics	Integrated Intel® HD Graphics 4000 Controller		
Humidity	10%~90% , non-condensing		
Ignition Control	Ignition control with user-selectable on/off delay		
Isolated DIO	4x isolated DI with COS interrupt and 4x isolated DO		
Memory	1x 204-pin SO-DIMM sockets, Max 8GB DDR3 1333/1600 MHz SDRAM		
Mini PCI-E	1x full-size mini PCI Express socket with USIM socket and 1x half-size mini PCI Express socket		
Mounting	Wall-mounting (Standard) or DIN-Rail mounting (Optional)		
mSATA	1x full-size mSATA, 32GB (optional up to 128GB)		
Operating Temperature (100% CPU Loading)	`-25°C ~ 70°C** (Max Performance)	`-25°C ~ 50°C**(Max performance)	`-25°C ~ 50°C**(Max performance)
		`-25°C ~ 70°C**(Reduce performance)	`-25°C ~ 60°C**(Reduce performance)
		`-25°C ~ 70°C**(Extended temperature)	`-25°C ~ 70°C**(Extended temperature)
PoE	4 x Compliant to IEEE 802.3at (25.5W) with per-port power on/off control		
Processor	Intel® Celeron™ 1020E (2.2 GHz, 2 MB cache)	Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache)	Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache)
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD and 1x Hot-swappable HDD tray for 2.5" HDD/SSD		
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)		
Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)		
Storage Temperature	-40°C ~ 85°C		
USB	4x USB 3.0 ports and 2x USB 2.0 ports		
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes(w/ SSD, according to IEC60068-2-64)		
Video Port	1x DVI-I connector for VGA/DVI output, supporting 2048x1536 (VGA) or 1920x1080 (DVI) resolution and 2x DisplayPort, supporting 2560x1600 resolution		
Weight	2.4 Kg		

* The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. For detail testing criteria, please contact Patronus Laboratories.

**For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.

Performance Setting	Celeron	Intel i5-3610ME	Intel i7-03610QE
Maximum Performance	2100 / 70°C	4388 / 60°C	7407 / 50°C
Reduced Performance		3896 / 70°C	5873 / 60°C
Extended Temperature			3471 / 70°C

CPU Benchmark Score / Operating Temperature