



Global Service Network



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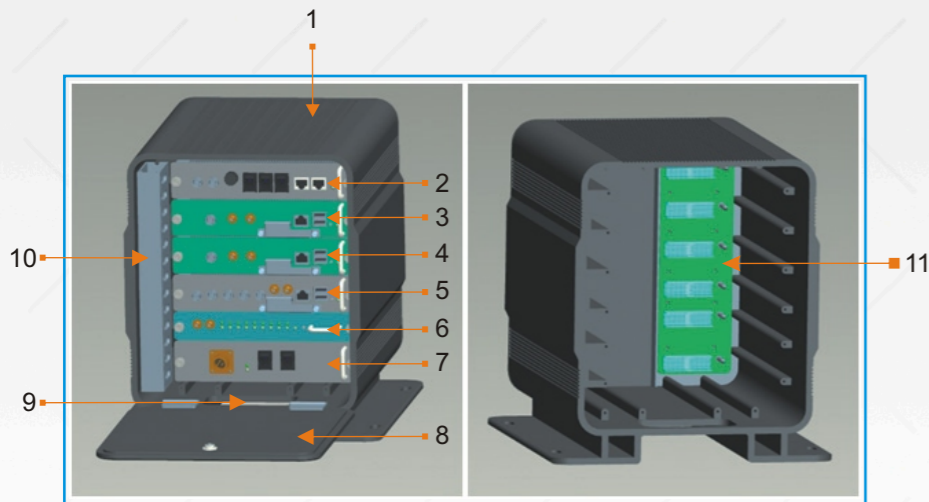
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CBP-3000 NORCO Vehicle Mounted Control System Product Solutions



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CBP-3000 In-Vehicle Computing System



- 1、Chassis
- 2、Amplifier
- 3、Server 1
- 4、Server 2
- 5、Player
- 6、Switch
- 7、Vehicle Power
- 8、Front Cover
- 9、Wire Distribution Pores
- 10、Guide Track
- 11、Backplane

Personalized Design:

- Modular design, easy to maintain, flexible expansion
- Interfaces and main storage adopt front installation, front connection, front-maintenance design
- The interior wiring guided by the guide track, all cables out from the bottom of the chassis
- Separate layout of external interface and debug interface, convenient for wiring and debugging

Test Standards:

- Vibration Standard: ISO-16750-3-2003
- Vehicle Power Standards : ISO-7637-2-2004

Stability Assurance:

1. Vehicle Power:

Vehicle power is the most important factor affecting the stability of vehicle devices. Vehicle power modules have to handle all kinds of interferences from vehicle operating environment: Pulse caused by the disconnection of the DC supply through an inductive load (such as windshield wiper motor); Pulse caused from D.C motors acting as generators after the ignition is switched off; EFT caused by voltaic arc in the switching on and off process of automotive electronic system switches, relay and fuse; The voltage reduction caused by energizing the starter-motor circuits of the internal combustion engines (eg. Turn on the air-condition); The load dump transient (voltage pulse) caused in the event of a discharged battery being disconnected while the alternator is generating charging current with other loads remaining on the alternator circuit at this moment (eg. fusing or disconnection of discharged battery when performing maintenance). To avoid or solve these interferences, the power module of this device is strictly complied with this international standards: ISO_7637-2-2004.

2. Vehicle Vibration

Vibration of automobiles is different from the vibration caused in other application environments. Vibration during transportation has the characteristics of large vibration amplitudes and without direction. Taking these characteristics into consideration, CBP-3000 adopts an unique anti-vibration design: Air-tight Pin Connection + Guide Pin + 360° all-round fixing mode. If utilizing mechanical hard disk, you can use a spring vibration isolator to fix the hard disk. The effectiveness of this method has been verified in the actual application environment. The vibration level of CBP-3000 meets ISO16750-3 vibration standard.

3. High Temperature

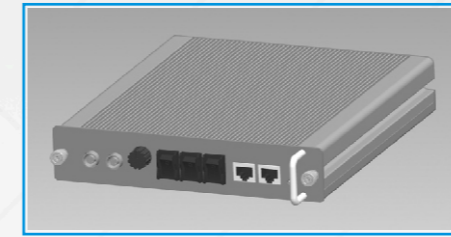
Automotive devices are running in the Open-air. With the direct solar radiation, it is a common that the in-house temperature of the vehicle will be up to 60°C/70°C. To cope with such a high temperature environment, CBP-3000 adopts a high conversion efficiency power supply, to decrease heat productivity of the power module and connect power module with the chassis for thermal conduction; The motherboard adopts low power CPU and utilize passive cooling of the heat sink to obtain an effective cooling performance.

4. Atmosphere Environment: Humidity, Vulcanization, ect

Automotive devices are also subjected to the impacts of the atmosphere in its application environments. For example, the high humidity or the high sulfur content in the air will affect automobile devices. Beside, automobiles will be affected by the moisture from its cleaning. To reduce the system failure rate to the minimum level, the enclosure of vehicle devices, together with all the working modules should adopt a double-layer seal design and the board with three-proof coating.

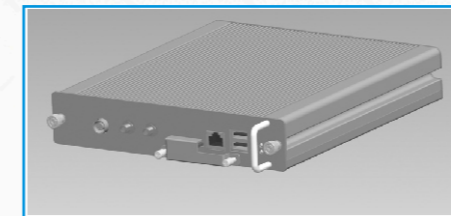
Modules Description

Vehicle Power :



- 8-36V wide input, total consumption 150W, suitable for vehicle power environment
- Provide undervoltage, overload, overcurrent, over-temperature and short-cut protection
- With Reverse Polarity Protection, undervoltage/overvoltage protection
- Undervoltage threshold: 7V, support 7V voltage input for 30s
- Overvoltage threshold: ≥80V, support 80V voltage input for 30s
- Offer UPS option and adopt Iron Battery Technology
- Powered by battery or power source, with interface to show current battery power
- Support Resume by RTC Alarm with 10 time slots configurable, provide software complier interface
- Dimension: 200mm (W) X230mm (L) X45mm (H)
- Strictly complied with ISO_7637-2-2004

Car/Vehicle Amplifier:



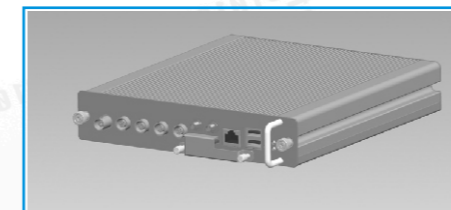
- Support 4 stereo inputs, from low, middle, in a priority order (low-middle-high-higher)
- Output power up to 40W
- Sound Volumn is Tunable
- Passive heat dissipation
- Powered by battery, amplifier will be OFF automatically; Powered by power source, amplifier will be ON
- Dimension: 200 (W) x230 (L) x40 (D) mm

Vehicle Servers :



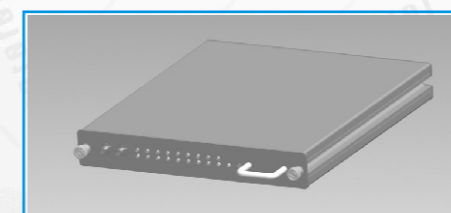
- ATOM N2800/D2700 CPU + NM10 chipset, with 2G DDR3 RAM, maximum 4G
- Panel with 1x SD, 1x CF, rear panel with 1x SATA
- 1x RJ45 debug port, 1x Gigabit Ethernet port, connected to switch via backplane
- 2x USB3.0 (panel), 4x USB2.0(internal)
- 2x mini-PCIE for 2x 3G function
- 2x SIM card slot
- Panel with 1x CAT5 port
- Passive heat dissipation
- Exchange slots of vehicle servers, player and Amplifier, easy for onsite maintenance
- Dimension: 200 (W) x230 (L) x40 (D) mm

Vehicle Player :



- ATOM N2800/D2700 CPU + NM10 chipset, with 2G DDR3 RAM, maximum 4G
- Panel with 1x SD & 1x CF on panel, rear panel with 1x SATA
- 1x RJ45 debug port, 1x Gigabit Ethernet port, connected to switch via backplane
- 2x USB3.0 (panel), 4x USB2.0 (internal)
- 2x mini-PCIE for 3G and WIFI support
- 2x SIM card slots
- 3x CAT5, 1x BNC/AV port
- Passive heat dissipation
- Exchange slots of vehicle servers, player and Amplifier, easy for onsite maintenance
- Dimension: 200 (W) x230 (L) x40 (D) mm

Switch Module :



- Integrated WiFi AP function, support 50 WiFi users online, 802.11g/n protocol
- 8x10/100/1000 Mbps adaptive Ethernet ports, connected to other modules via backplane, with LAN
- Delay 1 min to close WiFi AP when power down. Auto open WiFi AP after restore power
- When the interface of all servers are out of connection, switch module will be OFF automatically within 1 min, while any of the servers starts, switch module will auto ON
- When powered by battery, WiFi AP will not be activated when starting the switch module (WiFi AP function is closed when powered by battery)
- Passive heat dissipation
- 2x WIFI Antenna, 300Mbps, 8x LAN Link & Act LED on the front panel
- Dimension : 200 (W) x230 (L) x40 (D) mm