

- CVX-Server
- Embedded Computer Platforms (ECP) for OEMs



Form the leader in Embedded Computing Technologies, Kontron offers the CVX-Server, a low-power high performance Intel® Pentium® M-based embedded computing platform. Meeting Mil-Std 810F ratings for shock, vibration, humidity, and temperature, the CVX-Server features a solid, rugged, unitized aluminum construction to protect internal subsystems. It also offers impressive expansion capabilities giving

OEMs the flexibility they need to develop their customer specific systems. The CVX-Server's comprehensive I/O and expandability make it the most versatile development platform available. For whatever your embedded computing needs are, Kontron has the right turnkey embedded computer for your system development needs.

#### Key Features

- Small rugged enclosure design
- Multiple display outputs
- Wireless connectivity
- Standard PCI slot and Mini PCI slot
- 10 to 30V DC input power range
- Intel® Pentium® M performance
- Up to 60GB removable hard drives
- Optional -25 °C (-13 °F) cold soak startup spec
- Not PC/104

#### Key Applications

- Public Safety Dispatch and GPS/GIS
- Commercial aviation
- Heavy equipment GIS and logistics
- Drilling and mining telemetry
- Commercial vehicle tracking
- Construction and surveying

# ➤ CVX-Server - Technical Specifications

## Server

### Processor

- Intel® 735 Pentium® M processor at 1.7GHz
- System bus: 400MHz
- Intel® 855GME chipset

### OS Support

- Windows® 2000 Professional/XP Pro, Linux® 9 Kernel 2.6 Validated

### Chassis Construction

- A solid, conductive cooled, rugged unitized aluminum construction protects internal subsystems from shock and vibration

### RAM/Cache

- 512MB DDR 333MHz DRAM (PC2700), upgradeable to 1GB
- 64MB Video DRAM
- Standard 2MB L2 cache

### Removable Ruggedized 2.5-inch Hard Drive

- 40GB ATA/100 removable hard drive module - standard
- 60 and 80GB ATA/100 removable hard drive module - optional
- Heated hard drive upgrade for expanded operating temperature spec

### Embedded Expansion Slots

- PCMCIA card bus slots that accommodate two Type II or one Type III devices
- One open CF slot (CompactFlash™ media)
- One 5.8-inch length PCI card slot for DVR, data acquisition, etc.
- One open Mini PCI slot for 802.11g wireless LAN or other technology

### External Keyed I/O Connectors with Strain Relief System

#### Power

- Locking Vehicle power connector

#### UPS

- Locking Vehicle Smart Battery connector

#### Video

- One LVDS output (640 x 480, 800 x 600, 1024 x 768) and one RGB analog output (simultaneous different image, different resolution)

#### Sound

- Amplified stereo speaker out, stereo MIC-in and Line-in

#### Control Port

- Remote momentary power on/off switch signal, PS/2 mouse and keyboard signals, system controlled 12V DC 4A power out

#### Mouse/Keyboard Interface

- Electronically compliant IBM® PS/2 via control port

#### Serial Ports

- Two open RS-232 ports and one USB RS-232 port

#### USB

- Four bootable USB 2.0 ports (two on front of unit, two on rear)

#### High Speed Digital

- Powered IEEE 1394 port

#### Network

- RJ45 Ethernet LAN

#### Power button, HDD activity LED and Power LED

### Internal I/O Connectors

- 2nd IDE channel for integrated optical drive or DiskOnChip®
- Smart Battery port for integrated battery

### Physical Characteristics

#### Weight

- 5lbs (2.3kg)

#### Dimensions (W x H x D)

- 6.9 x 2.8 x 11.63-inch (17.52 x 7.11 x 29.54cm)

### Temperature and Power Management Systems

#### Temperature Management System

- Temperature management system will not allow system to turn on at temperatures below -15 °C (5 °F) unless extended temperature option is installed
- Override through CMOS setup
- Optional extended temperature option controls heating system to hard drive and other system components at temperatures below 0 °C. Parameters can be set through CMOS setup

#### Power Management System

- ACPI Compliance, (Standby, Suspend and Hibernate (S1,S3,S5))
- UPS Port. Optional Smart UPS allowing for user-definable graceful shutdown modes after power failure. Smart UPS allows for a minimum of 5min
- Brownout protection in 12 and 24V DC vehicles to 6.5V DC for 30sec
- Internal DC to DC converter with power input range of 10 to 30V DC
- 500ms debounce protection on power switch
- Two externally accessible mini car fuses and reverse polarity protection
- Graceful shutdown and inactivity timers
- "Auto on" vehicle key signal on power connector for remote power on and graceful power down
- Power LED error code status codes for troubleshooting
- System controlled 12V DC 4A power out on control port

### Environmental

#### Operating Temperature

- -15 ° to 60 °C (5 ° to 140 °F)

#### Non-operating Temperature

- -25 ° to 60 °C (-13 ° to 140 °F)

#### Optional Expanded Operating Temperature for Server

#### Extended Operating Temperature Option

- -40 ° to 60 °C (-40 ° to 140 °F)\*

#### Non-operating Temperature

- -25 ° to 60 °C (-13 ° to 140 °F)

#### Extended Cold Start Temperature

- -25 ° to 60 °C (-13 ° to 140 °F)\*

\*Power applied to unit at all times

#### Operating Humidity

- 10 to 90% relative humidity, non-condensing
- Mil-Std-810F, Method 507.4, storage humidity: 5 to 95% relative humidity, non-condensing

#### Operating Shock

- 40g @ 45 to 200Hz; 18 drops

#### Non-operational Shock

- 75g @ 80 to 2000Hz; 12 drops

#### Functional

- Mil-Std 810F, Method 516.5, Procedure I

#### Crash Hazard

- Mil-Std 810F, Method 516.5, Procedure V

#### Vibration

- Mil-Std 810F, Method 514.5, Procedure 1, Cat. 20, Table 514.5C-VII, Figure 514.5C (US highway truck)

#### H<sub>z</sub> Power Spectral Density (g<sup>2</sup>/Hz)

10	0.015
40	0.015
50	0.00015

- Overall acceleration: 1.04gm
- Duration: 1hr in each of three mutually perpendicular axes

#### Operating Altitude

- -300 to 3000 meters

#### Non-operating Altitude

- -400 to 5,000 meters

### EMI/EMC

- FCC Class A, CE Class A

### Safety

- ETL, cETL



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- **EnVoy II**
- **3-piece mobile data computing system**



10.4 or 12.1-inch displays available



TG3 keyboard



Kontron Mobile Computing, Inc introduces the next-generation EnVoy II Mobile Data Server — an advanced, modular, mobile computing system designed specifically for installation and use in professional service vehicles such as police, fire/EMS, and utility vehicles.

The new EnVoy II now incorporates Kontron's own CVX-Server. Meeting Mil-Std 810F ratings for shock, vibration, and temperature, the CVX-Server features a solid, rugged, unitized aluminum construction to protect internal subsystems. It also offers impressive expansion capabilities with

interfaces including IEEE 1394, USB 2.0, wireless 802.11b/g, and a CompactFlash™ slot. An open mini PCI slot for integrated 802.11g and a 5.8" length PCI slot give the user or OEM the ability to turn their MDT or in-vehicle embedded system into a Digital Video Recorder (DVR).

With its 3-piece, space-saving, modular design, the EnVoy II allows the monitor and keyboard to be mounted near the operator while the server is mounted in the trunk, under the seat, in the glove box, or elsewhere — away from the passenger area.

- **1.7GHz Mobile Intel® Pentium® Processor-M**
- **Low power consumption**
- **Embedded wireless LAN connectivity**
- **Independent dual displays**
- **PCI card slot expansion**



# ▶ EnVoy II - Technical Specifications

## Server

### Processors

- 1.7GHz Mobile Intel® Pentium® Processor - M

### OS Support

- Windows®2000 Professional/XP Pro

### Chassis Construction

- A solid, rugged unitized aluminum construction protects internal subsystems from shock and vibration

### RAM/Cache

- 512MB DRAM, upgradeable to 1GB
- 64MB Video DRAM - RAM dependent
- Standard 2MB L2 cache

### Hard Drive

- 40GB removable - standard
- 60 and 80GB removable - optional
- Heated hard drive upgrade for expanded operating temperature spec

### Embedded PC-CARD Slots

- PCMCIA card bus slots that accommodate two Type II devices

### I/O Connectors

- Power input: Internal DC to DC converter with power input range of 10 to 30V DC
- Video: Simultaneous digital LVDS output and RGB output
- Sound: Amplified (2W) stereo speaker out, stereo MIC-in and Line-in
- Mouse/keyboard interface: Electronically compliant IBM PS/2
- Serial ports: Two open RS-232 ports and one USB RS-232
- USB ports: Four USB 2.0 ports (two on front of unit, two on rear)
- One 5.8-inch length PCI card slot; one CompactFlash slot; IEEE 1394; RJ45 Ethernet LAN; Mini-PCI slot for WLAN expansion or other technology

### Physical Characteristics

- Weight: 5lbs (2.3kg)
- Dimensions (W x H x D): 5.75 x 2.63 x 11.5-inch (14.61 x 6.68 x 29.21cm)

### Remote PS/2 Keyboard and Mouse

- Full size QWERTY keyboard with 86 keys (USA standard key set)
- Sealed mouse
- Sealed against weather, dust, and moisture
- 8-level backlight control

### Physical Characteristics

- Weight: 2lbs (0.9kg)
- Dimensions (W x H x D): 12 x 2 x 6-inch (29 x 5 x 16cm)

### Keyboard Options

- PS/2 "Y" adapter (for connection to standard PS/2 compliant PCs)
- International key sets (Spanish, French, German, and others)

### Remote Display

#### 10.4-inch Display Option

- 1200 nit 800 x 600 SVGA with Resistive Matrix Touch Screen
- 1-touch brightness control with on/off button
- Eight backlit user-specifiable function keys
- Weight: 7lbs (3.2kg)
- Dimensions (W x H x D): 11.5 x 9 x 2.5-inch (29.2 x 22.9 x 6.1cm)

#### 12.1-inch Display Option

- 1400 Nit display brightness (Color TFT LCD)
- 800 x 600 SVGA with Resistive Matrix Touch Screen
- Weight: 9lbs (4.2kg)
- Dimensions (W x H x D): 12 x 9.5 x 3-inch (32 x 24 x 7cm)

### Optional External Drives

- Floppy drive\*
- USB CD-ROM drive\*
- Connector cables reaching up to 10-feet

\*Floppy and CD-ROM drives do not meet NEMA or IP environmental specifications

## Temperature and Power Management Systems

### Temperature Management System

- Temperature management system will not allow display to turn on at temperatures below -15 °C (5 °F)
- Temperature management system will prevent system from power-up if temperature is above operating limit

### Power Management System

- Smart UPS port allowing for user-definable graceful shutdown modes and connection of longer run-time smart batteries after power failure

## Environmental

### Operating Temperature

- -15 ° to 60 °C (5 ° to 140 °F)

### Non-operating Temperature

- -25 ° to 60 °C (-13 ° to 140 °F)

### Optional Expanded Operating Temperature for Server

- -25 ° to 60 °C (-13 ° to 140 °F)

### Operating Humidity

- 10 to 90% relative humidity, non-condensing

### Non-operating Humidity

- 5 to 95% relative humidity, non-condensing

### Operating Shock

- 40g @ 45 to 200Hz; 18 drops

### Non-operational Shock

- 75g @ 80 to 2000Hz; 12 drops

### Functional

- Mil-Std 810F, Method 516.5, Procedure I

### Crash Hazard

- Mil-Std 810F, Method 516.5, Procedure V

### Vibration

- Mil-Std 810F, Method 514.5, Procedure 1, Cat. 20, Table 514.5C-VIII, Figure 514.5C-3 (Composite wheeled vehicle)

### Operating Altitude

- -300 to 3000 meters

### Non-operating Altitude

- -400 to 15,000 meters

## EMI/EMC

- FCC Class A, CE Class A

## Safety

- ETL, cETL



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