

# Expanding Dragon

Powerful 1U platform with 2 PCI: Compact Flash or PMC expansion



The innovative ITOX Expanding Dragon 1U rackmount server meets industrial computer requirements for processing power, multiple expansion slots, storage, advanced cooling, and low cost. ITOX offers the Expanding Dragon as a barebones platform (case, power supply and motherboard) or a full system (including CPU, memory, hard drive and operating system). Both quality-built designs support high density, industry-standard rackmount applications.

## FEATURES

- **Rugged all-steel chassis.** The quality-built steel case is industry-standard 1.75" high, 19" wide, and only 15.75" (400mm) deep. Rack slide rails are included. An optional slide rail Extender Kit enables two Expanding Dragon 1U servers to fit back-to-back in a single 1U space.
- **Revision-control motherboard.** The high-performance IF15 motherboard is powered by the Intel 815E chipset and supports front side bus speeds to 133MHz and RAM memory to 512MB. This high-feature motherboard includes two Intel 10/100 Ethernet controllers, built-in Intel video, and two PCI slots. One version of the IF15 motherboard includes a PMC (PCI mezzanine card) expansion slot. The other version includes compact flash capability and a parallel port. Both motherboards are revision controlled and offer a long life cycle.
- **Intel processor support.** The IF15 Socket 370 design supports Intel Celeron processors and Intel Pentium III processors.
- **Advanced system cooling.** A 75mm blower delivers a powerful, 13.1 CFM air-flow to the motherboard, CPU and storage areas and permits operation at 45 degrees Celsius ambient.
- **Two air-cooled PCI expansion slots.** The two full-length PCI card slots include 2 hold-down bars and a protective frame. Three 40mm/6.8 CFM fans provide dedicated air-flow and cooling to the PCI bays. An additional hold-down bar is provided for H-100 connectors in the PMC model.
- **Watchdog timer.** The IF15's configurable watchdog timer resets the system and restarts software in case noise spikes or other events cause runaway software to hang the system. This is a valuable tool which maintains control when continuing and dependable operation is critical.

## BENEFITS

- **Feature-rich.** In addition to the system capabilities listed above, the Expanding Dragon includes built-in keyboard/video/mouse (KVM) ports, two USB ports, one or two DB-9 serial ports, and one internal 3.5" IDE drive bay.
- **Reliability.** The IF15 motherboard monitors processor temperature and fan operation and triggers alarms if allowed limits are exceeded. The complete Expanding Dragon system is backed by ITOX's 2-Year Limited Product Warranty.
- **Compatibility.** The IF15 motherboard is certified to run all Microsoft and Linux operating systems.
- **Flexibility.** The IF15 may be controlled in several ways including via keyboard, mouse, video, LAN, and console redirection.
- **Prolonged life cycle.** The IF15 and IF15-PMC revision-controlled motherboards prolong OEM product life cycles by eliminating costly computer design changes and system re-certifications.

## APPLICATIONS

- **Telephony and telecommunications.** The two full-length, air-cooled PCI expansion slots and optional PMC slot support high-density, mission-critical VoIP gateway, speech portal, PBX switching or voice/data/fax messaging environments.
- **Security & networking.** The built-in dual 10/100 Intel 82559 and 82562 Ethernet controllers permit separation and control of internal LAN traffic and external WAN network load.
- **Clustered computing.** The IF15-PMC motherboard's PMC expansion slot can be deployed to support a wide variety of expansion cards.
- **Internet.** The Expanding Dragon's full-featured capabilities, rackmount form-factor, and low cost of ownership make it an attractive solution for many applications.

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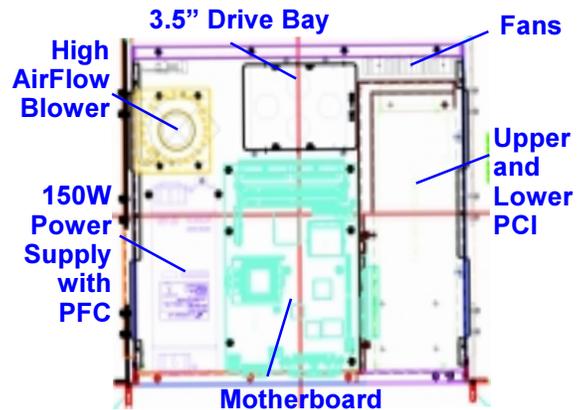
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Faceplates vary -- Model RG1UIF15 is shown

## MODELS AND ACCESSORIES

- **RG1UIF15:** Expanding Dragon barebones: DC1400-ED case, PS-150-601U 150 watt power supply, GIF15 motherboard, ACES-IF151PCI2 riser card. Serial and parallel ports, compact flash, no PMC slot. Includes chassis slides, PCI card hold-down bars. Also available as a fully configured and tested system with user choice of CPU, memory, drives, and operating system.
- **RG1UIF15-PMC:** Expanding Dragon with PMC slot barebones: Same case, power supply, riser card, chassis slides, and hold-down bars as above. GIF15-PMC motherboard. PMC slot, no parallel port, no compact flash. Also available as a full system.
- **Accessories** (contact your ITOX representative for availability): Double length chassis slides used to mount to Expanding Dragons back-to-back in a single 1U space, LCD Display with keypad, and PMC cards for server to server connectivity.



## DIMENSIONS

- 1.73" High (44 mm) x 16.79" Wide (426.5 mm) x 15.75" Deep (400 mm)
- Weight: 11.5 lbs; with packaging, 18 lbs

## CONSTRUCTION/FINISH

- Type of metal: Precoated phosphate 1mm steel
- Finish: Textured paint, black

## DRIVE BAYS

- One 3.5" drive bay (internal)

## EXPANSION SLOTS

- Two PCI (full length)
- One PMC (RG1UIF15-PMC model)

## CONTROLS

- Power on/off switch
- Reset switch

## INDICATORS

- Six LEDs: Power, hard drive activity, LAN1 power and activity, LAN2 power and activity

## POWER SUPPLY SUBSYSTEM

- 150 watt
- Output (ATX format connectors)
  - +5V 14A (max) -5V .3A (max)
  - +3.3V 10A (max) -12V .8A (max)
  - +12V 4.5A (max) +5Vsb 1A/2A
- Input: 115/240v VAC, autoselecting, 47 to 63 Hz
- Power Factor Correction

## THERMAL MANAGEMENT

- High efficiency blower (75 mm, 4200 rpm, 13.1 CFM @ 20.8 mm Aq)
- 3 Fans (40 mm, 6400 rpm, 6.8 CFM @ 0.11 mm Aq)
- Power supply exhaust fan
- Monitor and alarm for processor temperature and fans

## REGULATORY

- Safety: UL, CE
- Emissions Control: FCC Class B

## ENVIRONMENTAL

- Operating Temperature: 0°C - 45°C ambient
- Humidity: 20%-80% non-condensing

## WARRANTY

- Two year parts and labor limited warranty

## MOTHERBOARD

- Socket 370 for Intel Pentium III FCPGA and Intel Celeron CPUs
  - Flex ATX form factor
  - Intel 815E chipset
  - Two 10/100 Ethernet LAN
  - Video controller on-board
  - Two 168-pin DIMM sockets for 512 MB RAM
  - 66/100/133 MHz front side bus
  - Watchdog Timer
  - Monitor and alarm for processor temperature and fans
  - Two 32-bit PCI expansion slots (riser card included with case)
  - Revision control for extended availability
- See IF15 motherboard data sheet for additional specifications

## CONNECTORS

### IF15-PMC only

- 1 internal connector for PMC expansion card
- 1 internal header for COM1 serial

### IF15 only

- 1 internal connector for compact flash memory card
- 1 IEEE 1284 compatible DB-25 parallel port
- 2 DB-9 serial ports

### IF15 and IF15-PMC

- 2 USB ports
- 2 RJ45 10/100MHz Ethernet ports
- 1 mini-DIN-6 P/S2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 1 DB-15 video port



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