Model Information

Features

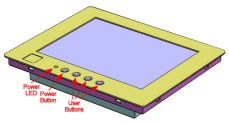
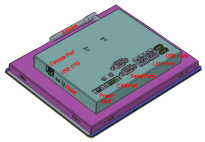
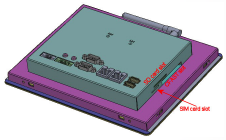
- **RISC based Touch Panel PC**
- ARM Cortex-A8 600MHz
- 256MB SDRAM, 256MB NAND Flash
- Flat Panel 8", resistive Touch
- 1 x CFAST-Slot, 1 x SD card slot
- 2 x Fast Ethernet LAN ports
- 1 x USB 2.0 OTG
- 2 x USB 2.0 Host
- 1 x CAN BUS
- 2 x Serial Ports RS232/422/485
- Audio-In/-Out
- 1 x Console Port
- 1 x MiniPCI Express-Slot for 3G-Modem
- Option: WLAN 802.11b/g/n, Bluetooth
- Very small, fanless, low Power
- Ready-to-run full-featured Debian GNU/Linux platform
- Supports Windows CE

Contact Online...

VS-860

Quick Link: | Features | More Pictures | Overview | System | Serial Interface | Power and Environment | Mechanical | Software Specifications | Device Drivers | Ordering Information |

More Pictures

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Overview

The VS-860 is a RISC Panel PC, an industrial embedded computer based on ARM Cortex-A8. It features an integrated 8" display panel with resistive Touch function. The great variety of interfaces like LAN/WLAN, CFast, USB, Bluetooth, serial interface plus more options makes it easy to connect various industrial devices to the VS-860.
Compact dimensions and Panel mount capability make the VS-860 to a space saving and flexible mounting industrial computer. It is feasible to be installed even in space limited environments.
The optional WLAN and Bluetooth functions provide opportunities for wireless communication. A miniPCIe slot provides options to extend that. For example the connected SIM slot allows to use GSM/3.5G modems.
Due to RISC based architecture the VS-860 has very small power consumption, so fanless heat dissipation is sufficient inside. Working in a wide temperature range from -10°C up to 65°C the VS-860 can be applied in under harsh industrial conditions. Therefore the VS-860 is downright designed for industrial automation.
The embedded computer runs full-featured Debian GNU/Linux on ARM operating system. This system is usually installed on the integrated NAND Flash memory, to operate without extra mass storage. External storage offered is a SD card to place in the card-reader, and an additional CFast card. The operating system may also start from the SD card. With Debian's repository database it is easy to

install and update the free software on the VS-860.
The system also supports Windows CE 6, starting from SD.

System

Hardware	• ARM Cortex-A8 32-bit RISC CPU, 600 MHz • 256 MB SDRAM (512 MB option) • 256 MB NAND Flash (512 MB option) • Real time clock with battery backup (CR2032) • Watchdog Timer
Mass Storage	• Internal NAND Flash Memory • SD-card Reader SD 2.0 / SDHC • CFast-Slot Type II, SATA connection
Network	• 2x Fast Ethernet • Option: WLAN 802.11b/g/n • Option: Bluetooth
Display & Touch	• 8" Panel 800×600 • Resistive Touch function
Audio	Audio-In and -Out Jacks
Expansion Slot	• 1x miniPCI Express, USB 2.0 signals (for GSM/3.5G, GPS, …) • SIM Slot for GSM/3.5G modems in miniPCIe slot
Serial Interfaces	• 2x USB 2.0 as Host • 1x USB 2.0 OTG • 1x Console Port RS232, up to 115200 bps • 2x RS232/422/485 up to 3.0 Mbps • 1x CAN Bus up to 1.0 Mbps
LED	• 1x Power on Front • LAN: 2x 10M/Link, 100M/Link, integrated in RJ45 connector
Buttons	• 1x Power • 3x User definable

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Serial Interface

Serial Port	• 2x RS232/422/485, selected by software or DIP switch • Highspeed UART, 128 Byte FIFO • RS232: up to 500 kbps • RS422/485: up to 3.0 Mbps
Available Modes	• RS232 • RS422 full duplex • RS485 4-wire, full duplex • RS485 2-wire, half duplex, without echo
Signals	• RS232: TxD,RxD, RTS,CTS, DTR,DSR, DCD, RI, GND • RS422: Tx+/-, Rx+/-, GND • RS485 2–wire: Data+/-, GND • RS485 4–wire: Tx+/-, Rx+/-, GND
RS485 Data Direction Control	by ART (Automatic Receive Transmit control)
CAN Bus	• CAN High Speed up to 1 Mbit/s for transmit/receive • HECC CAN+TJA1050 (20kbps min.) • Signals: CAN_H, CAN_L, CAN_GND

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Power and Environment

Power	• Input 9 - 30V DC • min. 900mA @12V • max. 3A @12V with USB devices • 2-pin Terminal block connector
Temperature	• Operating: -10°C - 50°C • Storage: -20°C - 70°C
Approvals	• EMC: FCC Class A, CE Class A • Environmental: RoHS

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Mechanical

Dimensions	219×44×179 mm³ (W×D×H)
Weight	1.45kg
Construction Material	Metal
Mounting	• Panel Mount • VESA 75×75

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Software Specifications

Linux	• Debian GNU/Linux for ARM • Enhanced support for USB • Watchdog Timer supported
Other	Windows CE 6

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Device Drivers

Data Communication	• USB (supports USB Mass Storage Devices, USB-to-Serial converters, USB–CAN adapter, Bluetooth) • UART FT2232D, 128 Byte FIFO, RS232/422/485 • WLAN 802.11b/g/n optional • Bluetooth optional
CAN	VScom CAN API, CANFestival, CANopen, LinCAN, SocketCAN
Others	• RTC • Watchdog Timer

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Ordering Information

Part Number	**6850** VS-860
Part Number	**6851** VS-860 WLAN (with Bluetooth and Wireless LAN)
Part Number	**6031** Power supply Adapter 12V DC, 1A. Connected by Terminal block
Part Number	**6055** Starter Kit Linux • VS-860 RISC Panel PC • 4GB microSD card for Linux inserted • Power adapter 12V @ 1.5A • Adapter cable for console port • Documentation and Development Software on DVD
Part Number	**6056** Starter Kit Windows CE6 • VS-860 RISC Panel PC • 4GB microSD card for Windows CE6+License inserted • Power adapter 12V @ 1.5A • Adapter cable for console port • Documentation and Development Software on DVD

GSM / UMTS	mPCIe card for 3G modem
Packing list	VS-860 RISC Panel PC

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Applications
Places
System
Sat 1 Jan, 2:38 AM
Computer
user's Home
Wastebasket
134 MB Filesystem

Front View

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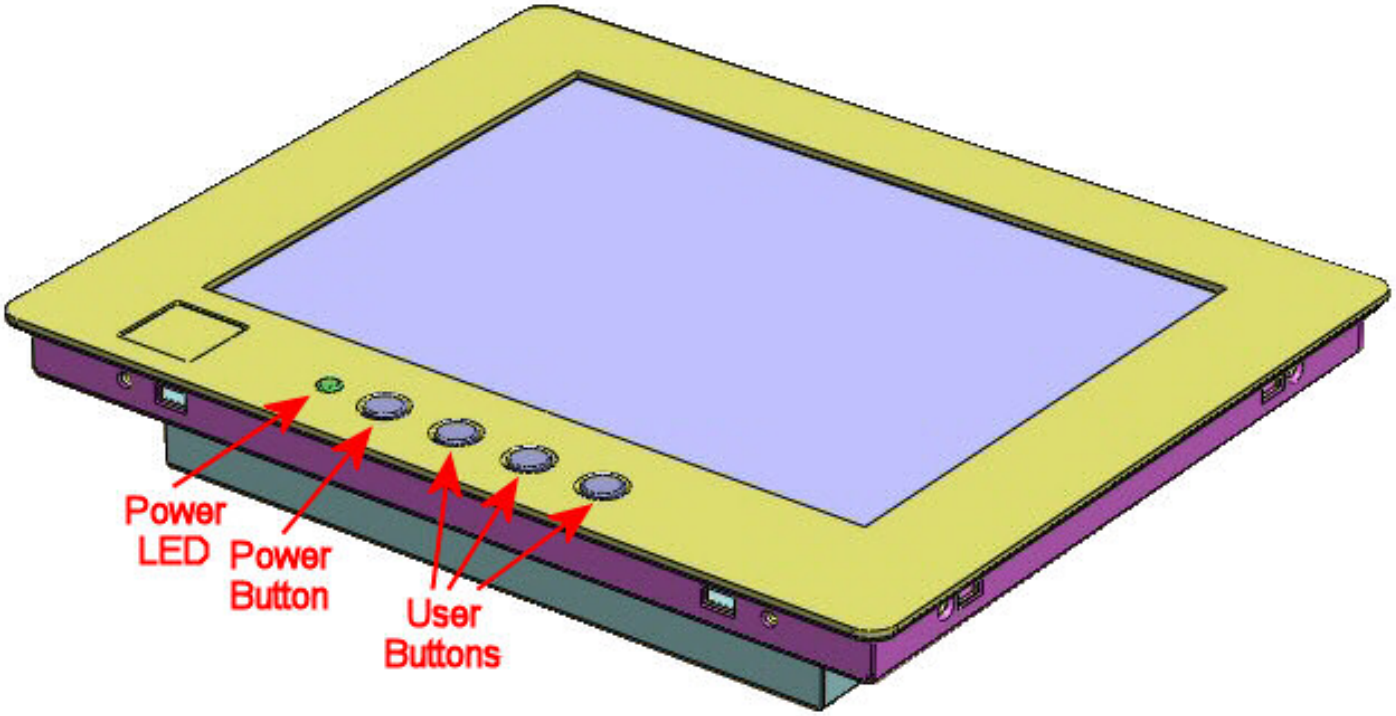

Back View

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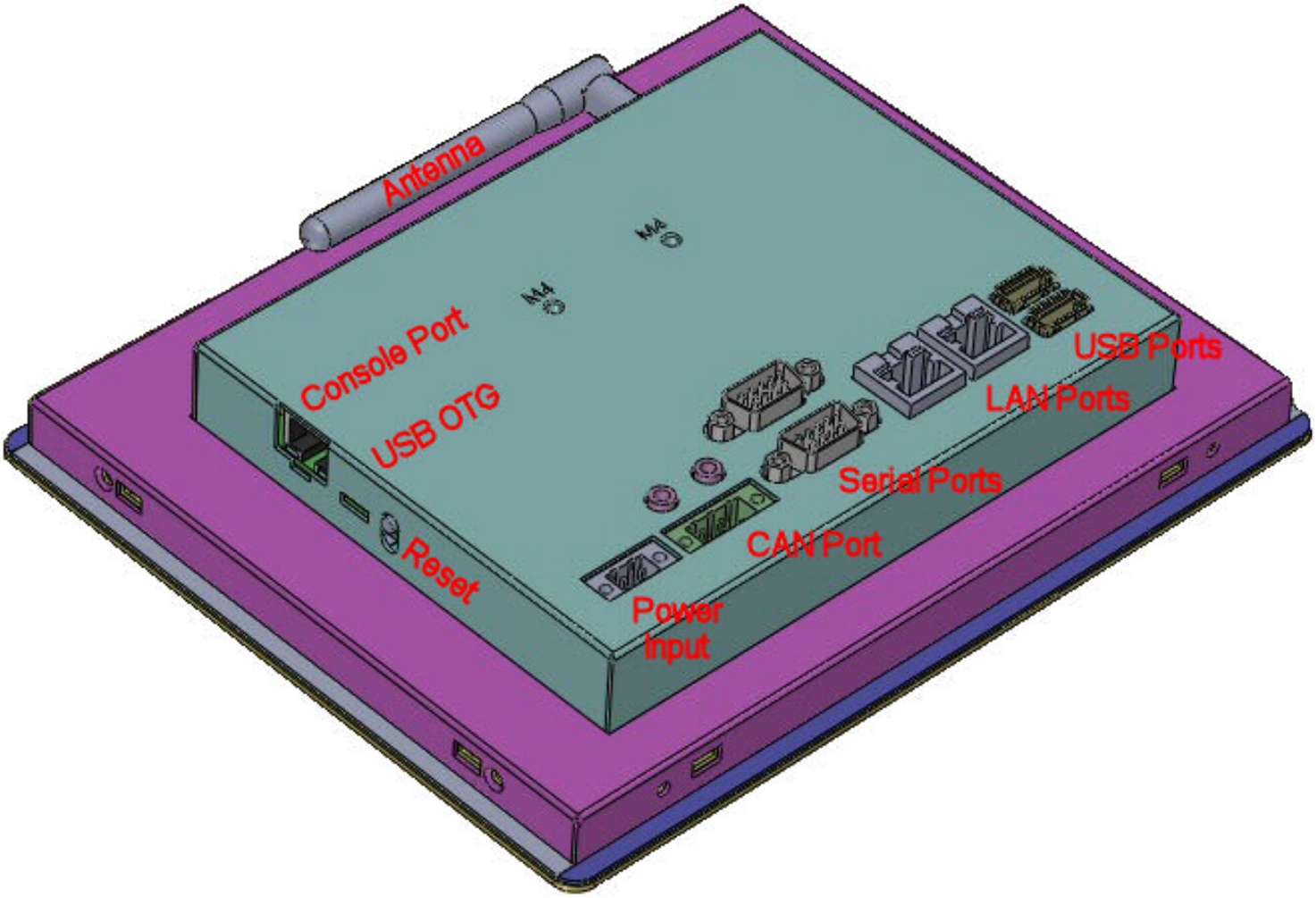

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