

ZYPAD

WR 11xx RUGGED WEARABLE COMPUTER



Features

Robust: the WR1100 has a special case made of ballistic nylon and magnesium alloy to maximize the strength and minimize weight.

Modular Design and Expansions: The WR1100 has a modular battery pack and add-on module expansion system; this allows the user to rapidly change the configuration of the device.

Accelerometer, electronic compass and a biometric finger reader: The WR1100 can be equipped with all these hardware features (some are optional).

Mission ready: By simply using the Mode Selector switch, users are able to change the configuration of the device between user-defined standard and mission modes. This also exposes a Programmable Alert Button that can be programmed to perform special functions.

Multiple User Friendly operating systems: The WR1100 can be supplied with Windows CE 6.0 or Linux operating systems.

Wireless Radio Design: Integrated into the core system is PAN (Bluetooth or ZigBee) and LAN (IEEE 802.11 b/g) hardware.

Multiple I/O: A USB Device and USB Master ports are available on the case. Also, the WR1100 has an audio stereo and mono microphone.

VGA 640x480 64k Color High Visibility Display with Touch Screen and Automatic Contrast: Users can comfortably view data and images, even in direct sunlight or darkened environments, on the shock resistant display.

High Performance CPU and Memory System: 128 MB Flash and 256 MB RAM. Even complex applications can be run on the device. Furthermore with the μ SD Card memory expansion large amounts of information can be stored.

The ZYPAD RUGGED WR1100 Wrist Worn Personal Rugged Computer is a powerful computing device designed to withstand the most severe environmental conditions and to be worn comfortably on the user's wrist for hands-free operation.

The WR1100 has a special case made of ballistic nylon and magnesium alloy, which maximizes the strength and minimizes weight. Also the large high-resolution touch screen display is protected by a special film, this is to avoid damage and is made to withstand water, dust, etc. The WR 1100 is compliant with MIL standard regulations.

Another big advantage of the WR1100 is the modularity, i.e. the possibility to change the function of the device only by replacing a module. So, if the users want to pass from a GPS receiver to a GPRS module, it will entail only a fast and easy plug and play operation. Being modular, also the battery module is easy to remove and insert allowing a fast replacing on the field that combined with the hot swapping functionality gives a further benefit for the users.

The hands-free operation of the WR1100 overcomes the physical limitations associated with normal hand-held computers, this allows users complete freedom to continue everyday activities using both hands whilst continuing to have full computer access at all times.

The hands-free versatility of the WR1100 makes it of special interest to First Responders, Emergency Services, Security, Defense, Forest Services and any area where hands-free access to large amounts of information is necessary.

For more information on Eurotech wearable computers and accessories, please visit our website: www.zypad.com.

ZYPAD WR 11xx Specifications



Architecture

PROCESSOR	PXA 270 @ 416 MHz
MEMORY	128 MB FLASH 256 MB RAM
DISPLAY	640 x 480 pixels (VGA) 65K Colours min 3.5" TFT with Touch Screen Visible with direct sun light Night vision compliant (optional) Shock resistant
LED	1 Power 1 Charge 1 WPAN 1 WLAN 1 Alarm
AUDIO	AC '97 codec On board microphone with noise cancellation On board integrated speaker for high noise environment
I/O	1 USB Device 1 USB Host 1 Audio (stereo out or mono in-mono out)
WPAN	Bluetooth Class 2 - integrated antenna or Zigbee - integrated antenna
WLAN	Integrated IEEE 802.11b/g - integrated antenna
OTHER DEVICES	Integrated Accelerometer Integrated electronic compass (optional) Biometric fingerprint reader
EXPANSION SLOTS	1 user accessible µSD memory card
OTHER EXPANSIONS	1 expansion connector for 1 optional module
KEYBOARD	Cursor pad Virtual qwerty on screen
PEN DEVICE	Stylus
OPERATING SYSTEM	LINUX based on Kernel 2.6
APPLICATION DEVELOPMENT SYSTEM	LINUX: Eurotech SDK for Kernel Linux 2.6
CASE	Ultra resistant
WEIGHT	650 grams (23 ounces)

Battery Pack

POWER	3.6 V Li-Ion Interchangeable (hot swappable) Battery Pack
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Add-on Modules*

GPS	12 channels receiver with very high sensitivity DGPS and SBAS (WASS, EGNOS) support Internal antenna + External antenna connector with automatic/manual antenna switching capability
WWAN + GPS	GSM/GPRS/EDGE/UMTS Internal antenna + External antenna connector with automatic/manual antenna switching capability 12 channels receiver with very high sensitivity DGPS and SBAS (WASS, EGNOS) support Internal antenna + External antenna connector with automatic/manual antenna switching capability
RFID	13,56 MHz ISO 15693 & 14443 A/B with integrated antenna

(*): one module per unit – some modules will not be initially available

Agency Approvals

Emissions	EN55022 (CISPR22) Class B FCC 15 Class B DOC Class B CE Mark MIL-STD 461
Immunity	EN55024 FCC 15, Class B DOC Class B MIL-STD 461
Safety	UL and cUL listed, UL 1950 third edition TUV T- Mark, EN60950 UL and cUL listed, UL 1604 with all batteries and all wireless radios ATEX Zone 2, Category 3

Accessories

Battery Charging	External universal power supply Multiple battery charger External 12/24 V charger Cigarette lighter power supply
Audio Adapter	Converts into 3.5mm stereo jack
USB Device cable	Converts into USB Device connector "A" type plug
USB Host cable	Converts into USB Host connector "A" type receptacle

Environmental specifications

Temperature	Operating: -4° to 140° F (-20° to 60° C) Storage: - 40° to 167° F (-40° to 75° C) Cold Boot (battery): 32° F (0°C) @ 70% charge Cold Boot (AC adapter): any <i>MIL-STD 810F methods 501.4 and 502.4</i>
Thermal shock	1.5°C < 5°C / minute over -20°C to 60°C <i>MIL-STD 810F method 503.4</i>
Humidity	0% to 95% non-condensing <i>MIL-STD 810F method 507.4</i>
Transit shock	Up to 4' drop to concrete, all surfaces, edges, and corners <i>MIL-STD 810F method 516.5</i>
Crash shock	75g, 11ms, Terminal saw tooth <i>MIL-STD 810F method 516.5</i>
Vibration	0.4g ² /Hz, 20Hz - 1000Hz 6dB/octave 1000Hz - 2000 Hz <i>MIL-STD 810F method 514.5C-17</i>
Vehicular vibration	Composite wheeled vehicle method <i>MIL-STD 810F method 514.5C-17</i>
Altitude	Operational 24.000 ft Storage 40.000 ft <i>MIL-STD 810F method 500.4 Procedure 1</i>
Enclosure class	Immersion in 150 cm of water <i>MIL-STD 810F method 512.4</i> Sand & dust: Particle size < 149 µm, 10 ±7 g/m3 particle density, 1.5 m/s to 8.9 m/s wind speed <i>MIL-STD 810F method 510.4</i> IP 67 equivalence Salt fog: 5% saline for 48 hours (12 wet, 12 dry, 2 cycles) <i>MIL-STD 810F method 509.4</i> Solar radiation: 120 W /m2 (355 Btu/ft2/hr) UVB @ 50°(7X24 hr cycles) <i>MIL-STD 810F method 505.4</i> Contamination by fluids: detergents, brake fluid, aromatic hydrocarbons

Specifications and features subject to change without notice

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