



Mobile Assistant<sup>®</sup> V



Technology that Works with You <sup>∞</sup>

# **Technology for the Task-at-Hand**

Boost on-the-job productivity and quality of service with Mobile Assistant V (MA<sup>®</sup> V). This powerful, rugged, fully functional, super lightweight wearable computer goes anywhere your employees go to achieve the task-at-hand.



		Transportation/ Aerospace	Medical/ Education	Telecommuni- cations/Utility	Media/Public Safety	Travel and Leisure	Government/ Military
	Inspection/Maintenance	•	•	•	•	•	٠
	Remote/Tele-maintenance	•	•	٠	•		٠
	Queue Busting		•		•	•	
	Inventory/Quality Control	•	•	•		٠	•
	Data Collection	•	•	٠	•		٠
	Asset/Project Management	•	•	•	•	•	•
	Training/Distance Learning	•	•	•	•		•
	Manufacturing/Logistics	•		٠			٠



### The Ultimate Productivity Tool

Wherever your employees do their work —in the office, underground, in the field, on the lift, or under the rigwith MAV they can communicate with each other, manage tasks, retrieve and send data, review plans, and even learn on-the-job. MA V keeps mobile workers connected with wireless, just-in-time access to data, to input and manage information from their point of activity. This means fewer interruptions and errors, reduced steps in the workflow and better teamwork. The result is productivity gains in the work force, improved quality of service for your customers and a measurable return on investment for your organization.

### **Empowering the Mobile Worker**

MA V brings the power and functionality of a state-of-the-art desktop computer into the remote, rugged, and spaceconstrained environments that highly mobile workers experience everyday. It keeps them connected to information and expertise needed to tackle the task-at-hand. A maintenance technician on a pole repairing a telecommunications line accesses detailed schematics and confirms a work order in real time to quickly restore phone service to customers.

A quality-control inspector with speech recognition software and diagnostic equipment instantly communicates defect information to an up-stream co-worker to correct a deficiency in the manufacturing line.

An aircraft mechanic instantly accesses maintenance schedules and reference diagrams without leaving the plane to reduce maintenance time and decrease flight delays.

A remote expert walks military field personnel through complex installation procedures with streaming video guidance from anywhere in the world.

An EMT wirelessly relays critical patient information at the scene and in route to the emergency room so that critical equipment and medical professionals are prepared to provide immediate treatment.

#### Using MA V means:

Improved productivity and efficiency of your workforce

Real-time communications and teamwork

Full function computing when and where you need it

Instant access to enterprise systems and task critical information

Eliminating repetitive data entry resulting in reduced errors

On-the-job training and learning

Multimedia enhanced tele-maintenance



# **Skill-Extending Functionality**

With a range of display, input, and wearability options, MA V meets the challenges of difficult work environments and allows users to personalize a configuration that works best with them to get the job done. This means workers can achieve new levels of efficiency, productivity, teamwork and job satisfaction.

### Displays



MA V works with a range of displays that offer standard, full-color VGA or SVGA desktop resolution. Xybernaut's flat-panel displays are all-light readable, have touchpads for quick input and are built to handle rugged use. Xybernaut's Head Mounted Displays\* (HMD) with integrated microphone and earphones facilitate continuous hands-free use through speech recognition. They offer binocular or monocular viewing and are worn comfortably with hard hats and other protective gear.

#### Input

MA V addresses a broad range of needs for data input. Workers can input detailed information conveniently with the featherweight 6o-key, wrist-worn QWERTY keyboard that can be configured with key commands to quickly input repetitive commands. Additionally, standard third-party USB keyboards and input devices can be used with the MA V. Integrated speech recognition capabilities allow for continuous hands-free input with an attached microphone. Mobile workers can receive and transmit captured still images and streaming video from standard cameras in real time for a full multimedia experience.

### Wearable Technology

MA V is designed to fit securely and comfortably on the body using a complete range of Xybernaut-designed vests, belts and cases. Xybernaut has taken great care to consider key ergonomic, comfort and function issues for body placement, access, weight balance, materials, freedom of movement, hygiene and body support to ensure seamless humancomputer interaction.

\* See user's manual for proper operation of Head Mounted Displays

# **Computing without Compromise**

The MA V is manufactured by IBM based on specifications developed by Xybernaut and its best-of-breed partners. The result is a robust, full-feature computer that integrates seamlessly with standard computing technology.

### Powerful

A 500 MHz Intel® Mobile Celeron® computer provides state-of-the-art functionality with enough power to run enterprise applications. An integrated Digital Signal Processor (DSP) increases processing efficiency for calculation intensive applications, such as speech recognition. An ultra low-voltage, lowheat CPU, powered by rechargeable, hot-swappable Lithium-ion batteries allows users to stay on the job longer. Windows<sup>®</sup>2000, 98, XP and Linux compatibility allows seamless integration with legacy applications, networks and technical support infrastructures.

### Connected

Integrated wireless and hard-wired communications through fixed and mobile LAN/WAN networks allow data, voice and video to flow through your organization.

Optional wearable holster provides additional dedicated Firewire, USB, PCMCIA and battery power with hotswapping. The VGA port in the holster also allows the unit to be used as a docking-station for use in a standard desktop setup.



# **Technical Specifications**

### Processor

• 500 MHz Intel® Mobile Celeron®, 1.1 V Ultra Low Voltage

# Memory and Storage

- 128 MB SDRAM, expandable to 256 MB
- 5 GB internal HDD, externally expandable
- to 40 GB • 1 GB removable HDD
- through the use of a 1 GB Compact Flash card
- Ports
- Compact Flash, USB, FireWire® (iLINK®), DC-IN jack, User Interface Port (supports LVDS and GVIF), PDP (Power Docking Port) for connection to the MA V Holster, Power switch, Hibernate switch

#### Ho

- Video memory 8 MB
   SDRAM
- Built-in sound card,

Audio/Video

- full-duplex, stereo I/O • Integrated Digital Signal Processor (DSP);
- Texas Instruments TMS320C5416<u>™</u>

# CPU Chassis

- Durable magnesium alloy case
  5.9" x 3.5" x 2" (15 cm x 9 cm x 5 cm)
- Approx. 1 lb. (455 g)
   Worn with belt, vest, suspenders, shoulder pack, or backpack

pouch

Optional protective

## Holster

- CPU Module connects to the optional holster for extended connec-
- tivity and operation

  1 Type II or III PCMCIA
- card slot
- USB, FireWire<sup>®</sup>
   (iLINK<sup>®</sup>), VGA, and
   Power Docking port
   Holster doubles as
- desktop docking station

#### Xyber®Panel Digital Flat Panel Display

- 6.4" (16.3 cm) viewable, all-light readable display, 640 x
- 480 color VGA • 8.4" (21.3 cm) viewable
- all-light readable display,
- 800 x 600 color SVGA
- Brightness control, up to 500 cd/m2
- Onscreen keyboard and built-in handwriting recognition

- Activation: voice, passive stylus, or
- touch-screen

  Optional zippered
  protective pouch or

#### Xyber®View Head <u>Mounted Di</u>splays

flip-down carrying

case

- VGA, SVGA color direct view display
   Monocular or binoc-
- ular view • Transmissive or
- occluded viewing • Left- or right-side
- wearable • Integrated micro-

available

phone and earpiece speaker for voice activation and voice communications • Hardhat models

### Battery

- Primary and Secondary Lithium-ion batteries
- Hot-swappable
- AC power adapter/ battery charger with protective circuitry

#### Xyber®Key Wrist-worn Mini-Keyboard

 60-key, wrist-mounted, ruggedized QWERTY keyboard

### Software

 Windows 2000, Windows<sup>®</sup> 98, Windows XP, or Linux
 CIC JOT Handwriting Recognition (with FPD)
 On-Screen Keyboard Software (with FPD)
 Other drivers appropriate with peripheral devices purchased from Xybernaut

# About Xybernaut

### We are Practical Visionaries

With over a decade of experience and know-how, Xybernaut® explores, invents and patents breakthrough concepts in wearable and mobile computing. Our ideas evolve the way we work and live with technology, setting new standards for what we can achieve.

### We Develop Innovative Technology Products

Xybernaut works with best-of-breed companies to create products that empower users to achieve the task-at-hand. Our hardware and software solutions can afford productivity gains in your work force, improved quality of service for your customers and a measurable return on investment for your organization.

# We Offer Complete Integrated Solutions Worldwide

Xybernaut works closely with customers to achieve effective, long-term success. Our subsidiaries offer consulting and training services that provide for successful implementation and support of complete technology systems.

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