

ZYPAD

WR11XX Rugged Wrist PC

ZYPAD

FIRST RESPONDERS



HOMELAND SECURITY



EMERGENCY SERVICE



DEFENSE



- Rugged mobile wearable computer for harsh environments
- Wireless connectivity
- User friendly operating system



EUROTECH
G R O U P



WR11XX Rugged Wrist PC



The ZYPAD RUGGED WR11XX 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 WR11XX has a special case made of fibreglass reinforced 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 WR11XX is compliant with MIL standard regulations.

Another big advantage of the WR11XX is the modularity—the ability to change the functions for the device by merely replacing a module. If the user wishes to switch from a GPS receiver to a GPRS module, for example, this can be done through a simple, plug-and-play, hot swap 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 WR11XX overcomes the physical limitations associated with normal hand-held computers, this allowing users complete freedom to continue everyday activities using both hands while continuing to have full computer access at all times.

The hands-free versatility of the WR11XX 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.



The ZYPAD WR11XX solidifies the concept of ubiquitous computing by integrating all the power and capabilities expected from a laptop PC within an extremely versatile device.

The Rigid Wrist Support allows ergonomic positioning and easy fastening to the arm, even over the users work clothes, thus ensuring ideal weight distribution and maximum comfort, while the removable core system allows users to easily insert/remove it from main Rigid Wrist support at any time.

The ZYPAD WR11XX can be quickly configured to access any remote host system through its integrated wired or wireless interfaces using the Linux operating system. Information can be shared and services accessed regardless of location.

The system integrates the latest and most innovative features, such as a tilt and dead reckoning system that detects the position of the user's arm and sets the system to standby mode when the arm is hanging down beside the body and an electronic compass.

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



FEATURES

Ruggedized: The WR11XX is fully designed to withstand to the most severe conditions. Its special case, made of fibreglass reinforced nylon and magnesium alloy, maximizes durability and minimizes weight. This combination enables the WR11XX to uniquely serve in the harshest of environments.

Ergonomics: The WR11XX is made up of two elements: the core system and the rigid wrist support. The core system can be easily detached from the rigid wrist support by pressing two buttons at the same time. The rigid wrist support is designed to fit comfortably on the user's wrist and through an interlocking buckle system is very easily fastened or released.

Modular Design and Expansions: The WR11XX has a modular battery pack and an add-on module expansion system; this allows the user to rapidly change the configuration of the device. Add-on modules are available with WWAN and GPS.

Accelerometer, electronic compass and a biometric finger print reader: The WR11XX can be equipped with all these hardware features.

Mission ready: By simply using the Mode Selector, users are able to change the configuration of the device between normal and alert modes. The selector also exposes a Programmable Alarm Button that can be programmed to perform special functions.

User Friendly operating system: The WR11XX is supplied with Linux operating system. Wireless Radio Design: Integrated into the core system are WPAN (Bluetooth or ZigBee) and WLAN (IEEE 802.11 b/g) hardware.

Multiple I/O: USB Device and USB Host ports are available on the case. In addition, the WR11XX has stereo audio and mono microphone interfaces.

VGA 640x480 High Visibility Color 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.

Enhanced Power Management: The use of Li-Polymer cells allows maximum operating time and saves energy when the operator does not use the computer (patented). The modularity of the battery pack and the hot-swap capabilities allows users to exchange the modules without switching off the device.

Tilt and dead reckoning system: Anytime, anywhere tracking of the user to detect if they have been motionless for a specified period of time.

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Core Architecture

PROCESSOR	PXA 270 @ 416 MHz
MEMORY	128 MB FLASH 256 MB RAM
DISPLAY	640 x 480 pixels (VGA) Color 3.5" TFT with Touch Screen Visible with direct sunlight 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 port 1 USB Host port 1 Audio port
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 EXPANSION	1 expansion connector for 1 optional module (see below)
KEYBOARD	Cursor pad Virtual QWERTY keyboard 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	Fibreglass reinforced nylon/Magnesium alloy
WEIGHT	645 g Computer Core 120 g Wrist Support

Battery Pack

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

GPS	12 channels receiver with very high sensitivity DGPS and SBAS (WASS,EGNOS) support Internal antenna
WWAN	GSM/GPRS/EDGE/UMTS Internal antenna
WWAN + GPS	GSM/GPRS/EDGE/UMTS Internal antenna 12 channels receiver with very high sensitivity DGPS and SBAS (WASS,EGNOS) support Internal antenna

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

AC Adapter	External universal power supply Input: 100-240V AC / 50-60Hz / 400mA Output: 5V DC / 2.4 A
Audio Adapter	Gives the following features: - a 3.5mm stereo audio socket - a 3.5mm mono microphone socket
Power and USB Adapter	Gives the following features: - Connection to the AC adapter - USB Device connector ("A" type plug) - 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 MIL-STD 810F methods 501.4 and 502.4
Thermal shock	1.5°C < 5°C / minute over -20°C to 60°C MIL-STD 810F method 503.4
Humidity	0% to 95% non-condensing MIL-STD 810F method 507.4
Transit shock	Up to 4' drop to concrete, all surfaces, edges, and corners MIL-STD 810F method 516.5
Crash shock	75g, 11ms, Terminal saw tooth MIL-STD 810F method 516.5
Vibration	0.4g ² /Hz, 20 Hz - 1000 Hz 6dB/octave 1000 Hz - 2000 Hz MIL-STD 810F method 514.5C-17
Vehicular vibration	Composite wheeled vehicle method MIL-STD 810F method 514.5C-17



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