DRS TACTICAL SYSTEMS

PRODUCT GUIDE 2003/4

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>> DRS RUGGED SYSTEMS

A leading supplier of defense electronics systems, DRS Technologies provides high-technology products and services to all branches of the U.S. military, major aerospace and defense prime contractors, government intelligence agencies and international military forces. DRS has demonstrated for nearly 35 years that it has the agility, technology and focus to respond quickly to customers' needs.

DRS's systems are deployed on the most technologically advanced ship, aircraft, soldier system, computer and land vehicle applications in the world. We focus our resources on innovation, quality, cost-effectiveness and superior value for our customers. This practice has earned DRS recognition as one of the best managed defense companies today. It is our mission and responsibility to make the military's policies and visions a reality.

DRS Tactical Systems is a world leader in high-performance ultra-rugged computer systems and integrated peripheral products designed to operate in harsh military environments to support the digitization of the 21st century battlefield. Our mission critical rugged computers, servers, flat panel displays and other peripheral products support a variety of ground force modernization and Command, Control, Communications, Computer and Intelligence (C4I) platform transformation applications for land, sea and air operations. Successfully deployed for mobile forces, our portable, battle-ready and ultra-rugged Commercial-Off-the-Shelf (COTS) workstations, laptops, displays, and handheld computers are proven to operate under extremely harsh conditions.

DRS supports the U.S. Army's Common Hardware/Software **(CHS-2/3)** Program with the ExplorerMP™ Rugged Portable Multi-Platform Workstation, the HTU Handheld Terminal Unit, and rugged 18" and 21" displays.

For the U.S. Army's Force XXI Battle Command Brigade and Below **(FBCB2)** Program, DRS is providing Appliqué Rugged Vehicle System computers focused on developing a digital battle command information system designed to provide commanders, leaders and soldiers, with improved information for command and control and enhanced situational awareness.

For the United Kingdom's BOWMAN Program, DRS is providing Scorpion ultra-rugged computers to support a secure digital voice and data communications system based on Internet protocol. **BOWMAN** will equip approximately 18,000 army vehicles as the largest defense communications program in the U.K. in over 50 years.

>> SCORPION RBM and RDS NOTEBOOKS

SCORPION RBM AND RDS

DRS Lightweight Scorpion notebook computers are designed and built to survive the most rugged conditions worldwide, ready and able to perform in the most demanding operational challenge. Fully sealed, wider temperature range, stronger construction, military heritage, and warranted performance make the Scorpion the right choice for operations in any hostile environment. The Scorpion delivers the best of rugged computer technology to the Warfighter whether it's in use on the digital battlefield or the flightline.

The DRS Scorpion™ RMB and RDS are two of the four main rugged computers that support the UK BOWMAN program. The Bowman program brings vehicle mounted rugged computers and displays to all radio equipped UK Army (and some Air Force and Navy) vehicles and many of the dismounted troops. The system will be 'overlaid' over existing equipment, vehicles and dismounted soldiers. This new Army digital command and control system (C2) will show friendly vehicle and dismounted forces locations and confirmed enemy locations in near real time in each vehicle and hand held computer display. This displayed Situational Awareness (SA) will replace the paper map in nearly all respects. It will also enable the rapid and secure passage of all types of C2 information up and down the chain of command.

COMPUTING

- Processor . . . . . .Intel® Pentium® III, 700 MHz, 256K L2 cache
- Memory . . . . . .128 MB PC-100 SDRAM, expandable to 512 MB
- Mass Storage . . . . . .Removable internal 40 GB hard drive
- Display . . . . . .SVGA, 12.1" Transflective, 800 x 600 pixel resolution Daylight viewable
  . . . . . .XGA, 13.3", Transmissive, 1024 x 768 pixel resolution Touch screen optional
- Keyboard . . . . . .Sealed, elastomer 88 QWERTY configured keyboard
- Pointing Device . . . . . .Fully sealed pointing device with right and left pick buttons
- Operating System . . . . . .Compliant with MS-DOS, Windows 95, 98, 2000, Microsoft NT v. 4.0 and Solaris
- Expansion . . . . . .Two (2) type I/II or one (1) type III PCMCIA ports
  . . . . . .Additional battery
  . . . . . .DVD/CD-ROM drive
  . . . . . .Custom USB interface device
- External Ports. . . . . .Parallel port
  . . . . . .2 USB ports (1.1 or 2.0)
  . . . . . .10/100 ethernet port
  . . . . . .External VGA supports up to 1280 x 1024
- Communication Ports . . . . . .Port 1: RS-232, RS-422 or RS-423
  . . . . . .Port 2: RS-422 or RS-423
  . . . . . .Port 3: RS-422 or RS-423
  . . . . . .Port 4: RS-422, RS-423, or internal fax modem

POWER

- Power . . . . . .28 VDC Vehicle power per MIL-STD-1275A
  . . . . . .Optional AC converter 90-264 VAC, 47-440 Hz
  . . . . . .Lithium Ion hot swappable battery

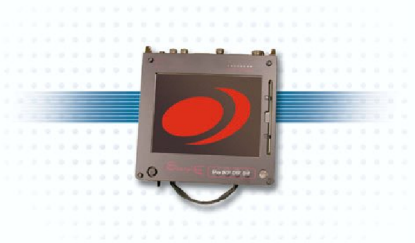
PHYSICAL

- Weight . . . . . .15 lbs.
- Dimensions . . . . . 13" x 12" x 2.5"

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461
- Optional Low Temperature Operation Kit available for the RDS

>> SCORPION RVT TABLET COMPUTER



SCORPION RVT

The SCORPION Rugged Vehicle Terminal (RVT) is a touch-screen tablet computer with external keyboard capability. The RVT delivers the best of rugged computer technology to the Warfighter wherever it is needed - on the digital battlefield, at sea, or on the flightline. The RVT can be mounted inside a combat vehicle and operate on the move. The RVT can operate from vehicle power, or independently using its internal rechargeable batteries.

COMPUTING

- Processor . . . . . .Intel® Pentium® III, 700 MHz, 256K L2 cache
- Memory . . . . . .128 MB PC-100 SDRAM, expandable to 512 MB
- Mass Storage . . . . . .Removable internal 40 GB hard drive
- Display . . . . . .SVGA, 12.1" Transflective, 800 x 600 pixel resolution . . . . . .Daylight viewable / Touch screen optional
- Pointing Device . . . . . .Fully sealed, PS-2 pointing device with right and left pick buttons
- Operating System . . . . . .Compliant with MS-DOS, Windows 95, 98, 2000, Microsoft NT v. 4.0
- Expansion . . . . . .Two (2) type I/II or one (1) type III PCMCIA ports . . . . . .Additional battery . . . . . .DVD/CD-ROM drive: Custom USB interface device
- External Ports . . . . . .Parallel port . . . . . 2 USB ports (1.1 or 2.0): 10/100 ethernet port . . . . . .External VGA supports up to 1280 x 1024
- Communication Ports . . . . . .Port 1: RS-232, RS-422 or RS-423 . . Port 2: RS-422 or RS-423 / Port 3: RS-422 or RS-423 / Port 4: RS-422, RS-423

POWER

- Power . . . . . .28 VDC Vehicle power per MIL-STD-1275A . . . . . .Optional AC converter 90-264 VAC, 47-440 Hz . . . . . .Lithium Ion hot swappable battery

PHYSICAL

- Weight . . . . . .11.75 lbs.
- Dimensions . . . . . .12 x 12 x 2.7 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> SCORPION PDPU

P-BISA DIGITIZATION PROCESSOR UNIT (PDPU)

The DRS Platform Digitization Processor Unit (PDPU) can be vehicle mounted and is designed to operate in and survive the harshest of environments and offers the user maximum flexibility and versatility. The PDPU allows accurate positional and heading data to be fused with weapon system sensor information and passed electronically over an embedded MilCAN bus.

The PDPU brings exceptional ultra-rugged computing performance and flexibility to the field, or where ever it is needed.

COMPUTING

- Processor . . . . . .800 MHz Pentium® or Celeron, 256K L2 Cache
- Memory . . . . . .64 MB SDRAM
- Mass Storage . . . . . .Bootable 16 MB Flash Disk-on-Chip
- Operating System . . . . . .Compliant with MS-DOS, Windows 95, 98, 2000 and Microsoft NT v. 4.0
- External Ports . . . . . .10/100 ethernet port External VGA supports up to 1280 x 1024
- Communication Ports . . . . . .Port 1: RS-423 Port 2: 1553B Port 3: Can Bus

POWER

- Power . . . . . .28 VDC Vehicle power per MIL-STD-1275A . . . . . .Optional AC converter 90-264 VAC, 47-440 Hz . . . . . .Lithium Ion battery

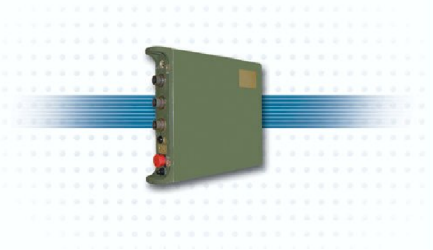
PHYSICAL

- Weight . . . . . .15 lbs.
- Dimensions . . . . . .13 x 12 x 2.5 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> SCORPION PBPU



SCORPION PBPU

The DRS Platform BISA Processor Unit (PBPU) processes and provides SA and C2 data to armored vehicle commanders displays. This ultra-rugged black box processor unit designed and built to survive the most rugged conditions worldwide, is ready and able to perform in the most demanding operational challenge. Fully sealed, wider temperature range, stronger construction, military heritage, and warranted performance make the PBPU the right choice for operations in any hostile environment.

COMPUTING

- Processor . . . . . .Intel® Pentium® III, 700 MHz, 256K L2 cache
- Memory . . . . . .512 MB PC-100 SDRAM
- Mass Storage . . . .Internal 40 GB hard drive (expandable, consult factory)
- Display . . . . . No Display
- Keyboard . . . . . .Sealed, elastomer 88 QWERTY UK configured external keyboard
- Pointing Device . . . . . Fully sealed pointing device with right and left pick buttons (external keyboard)
- Operating System . . . . . .Windows 2000
- External Ports . . . . . .1 USB ports in back (1.1) 2 USB ports in back (2.0 – one connector)/RS-422 10/100 ethernet port/ SGVA/PS/2
- Communication ports RS-232/422

POWER

- Power . . . . . .28 VDC Vehicle power per MIL-STD-1275

PHYSICAL

- Weight . . . . . .Approx. 13.5 lbs.
- Dimensions . . . . . .Approx. 12 x 13 x 2.3 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> SCORPION XNB

SCORPION XNB - EXPANDABLE NOTEBOOK

DRS's versatile Scorpion XNB Laptop computer is designed and built for multi-function expandability.

The XNB brings with it an extremely versatile configuration, which is entirely Commercial-Off-The-Shelf (COTS) internal architecture. This rugged laptop has been designed to accept two additional half-size PCI format cards, one PC-104 format cards as well as two PCMCIA slots. Combined with a truly exceptional 12.1 inch TFT daylight readable screen and removable hard drive, the XNB provides constant operation in the most extreme environment.

COMPUTING

- Processor . . . . . .700 MHz Intel® Mobile Pentium® III Processor
- Memory . . . . . .256 MB SODIMM SDRAM
- Mass Storage . . . . . .Removable 20 GB minimum hard drive (Expandable, consult factory)
- Display . . . . . .12.1 inch, 800x600 AMTFT LCD with backlight
- Pointing Device . . . . . .Fully sealed pointing device with right and left pick buttons
- Operating System . . . . . Linux Red Hat v. 7.2, Windows
- Expansion . . . . . .two PCMCIA slots: two (2) Type II or one (1) Type III . . . . . .Two half size PCI (or) one PC104
- Communication Ports . . . . . .Two RS-232 or RS-422 ports, one 10/100 Ethernet, USB

POWER

- Power . . . . . .One DR-36 style lithium-ion battery. 28 VDC, 110/220 VAC, 50/60 Hz

PHYSICAL

- Weight . . . . . .17 lbs.
- Dimensions . . . . . .13 x 12 x 6 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> RVS-330 – APPLIQUÉ

RVS-330 (APPLIQUÉ)

DRS's RVS–330 Rugged Vehicle System, the Appliqué, is a fully rugged vehicle system. Designed to operate in and survive the harshest of environments, the Appliqué offers the user maximum flexibility and versatility.

Possessing only off-the-shelf components, the Appliqué is designed to progress with technology. Expansion capabilities allow for user customization to suit a variety of needs. In addition, the RVS-330's sunlight readable display provides resolution conducive to intense operation in all temperature extremes.

COMPUTING

- Processor . . . . . .Intel® Pentium® III, 700 MHz or faster. 256K L2 cache, ...Socket 370, design also supports Celeron processors
- Memory . . . . . .Up to 512 Megabytes PC-100 SDRAM
- Mass Storage . . . . . .Removable internal 10 GB hard drive expandable to 28+ GB
- Display . . . . . .SVGA, 12.1" diagonal, color LCD with touch screen, Active Matrix TFT
  800 by 600 pixels resolution
  Sunlight readable at maximum luminance of 750 nits with a contrast ratio of 2.8:1
  . . . . . .Display unit interface permits tethered operation up to 25-ft.
  Side-to-side viewing angle +/- 60°C
  Top to bottom maximum viewing angle +10°/-30°C
- Keyboard . . . . . .SB 88-key full-travel elastomeric keyboard in QWERTY configuration
  "Hot swappable" while the system is powered
- Pointing Device . . . . . .Fully sealed pointing device with right and left pick buttons
- Operating System . . . . . .Compliant with MS-DOS, Windows 95, 98, 2000, Microsoft NT and Solaris
- Expansion . . . . . .One PMC slot
  Disk On Chip socket
  3U CompactPCI expansion slot
  Device Bay DB20 form factor slot

- External Ports . . . . . .External SVGA port supports up to 1280 x 1024 pixel resolution
  . . . . . .18-bit LVDS video Sound Blaster™ compatible PCI audio input and output
  . . . . . .Two USB ports, one dedicated to Processor Unit/Display Unit interconnect
  . . . . . .IEEE 802.3 LAN interface 10/100BaseT
  . . . . . .One RS-232C port dedicated to the Display Unit Touch Screen
  . . . . . .Five RS-422/RS-423 ports, one dedicated to Processor Unit/Display Unit interconnect
  . . . . . .2 synchronous serial communication ports for Conditioned Di-Phase (CDP)
  . . . . . .and MIL-STD-188-144 Non-Return-to-Zero communication interfaces

POWER

- Power . . . . . .28 VDC vehicle power per MIL-STD-1275A(AT)
  . . . . . .Optional AC converter 85-264 VAC, 47-63 Hz

PHYSICAL

- Weight . . . . . .Processor Unit: 18.05 lb.
  Display Unit: 7.3 lb.
  Keyboard Unit: 2.2 lb.
  Hard Disk Drive Cartridge: 0.8 lb.
- Dimensions . . . . . .Processor Unit: 5.1 x 12.7 x 10.2 inches
  Display Unit: 2.36 x 13.1 x 9.0 inches
  Keyboard Unit: 1.0 x 11.5 x 7.25 inches
  Hard Disk Drive Cartridge: 0.7 x 3.9 x 5.9 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> RLT SERIES COMPUTERS

RLT

DRS's laptop computers are rugged, sealed units that allow for superior performance under the most extreme environmental conditions including desert sand, driving rain and severe EMI limits.

COMPUTING

- Processor . . . . .Intel® Mobile Pentium® III (BGA2) 400, 500 or 750MHz operating speed with extensive power management features to enhance battery operating life
- Memory . . . . . .Main memory expandable from 128 - 512 Mbytes
- Cache memory . . . . . .16 Kbytes of on-chip Level 1 cache . . . . . .256 Kbytes SRAM Level 2 cache memory
- System memory . . . . . .256 Kbytes minimum, field re-programmable BIOS FLASH memory . . . . . .2 Mbytes maximum
- Software . . . . . .Standard operating system: Microsoft Windows® 2000 . . . . . .Also supports: MSDOS® 6.0, Windows® 3.x, 98, NT®
- Display . . .LCD/CRT Video support for color to 1280 X 1024 at 256 colors, ...monochrome support for 256 shades of gray . . . . . .Simultaneous CRT & LCD operation is supported Consult factory for additional information
- Mass storage . . . . . .Support for two IDE/EIDE devices such as hard drives and CDROM drives
- Floppy . . .Support for internal 3.5" floppy drive or an external, bootable, floppy drive via the optional parallel port pins
- I/O . . . . . .One RS-232 serial port, operational to 115K Baud . . . . . .Optional COM2 can be configured as RS-232 or RS-485 . . . . . .Optional IEEE-1284 compliant parallel port - Two USB ports
- PCMCIA.....Supports two Type I or II cards or one Type III card in the top slot and one Type I or II in the bottom slot . . . . . .High-performance PCI bus access to the PCMCIA controller . . . . . .Both slots support "zoom video" and card bus access protocols

- Expansion

RLT-545C . . . . . .One internal PC-104 expansion slot
RLT-545F . . . . . .Two internal PC-104 expansion slots
RLT-545D . . . . . .Internal PC104 expansion slots - (optional two slot ISA expansion capability)

- Keyboard and pointing device . . . . .Sealed full travel elastomer keyboard, QWERTY layout with built-in sealed three button mouse
- Connector for external PC/AT keyboard and external PS/2 pointing device
- RTC . . . . . .Battery backed real-time-clock Minimum 5 year backup battery life

POWER

- Power . . . . . .Operated from user replaceable NICAD battery pack or external DC power source, 11 to 40 Volts, 55 Watts minimum, 28 VDC . . . . . Vehicle power per MIL-STD-1275A

PHYSICAL

- Dimensions and weight

RLT-545C . . . . . .15.9 x 10.5 x 4.13 inches, approx. 16 lbs.
RLT-545F . . . . . .16.0 x 10.5 x 5.5 inches, approx. 15 lbs.
RLT-545D . . . . . .16.75 x 10.5 x 7.25 inches, approx. 24 lbs.

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> RVS-250

RVS-250

DRS's RVS-250, Rugged Vehicle System, is a ruggedized COTS vehicle system. Designed to operate in and survive the harshest of environments, the RVS-250 offers the user maximum flexibility and versatility.

The RVS-250 is a leading system for blue force tracking and situational awareness on the uncompromising battlefield. The RVS-250 allows logistical leaders a means by which of staying abreast of the fluid dynamics of their ever-changing environments.

COMPUTING

- Processor . . . . . .Intel® Pentium® Processor, 266 MHz or faster
- Memory . . . . . .64 MB DRAM, expandable to 128 MB
- Display . . . . . .Active Matrix Color Display, 640 x 480, 6.5" . . . . . .Operator dimmer control and instant black-out switch
- I/O . . . . . .Two (2) RS-422 ports, Two (2) RS-232 port and One (1) parallel port
- Expansion . . . . . .2 MB Video Memory . . . . . .Two (2) Type I/II PCMCIA ports or one (1) Type III PCMCIA port
- Storage . . . . . .6 GB Hard Disk Drive
- Keyboard . . .Sealed, integrated detachable keyboard and pointing device

POWER

- Power . . . . . .DC power input: 12 VDC; Extended voltage range available . . . . . .AC adapter power input: 110 VAC and 220 VAC, 50/60 Hz

PHYSICAL

- Weight . . . . . .17 lbs.
- Dimensions . . . . . .13 x 12 x 6 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> LXI-3

LXI-3

DRS's lightweight, portable LXI computers bring high performance technology to the front lines of the digital battlefield. The LXI-3 provides solutions for computing in real-world military environments where mobility is paramount.

COMPUTING

- Processor . . . . . .Intel® Pentium® III
- Max RAM . . . . . .up to 1 GB
- Hard drive . . . . .12 GM (minimum) removable 2.5 inch high capacity HDD
- Drives . . . . . .integral CD-ROM/DVD; 3.5 inch sublime high capacity floppy (120MB); One (1) full size expansion slot
- Graphic . . . . . .up to 64MB shared video memory
- Bus . . . . . .ISA, PC-104, PC-104+ and PCI
- Ethernet . . . . . .rugged MMFM fiber optic, 10/100 Base-T
- I/O . . . . . .up to four (4) RS-232 serial ports, one (1) parallel port, ...one 4-port USB . . . . . integral SCSI (external) and IDE controllers . . . . . .external video (up to 1600 x 1200) 16-bit color . . . . . .external audio, Soundblaster™ compatible
- Options . . . . . .PCMCIA type III (up to two drives, one internal and one user accessible . . . . . .video grab; camera input; GPS detachable IP65 . . . . . keyboard with trackball
- Display . . . . . .15" XGA (1024x768) AMLCD, TFT

POWER

- Power . . . . . .AC auto-ranging, integral 197-260VAC . . . . . .DC 18-32VDC
- Battery . . . . . .2.5 hour battery operation

PHYSICAL

- Weight . . . . . .26.4 lbs. (configuration dependent)
- Dimensions . . . . . .6 x 18 x 14 inches

ENVIRONMENTAL

- DEF STAN 07-55
- DEF STAN 59-41

>> NOMAD

NOMAD

The DRS Tactical Systems Nomad represents the very latest in rugged COTS technologies. Based on the increasingly popular compactPCI board format, the Nomad delivers significant performance in a compact package into extreme military vehicle environments. The Nomad can be configured with up to 2 compactPCI 6u cards. The main processor can be either an Intel® P4 processor (mobile up to 2GHz) or an UltraSPARC IIi processor running SOLARIS, again with a wide range of standard interfaces.

COMPUTING

- Processor ..... Intel P3™, 700MHz, as standard
  ..... Intel P4™, up to 1.7GHz, optional
  ..... UltraSparc IIe, 500MHz, optional
- RAM ..... 512MB, standard (expandable to 1/2GB)
- Internal Drives/Storage ..... 2.5" HDD, >10GB or Flash storage
- Interfaces (standard) ..... 2 x RS-232 serial
  1 x USB (rev 1.1) port
  1 parallel port
  External video, to 1600 x 1200, 16-bit colour
  1 x 10/100BaseTx Ethernet LAN
  PS/2 for keyboard and pointing device
- TEMPEST ..... Built-to-meet AMSG 788A

POWER

- Power
  DC (standard) ..... 18 to 32 VDC
  AC (option) ..... 100-240 VAC

PHYSICAL

- Weight ..... 10Kg (configuration dependent)
- Dimensions ..... 350 x 250 x 140 mm

ENVIRONMENTAL

- Temperature, Operating ..... -26°C to +58°C
- Humidity ..... 10% to 95%
- Shock 20g, 11ms
- EMC ..... Def Stan 59-41, Land Class A

>> V3 UCC (UNIVERSAL CONTROL COMPUTER)

V3 UCC (UNIVERSAL CONTROL COMPUTER)

DRS's V3 Universal Control Computer is a rugged ultra low power computer designed to operate in the most severe military environments. The V3 UCC is fully adaptable to any control function such as weapons system or ground radar control tasking. The universal controller provides the ideal rugged computer base for Missile Fire Systems, Mortar Fire Control, Ground Radar, and Chemical Agent Detector, and Robotic Systems such as mine detection. The Universal Control Computer provides the ability to adapt to any control function needed by the Warfighter.

COMPUTING

- Processor ..... 300 MHz Geode ultra low power
- Memory ..... 64 MB DRAM expandable to 128 MB
- Display ..... 8.4" VGA (640 x 480) transflective color sunlight readable LCD, ... adjustable backlight
- I/O ..... Two (2) serial ports configured as 1 RS-232 and 1 RS-422
  One (1) USB port
  One (1) Ethernet 10/100 port
  PS/2 Keyboard and mouse
  Audio output
- User Input ..... Five wire touch screen

POWER

- Power ..... 110/220 VAC or 18-32 VDC

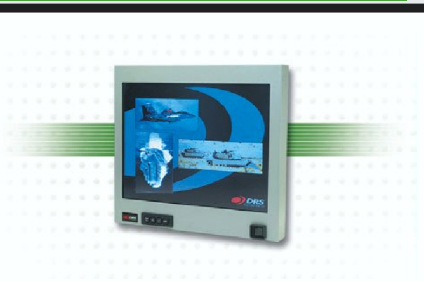
PHYSICAL

- Weight ..... under 11 lbs.
- Dimensions ..... 8.5 x 5.5 x 2.5 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> FPR DISPLAYS – 18", 21"



FPR SERIES RUGGED THIN CLIENT COMPUTERS AND FLAT PANEL DISPLAYS

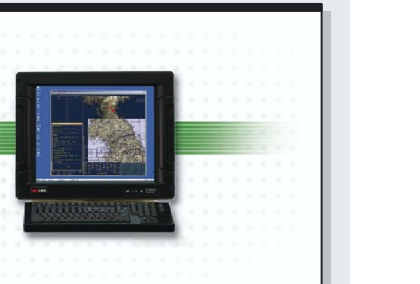
DRS's Flat Panel, Rugged (FPR) class of mission-critical, military computing solutions carries a strong history of proven fielding performance. The FPR class is a solid performer with thousands of fielded units spanning all branches of the U.S. and foreign militaries. Designed for land, sea, and airborne applications, the FPR series also has become the de facto standard of the U.S. Army's Common Hardware/Software (CHS-2/3) program.

FPR Thin Client computers feature a fully integrated computer workstation within the same slim chassis as the flat panel display. The FPR Thin Client integrated computer provides the latest Pentium® class processors, fixed or removable hard drives, flash drives, PCMCIA expansion, redundant Ethernet, built-in UPS and custom I/O panel configurations. Options for touch-screen, keyboard/trackball, copper/fiber Ethernet converters and a multitude of mounting options are available. FPR Flat Panels function as situational displays and user interfaces; they feature high-resolution, 24-bit AMLCD technology and are designed to meet rigorous specifications that ensure reliable performance in hostile environments. Options for sunlight readability, touch-screens, and EMI Shielding are available.

COMPUTING

- Processor .....Intel® Pentium®
- Max RAM 1GB
- Hard drive .....30GB min EIDE HDD (minimum)
- Flash drive .....up to 1GB flash
- Graphic .....up to 64MB shared video memory
- Bus .....ISA, PC/104, PC/104+ and PCI
- Expansion .....PCMCIA Type I, II, III
- Ethernet .....10/100 base-T (dual available)
- I/O.....PS/2 keyboard/trackball, IDE, parallel, USB, RS-232/422/485

>> INSIGHT: NAVEL DISPLAYS - 18",20",21"



InSIGHT: ADT-21, ADT-20 & ATD-18

DRS's InSight Advanced Tactical Displays (ATD), Embedded Workstations (ATW) and Thin Client Computers (ATC) represent a revolution in workstation access and console systems. Providing incredible economies of space, weight, and cost, InSight™ features a complete computer system and display integrated into a single, fully sealed, rugged chassis.

INSIGHT™ PRODUCT MODELS

- 18-inch Rugged Flat Panel/Embedded Workstation/Thin Client ATD-18/ATW-18/ATC-18
- 20-inch Rugged Flat Panel/Embedded Workstation/Thin Client ATD-20/ATW-20/ATC-20
- 21-inch Rugged Flat Panel/Embedded Workstation/Thin Client ATD-21/ATW-21/ATC-21

COMPUTING

- Processor .....Intel® Pentium®III
- Max RAM 1GB
- Hard drive .....up to 30 GB min EIDE HDD
- Flash drive .....up to 1 GB Flash (optional)
- Graphic .....up to 64 MB shared video memory
- Bus .....ISA, PC/104, PC/104+ and PCI
- Ethernet .....10/100 Base-T (dual available)
- I/O .....PS/2 keyboard/trackball, IDE, parallel, USB, RS-232/422/485

POWER

- AC .....110/120 VAC (via MIL-C-38999)
- DC .....20-32 VDC (via MIL-C-38999)

ENVIRONMENTAL

- MIL-STD-901
- MIL-STD-108
- MIL-STD-461

>> HAND HELD CONTROL UNIT (HHCU)

HAND HELD CONTROL UNIT (HHCU)

DRS's Hand Held Control Unit (HHCU) is a fully rugged display and control station system. Designed to operate in the harshest of military environments, the HHCU offers the user maximum versatility and survivability.

The HHCU is qualified and approved for aircraft carrier flight line operations. This system provides maintenance leaders a controller unit to interface with and operate various sets of flight line test equipment.

The DRS Hand Held Control Unit (HHCU) is the display unit for the Joint Service Electronic Combat Systems Tester (JSECST) program. The HHCU is part of a test set designed for compatibility with all systems in all branches of worldwide military forces.

Electronic combat and avionics testing data are displayed via the HHCU, a user-friendly, graphical interface that includes menus, dialog boxes, and graphical instructions. The HHCU is easily read in either daylight or darkness. The system can operate from –40°C to +55°C while wearing MOPP4 gloves.

COMPUTING

- Display . . . . . .Full Color
- Screen Size . . . . . .10.4" Diagonal
- Resolution . . . . . .640 x 480 Pixels
- Contrast Ratio 3:1

PHYSICAL

- Weight . . . . . .6.5 lbs.
- Dimensions . . . . . .26.4 x 32 x 4.2 cm

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> COMMANDER CREW STATION (CCS)

COMMANDER CREW STATION (CCS) DISPLAY

TThe Commander's Crew Station (CCS) is a 10.4" sunlight readable SVGA display with 24 sealed function keys. The CCS also features both MilCan and 1553 interfaces. The CCS delivers the best of rugged computer technology to the Warfighter wherever it is needed - on the digital battlefield, at sea, or on the flightline. The CCS can be mounted inside a combat vehicle or operate on the move. The CCS can operate from vehicle power, or independently using its internal rechargeable batteries.

COMPUTING

- Display . . . . . .SVGA, 10.4" Transflective, 800 x 600 pixel resolution
- Keyboard . . . . . .24 sealed Function keys
- Operating System . . . . . .Compliant with MS-DOS, Windows 95, 98, 2000 and Microsoft NT v. 4.0
- Communication Ports . . . . . .Port 1: RS-423 . . . . . .Port 2: 1553B . . . . . .Port 3: Can Bus

POWER

- Power . . . . . .28 VDC Vehicle power per MIL-STD-1275A, ...Optional AC converter 90-264 VAC, 47-440 Hz

PHYSICAL

- Weight . . . . . .11 lbs.
- Dimensions . . . . . .12 x 9 x 2.5 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> VTI-5 THERMAL IMAGE VIEWER

VTI-5 THERMAL IMAGE VIEWER

The VTI-5 is an ultra compact 5" rugged video display designed for use as an auxiliary display with a wide range of cameras and thermal imagers. The unit is ideal for retrofit activities where space is very limited. With an aluminum alloy casing, the VTI-5 is fitted with an earth stud for grounding to the vehicle chassis and with a breather to enable it to withstand pressure changes arising during transportation in an un-pressurized aircraft environment. The VTI-5 accepts standard military vehicle power supplies and is fully sealed for use in fighting vehicles.

BASE FUNCTIONALITY

- Display ..... .full color
- Diagonal ..... .5" (125mm) nominal
- Aspect ratio 4:3
- Resolution ..... .320 x 234 pixels
- Brightness ..... .125 cd/m² (typical)
- Contrast ratio ..... .100:1
- Power supply ..... .28VDC to DEF STAN 61-5, Pt 6
- Consumption ..... .15W (20-30W for heaters, if fitted)
- Input signal ..... .CCIR System I (PAL)

PHYSICAL

- Weight ..... .< 3Kg (typical)
- Dimensions ..... .150 x 145 x 50 mm

OPTIONS

- Screen Coatings Anti-reflection, ...EMC
- Input signal ..... .CCIR System N (NTSC)
- Case color ..... .(White is standard)
- Mounting ..... .(Side pivots are standard)

>> HANDHELD TERMINAL UNIT (HTU)

HANDHELD TERMINAL UNIT (HTU)

DRS's Handheld Terminal Unit (HTU) provides a small, lightweight, fully rugged, fully sealed computing device. Highlighted by GPS and TCIM, the HTU is a product based solely on Commercial-off-the-Shelf (COTS) technology, allowing the most cost-efficient solution for the battlefield. The HTU's design meets the most demanding environmental requirements, to include MIL-STD-810 and MIL-STD-461 compliance.

The DRS Handheld Terminal Unit (HTU) was recently selected for the U.S. Army's CHS-2/3 (Common Hardware/Software) program. Various uses include air defense, special forces applications and forward observer activities.

COMPUTING

- Processor ..... .Intel® 650 MHz, or greater
- Memory ..... .256 MB expandable to 512 MB
- Mass Storage ..... .20 GB
- I/O ..... .Two (2) RS 232/432, Two (2) USB
- Expansion ..... .2 Type I/II PCMCIA Slots

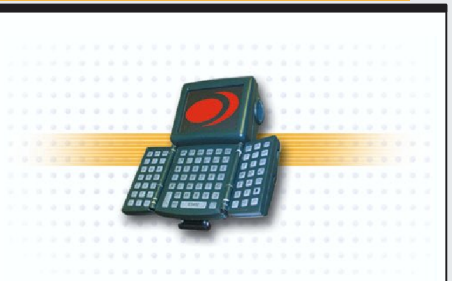
PHYSICAL

- Weight ..... .8 lbs.
- Dimensions ..... .9 x 7 x 3 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> PXI



PXI

The PXI is a field-proven, extremely rugged, hand-held personal computer designed for use in a wide range of environments ranging from the barracks to the leading edge of the battle area. The unit combines high standards of ruggedness, functionality, battery life and inter-connectivity with optimum man machine interface. The PXI is ideally configured for use as the Man Machine Interface (MMI) for mobile and Satcom communications systems.

COMPUTING

- Processor . . . . . .Dual 486-class
- RAM . . . . . .3MB and 8MB DRAM
- Interfaces . . . . . .2 x RS-232
  1 x RS-485
- Disk . . . . . .4MB Flash memory per processor
- Speaker . . . . . .Built-in 0-84 dBa (controllable) speaker
- Operating System . . . . . .MSDOS & PSOS
- Display . . . . . .5" TFT, 320 x 240, 16 colours
- Keyboard . . . . . .Fold open, backlit, tactile response, QWERTY keyboard
  Open - 81 keys. Closed - 10 keys + 2 Emergency Erase keys
  Anti-tamper facility

PHYSICAL

- Weight . . . . . .1.8Kg (approx.) with battery
- Dimensions (closed) . . . . . .140 x 200 x 70 mm
- Volume . . . . . .1.96 litres

ENVIRONMENTAL

- DEF STAN 00-35
- DEF STAN 07-55
- DEF STAN 59-41

>> SCORPION RPDA

SCORPION RPDA

The DRS Tactical System's Scorpion RPDA is a lightweight handheld computer that can be used by the dismounted solider for situational awareness, information updates, and targeting information. The RPDA all-in-one design with wireless capability eliminates bulky and excessive peripheral devices. The RPDA design decreases solider load tremendously while enhancing information flow to the user. The smallest of the DRS rugged hardware offerings, the RPDA is still built to meet both MIL-STD-461 and MIL-STD-810E. The Scorpion RPDA is the solution for a rugged dependable computing, communications, and situational awareness device for commanders at all levels.

COMPUTING

- Processor . . . . . .Intel® X-Scale 400 MHz Processor
- Memory . . . . . .64 MB DRAM, expandable to 256 MB
- Display . . . . . .VGA color sunlight readable LCD, 320 x 240, 95 mm diagonal backlight
- I/O . . . . . .One (1) Type III or two Type II PCMCIA internal PC card slots
- User Input . . . .Resistive Touchscreen; Multifunction Keypad; Pointing Pad

POWER

- Power . . . . . .Internal rechargeable Lithium Ion primary or External BA-5800/other secondary AA integrated battery pack

PHYSICAL

- Weight . . . . . .1.4 lbs.
- Dimensions . . . . . .6.5 x 3.5 x 1.7 inches

ENVIRONMENTAL

- MIL-STD-810
- MIL-STD-461

>> MISSION DATA LOADER (MDL)

MISSION DATA LOADER (MDL)

The DRS Mission Data Loader is a stand-alone USB device with a user removable 1 Gigabyte Flash Memory card. Sine Flash Memory is "steady-state", it is able to withstand environmental conditions that most mechanical drives cannot. The MDL is compatible with all operating systems, provided the OS recognizes USB devices. A specially designed door allows the quick removal and replacement of the memory card.

POWER

- +5VDC USB Powered

PHYSICAL

- Dimensions.....108 x 152 x 32 mm

ENVIRONMENTAL

- EMI.....MIL-STD-461 – CE102, RE102, RS103
- Temperature Test.....-10°C to +50°C
- Drop Test.....762mm
- Temperature (operating).....-10°C to +50°C
- Dust test.....30min at 32 Kph
- Sand test.....30min at 32 Kph
- Water Test.....High Pressure Water Jet
- Altitude Test.....3048 meters
- Loose Cargo test.....In carrying case
- Connector.....D38999/20WA35SN

>> RP-8200

RP-8200 RUGGED PORTABLE WORKSTATION

The RP8200 is the ultimate in rugged military computing, providing flexibility, expansion and solid ruggedness for mobile and installed applications.

A wide range of processor options can be provided based on its compact PCI based processor architecture: Intel® Pentium®, Sun UltraSPARC and Power PC. Internal and removable hard disk drive options can be provided utilizing latest storage capacity and speeds.

COMPUTING

- Compact PCI based processor boards from Intel, including Coppermine, Power PC, Sun ULTRASparc
- Floppy Disk Drive, CD-RW and DVD options, PCMCIA
- 15" 1024 x 768 TFT display (optional 1280 x 1024)
- SCSI, RS232 / RS422 serial ports, USB, 10/100 Ethernet
- Full travel keyboard and tracker-ball
- SoundBlaster compatibility
- Two (2) 6u CPCI expansion slots

POWER

- Input 19-32VDC. .....External AC adaptor option for 100-240 VAC
- .....Optional UPS

PHYSICAL

- Weight 16Kg
- Keyboard closed.....463 x 357 x 240 mm
- Keyboard open .....463 x 357 x510 mm

ENVIRONMENTAL

- Operating Temperature ..... -20°C to +55°C
- Rainproof to IP65
- Relative humidity.....95% non-condensing
- Altitude .....10,000 ft
- Vibration .....DEF STAN 07-55 Part 2, Tests A1 and A2
- Shock Operating .....15g/11ms. Non-operating: 30g/6ms
- Bump.....10g/16ms, 4,000 bumps in 3 axes
- Drop & topple .....2-meter drop (packaged)
- EMC .....DEF STAN 59-41
- Tempest option.....SG 788

>> OPUS2

OPUS2

OPUS2 is an outstanding range of new generation, rugged multi-function consoles from DRS-RSE. These versatile single or dual display consoles are designed to support sea, air and land systems hosting applications such as combat management, communications, radar, sonar, weapon control, ESM and platform management. Featuring an adaptable aluminum construction and based on a comprehensively modular design, OPUS2 delivers significant benefits, including increased flexibility and reduced through-life support costs, to prime contractors and end users engaged on new and retrofit defense programs.

The display module comprises active matrix LCD displays (up to 21", 2000 x 1600 resolution), in vertical or horizontal configuration, and is adaptable to future display sizes. Displays are tilt-able with infinite adjustment. The ancillaries' module is configurable for touch panel, peripherals, keypad or customer furnished equipment. The tilt-up desk (similarly, configurable for keyboard, roller-ball, joystick, keypads, or other input devices) has a damped and positively locked tilting action and allows operator and maintainer access. The electronics module can house a variety of processors and form factors. Options include a 20-slot VME sub-rack; PIC-MG passive backplane (DRS-RSE's Genesis computer); compact PCI; Thin and Ultra Thin Client systems with either Intel or Sun processor architectures. A configurable connector panel is accessible at the rear of the unit.

>> RUGGED MULTI-FUNCTION CONSOLE

FEATURES

- Modular design delivers increased flexibility and reduced through-life support costs
- Single or dual, vertical or horizontal displays up to 24"
- Rugged construction qualified to NES 1004
- Ergonomic design in accordance with DEF STAN 00-25
- EMC to DEF STAN 59-41 (below decks)

DISPLAY OPTIONS

- Single or dual, 18" or 20": 1280 x 1024, 21": 1600 x 1200, 24": 2000 x 1600
- Tiltable with infinite adjustment

DESK LAYOUT/OPTIONS

- 2° tracker-ball with mouse keys, 2 or 3 axis joystick, hand-wheel
- Keyboard: sealed standard PC layout or Sun SPARC UNIX keyboard with optional back-lighting and user-defined keypads

OPTIONAL ANCILLARIES

- Touch screen: up to 10.4", electro-luminescent or color LCD with touch overlay for function keys
- Wide range of storage device options

PROCESSOR CABINET OPTIONS

- 20-slot VME chassis as single processor, or dual with split backplane, plus other configuration options
- PCI backplane or Compact PCI electronics supporting Intel® and Sun UltraSPARC

POWER

- 100-230VAC, auto-ranging, 50/60Hz, to suit shore and ship applications (DEF STAN 61-5)
- Optional 5 minute UPS to allow orderly shutdown in event of power failure

PHYSICAL

MODEL	(H)	(W)	(D)
OPUS-Standard	1800 mm	700 mm	550 mm
OPUS2-Compact	1490 mm	610 mm	550 mm
OPUS2-Single	730 mm	700 mm	412 mm
OPUS2-Horizontal	1200 mm	1080 mm	550 mm

All measurements with desks closed

WEIGHT

- Weight 100 to 220Kg, configuration dependent

STANDARDS

Environmental	NES 1004, including fire fighting spray
EMC	DEF STAN 59-41 below decks
Ergonomic	DEF STAN 00-25
Magnetic	OPUS2 has been designed to minimize the use of ferrous materials. It is suitable for use on Mine Hunting vessels.

>> OPUS2 FEATURES

BUILT-IN-TEST

The OPUS2 console has an integrated Built-in-Test (BIT) facility to allow rapid fault diagnosis to LRU level. This monitors internal and external voltages, console temperatures and reports failure of any of the internal cooling fans. It consists of a number of modules distributed throughout the console and is connected on an I^2C bus. The modules are powered by a dedicated high-reliability power supply so that accurate BIT reporting can be guaranteed under a wide variety of fault conditions. The BIT system also communicates with other fault monitoring circuitry within the displays and processor system and allows all fault data to be reported in a consistent way on a maintainer's BIT display or remotely over an RS232 link.

AURAL FACILITIES

The OPUS2 Aural Facility provides the operator interface for the monitoring of sonar signals. A variety of configurations are possible with the sonar input coming into the console as 24-bit AES / EBU digital data, analogue signals or contained in data packets on an Fibre Channel bus. Once converted, the signals are amplified by a standard audio output stage that ensures that the provisions of International Health and Safety legislations for continuous exposure to sound can be met without compromising the signal quality. Dual headset driving with side-tone mixing for the microphone is provided as standard with an option to switch the headset from sonar data to a ship's communication system.

CAPTAIN'S CONSOLE

This compact console is an extension to OPUS2 and allows the ship's commander to monitor selected activities. The unit can be mounted on the Bridge and configured if required with a touch screen, to support interactive requirements.

>> ADVANCED CONSOLE SYSTEMS

INFILL CONSOLES / CONSOLE SUITE

As part of the OPUS2 family, DRS can provide infills to fit between functional operator positions to form a complete console suite. The infills are of a similar construction and shape to the functional consoles, and provide a clean and aesthetically pleasing platform for ancillary functions such as ship's communication and information systems.

INTEGRATION OF THIRD PARTY ELECTRONICS

DRS has formed strong associations with a number of key specialist suppliers in order to provide a full range of third party hardware and software services. As a result, DRS can deliver a fully integrated console complete with processor, graphics and communications electronics and, where applicable, associated software, saving its customers time, money and risk.

FLEXIBLE CONSOLE CONFIGURATIONS

The OPUS2 modular design and construction allows for both dual and single display configurations as well as a horizontally mounted 'side-by-side' display.

>> GENESIS

GENESIS MULTI PLATFORM RUGGED COMPUTER

GENESIS is a highly adaptable, rugged, rack-mount computer designed for installation in wheeled and tracked vehicles, military aircraft, surface ships and submarines. The unit can accommodate different processor engines, has configurable I/O panels, and can operate from interchangeable power sources. The Genesis SR is one of a core range of rugged technology platforms from DRS-TS. It delivers the advantages of proven, low-risk rugged COTS equipment from a total hardware systems provider and has been selected by Defense Forces worldwide.

COMPUTING

- Processor . . . . . .Intel® Pentium®, P3 and P4
- Internal Drives . . . . . .Will support 'Hot Swap' and disk mirroring (RAID) 2 x 5.25" half-height; 1 x 3.5" full height- up to 160GB
- I/O . . . . . .Customer configurable I/O panel
- Peripherals . . .Range of CD-ROM, CD-RW, DVD, Tapes, and PCMCIA devices

DISPLAY

- Option . . . . . .Rugged flat panel displays are available in sizes ranging from 10.4" to 21"

ELECTRICAL

- Input Voltage . . . . . .110-230VAC (auto-ranging), 47-63Hz . . . . . .Option: 19-32VDC and inbuilt UPS
- Grounding . . . . . .Single point chassis
- Surges . . . . . .AC to IEC 1000-4 . . . . . .DC to DEF STAN 61-5

PHYSICAL

- Weight . . . . . .19.5Kg, configuration dependent
- Height & Depth . . . .4U and 400mm to 570mm (configuration dependent)
- Mounting . . . . . .19" RETMA

ENVIRONMENTAL

- DEF STAN 66-31
- DEF STAN 07-55
- DEF STAN 59-41

>> GENESIS ULTRA 3

GENESIS ULTRA 3

The GENESIS Ultra 3 is a highly adaptable, rugged, rackmount computer designed for installation in wheeled and tracked vehicles, military aircraft, surface ships and submarines. Typical applications include tactical communications systems, mission planning, combat support and logistics support.

The Genesis Ultra 3 is designed in conjunction with SUN Microsystems Limited and utilizes the latest SUN motherboard. It can be configured with either one or two Ultra SPARC IIIi processors and can be fitted with the latest speed processors.

COMPUTING

- Processor . . . . . .Single or Dual SUN UltraSPARC™ IIIi
- Internal Drives . . . . . .Two (2) 5.25" half-weight . . . . . .One (1) CD-ROM drive
- I/O . . . . . .Customer configurable I/O panel

POWER

- Input Voltage . . . . . .110-230 VAC (autoranging), 47-63 Hz
  Option: 400Hz
  Option: . . . . . .19-32 VDC
- Grounding . . . . . .Single point chassis
- Surges . . . . . .AC to IEC 1000-4DC to DEF STAN 61-5 or MIL-STD 1275

PHYSICAL

- Weight . . . . . .19.5 Kg, configuration dependent
- Height and Depth . . . . . .4U and 560mm
- Mounting . . . . . .19 inch RETMA

ENVIRONMENTAL

The Genesis range is currently installed in a variety of fighting vehicles, military aircraft, and surface and submarine platforms. Each installation is tailored to meet the requirements of its environment.

- DEF STAN 66-31
- DEF STAN 07-55
- DEF STAN 59-41

>> EXPLORER MP

EXPLORER MP

The Explorer MPT Rugged Portable Workstation provides a complete, powerful, compact, and transportable solution for programs that support the most demanding applications in real-world military and harsh environments including CIS, GIS, fire-control, digital mapping and weather systems. Complete with a wide range of advanced multimedia, graphics systems and a 15.4-inch active matrix flat panel display, the Explorer MPT is the high-end workstation solution for mission critical fielding requirements.

COMPUTING

- Processors .....UltraSPARC™-IIi (UltraSPARC™ Axi), Intel® Pentium®
- Max RAM.....1 GB
- Mass storage.....four configurable – height 5.25-inch drive bays
- Ethernet .....fast Ethernet – 10/100 base-T via RJ-45
- I/O .....internal and external ultra-wide SCSI-3, parallel, two RS-232/423, 16-bit audio
- Expansion .....four 33MHz/32-bit PCI expansion slots
- Keyboard .....fully sealed, fold down, detachable with integral trackball
- Display
  - Diagonal area . . . . . .15.4 inches
  - Resolution . . . . . .up to 1280 x 1024
  - Luminance . . . . . .maximum 200 cd/m2
  - Contrast ratio 200:1
  - Technology . . . . . .24-bit AMLCD, TFT
  - Viewing angle . . . . . .+/-60o(H), +/-50oV
  - Additional features . . . .EMI shield

POWER

- AC.....110 +/-10%, 220VAC, +/- 10% VAC, 47-63Hz
- DC .....20-32VDC (optional)
- UPS .....internal UPS recharging from AC or DC input, up to 10 minutes

PHYSICAL

- Weight .....50 lbs. (configuration dependent)
- Dimensions .....14.5 x 22 x 10.5 inches

ENVIRONMENTAL

- MIL-STD-2169B
- MIL-STD-2169B

>> RP-AGE

RP-AGE (AIR GROUND EQUIPMENT)

The RP-AGE has been designed specifically for the aircraft ground support environment. The flight line can provide some of the most arduous environmental and EMC conditions in the world. Military aircraft operate at extremes: freezing temperatures, baking sun, driving rainstorms, sand and dust, salt fog, and are co-located with very powerful radio transmitters and explosive substances.

The essential location of mission loading and test equipment, demands that performance has to be thoroughly reliable, and built to operate within the immediate location of a high radio interference environment.

COMPUTING

- Compact PCI Pentium, UltraSPARC or Power PC
- 36GB + removable and fixed Hard Disc Drive
- FDD (optional LS120 or PCMCIA): CD-RW and DVD
- I/O includes SCSI, RS232 serial, keyboard/display, LAN, WAN, RS422, audio
- Expansion 3 x free compact PCI slots
- DISPLAY 15.1" 1024 x 768 TFT LCD (optional 1280 x 1024)
- KEYBOARD IP65 and EMC sealed full-size k/b with integral tracker-ball

POWER

- Input 19-32VDC. External AC adaptor. Option: 100-240VAC
- Optional UPS

PHYSICAL

- Weight 20-24Kg
- Dimensions 463 x 400 x 328 mm, keyboard closed

ENVIRONMENTAL

- Temperature Operating: -20°C to +50°C
- Storage: -30°C to +55°C (option -40°C to +70°C)
- Driving rain, humidity to 95% non-condensing
- Explosive atmosphere
- Altitude operating: 10,000ft
- Vibration to DEF STAN 07-55 Part 2, Tests A1 and A2 (with optional AV mounts)
- Shock Operating: 15g/11ms. Non-operating: 30g/6ms
- Bump 10g/16ms, 4,000 bumps in 3 axes
- EMC DEF STAN 59-41, Land Class C (Land Class A option)
- TEMPEST options to AMSG 788

>> MC50A

MC50A

The MC50A is a 1 ATR rugged computer system designed for airborne data processing and display applications. Based on COTS technology, the unit offers systems designers the ability to integrate Pentium® based CPU and PCI products into new or technology insertion programs. The MC50A has been designed and tested to meet the stringent environmental and EMC standards required of computer electronics installed within military aircraft. The MC50A, which functions as an airborne data processing unit for the RAF Nimrod MR Mk 2 Maritime Patrol Aircraft Central Tactical System, has achieved formal airworthiness certification.

COMPUTER

- Intel® Pentium® and other PIC-MG form factor processors can be supported
- Colorgraphic multi channel graphics controller
- 4 x 16C550 compatible Serial Controller
- Range of ISA and PCI slots
- Optional Flash File System
- Mouse/Keyboard port available for maintenance purposes
- Parallel Port - used for program loading, EPP/ECP compatible

POWER

- 47-400Hz, 115-240VAC, 100W to BS3G100

PHYSICAL

- Weight 12Kg, configuration dependent
- Dimensions 193.5 x 496 x 258 mm

ENVIRONMENTAL

- Temperature: DEF STAN 07-55 B1 and B4
  - Operating: 0°C to +50°C, option: -26°C start-up
  - Storage: -40°C to +70°C
- Humidity: MIL-STD-810E, 507.3, I (95% relative humidity, non-condensing)
- Acceleration: MIL-STD-810E, 513.4
- Vibration Operating: BS 3G100, Pt 2, Section 3.1
- Shock Non-operating: MIL-STD-810E, 516.4, V and VI, 40g/9ms
- Altitude: MIL-STD-810E, 500.3, I and II
- Rapid decompression: 10psi to 1psi @ 50psi/second
- Operating: to 25,000ft. Storage/Transport: to 40,000ft
- EMC: MIL-STD-461C, RE01, RE02, CE01, CE03, RS01, RS02, RS03, CS01, CS02, CS06 aircraft limits

>> PATHFINDER-2

PATHFINDER-2

Pathfinder-2 is optimized for computing general-purpose frequency-domain functions such as FFTs, IFFTs, real and complex multiplies, correlations, fast convolutions, and polyphase filters. Its high precision and handling of internal scaling enables Pathfinder-2 to process large vector sizes (up to 1 million complex samples) with dynamic range unmatched by any other commercially-available FFT processing integrated circuit.

COMPUTER:

- Processing Speed . . . . . .133 MHz clock rate
- Performance . . . . . .For even greater performance than the unstacked FFT, FFTs with 256 points or less can be stacked for dramatic increases in throughput. Multiple Pathfinder-2 chips may be cascaded to support continuous data rates of 133 million complex samples per second or 266 million real samples per second for up to one million point transforms.

POWER

- Max. current at 3.3V . . . . . .0.15 A
- Max. current at 2.5V . . . . . .2.0 A
- Power dissipation: . . . . . .6W at 133 MHz

ENVIRONMENTAL

- Junction temperature . . . . . .0° - 90°C

>> CHEETAH VME

CHEETAH VME

Cheetah is a high performance digital signal processing board optimized for high-bandwidth, low-latency digital signal processing applications. It is an excellent match for accelerating frequency-domain algorithms in applications requiring state-of-the-art performance. The VME form factor provides excellent integration with VME backplane systems. The input and output PMC daughtercards allow for high speed data movement in a variety of formats without going across the host bus.

COMPUTING

- Software Support . . . . . .Driver support includes VX Works, MCOS and Windows NT 4.0. DRS-TS software API and System Development Framework (SDF) included. Also supported is a large class of libraries and DSP functions such as FFTs, fast convolutions, polyphase filters, and matched filters.
- Processing Speed: . . . . . .120 MHz clock rate
- PCI Signaling: . . . . . .64-Bit 66 MHz at 3.3V (transfers at 60 MHz)
- Performance (throughput)*: . . . . . .1K CFFT in 9.8 microseconds . . . . . .256K CFFT in 3.3 milliseconds . . . . . .*Performance can be improved by stacking
- The Cheetah processing engine can perform windowed FFTs at the following maximum achievable rates:
  - FFTs with complex inputs:
    - 16 to 256 points . . . . . .240 Complex MSPS
    - 512 to 64K points . . . . . .120 Complex MSPS
    - 128K to 256K points . . . . . .80 Complex MSPS
  - FFTs with real inputs:
    - 32 to 512 points . . . . . .240 Real MSPS
    - 1K to 128K points . . . . . .160 Real MSPS
    - 256K to 512K points . . . . . .120 Real MSPS

POWER

- Max current at 5V 6A
- Max current at 3.3V 6A

ENVIRONMENTAL

- Operating temperature . . . . . .0° to 50°C
- Cooling . . . . . .500 LFM minimum

Also available in PMC and PCI versions. Consult factory for details.

>> CHAMELEON II VME

CHAMELEON II VME

The heart of the Chameleon II VME board consists of three Xilinx® Virtex® -II 6000-4 FPGAs, providing over eighteen million reconfigurable system gates and 432 18x18 hardware multipliers the user can apply to the application. Connected to FPGAs A, B, and C are twelve independently addressable ZBT ram blocks shared between processors. The FPGAs on the Chameleon II VME link together in a ring with dedicated 72-bit paths: A to B, B to C, and A to C. These FPGA busses can be clocked at rates up to 133 MHz.

The Chameleon II VME has three high-speed I/O daughtercard sites compatible with the industry's PCI Mezzanine Card (PMC) standard. By leveraging PMC, the effort to tailor the Chameleon II VME to specific I/O requirements decrease the driver integration instead of a full custom I/O daughtercard development task.

COMPUTING

- PCI Signaling . . . . . .64-Bit 66 MHz at 3.3V
- Processing Speed . . . . . .133 MHz clock rate
- Performance . . . . . .Programming dependent

ENVIRONMENTAL

- Operating temperature . . . . . .0°- 50° C
- Cooling . . . . . .500 LFM minimum

Also available in PMC version. Consult factory for details.

>> PHOENIX VME

PHOENIX VME

Phoenix provides sample control, header support, and other various formatting and processing capabilities. It also acts as a carrier for the Talon series of analog daughtercards.

The analog daughtercards are designed around Analog Devices' current generation of A/D converters. They provide sampling of 10-14 bits at up to 210 MSPS. The daughtercards are provided with a direct connection to a linear power supply allowing for the cleanest possible power source. Optionally, the daughtercards analog portion may be encased in an EMI shield to further reduce the effects of any parasitic interference. Analog signals may be either AC or DC coupled, as well as optionally filtered and dithered.

COMPUTING

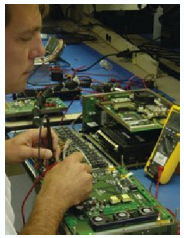
- Analog Input Bandwidth:
  - 10-bit, 210 MSPS .....250 MHz
  - 14-bit, 10 MSPS .....70 MHz
  - 14-bit, 80/105 MSPS .....270 MHz
  - 12-bit, 210 MSPS .....250 MHz
- Power .....~10 Watts total power draw depending on sampling rate

ENVIRONMENTAL

- Operating temperature .....0° - 50° C
- Cooling .....500 LFM minimum

Also available in PMC and PCI versions. Consult factory for details.

>> ENGINEERING AND SUPPORT



PROVEN, RELIABLE PERFORMANCE

DRS recognizes that each customer offers the opportunity to become a qualified and valued supplier. We consider this opportunity of significant importance in the continued development and expansion of our company. DRS is fully prepared to apply appropriate key resources to provide a plan for each customer that will ensure that we always offer the superior solution.

The reliability and performance of our products in extreme environmental and operational situations relate directly to DRS's fundamental electrical and mechanical designs, specification and selection of proper components, manufacturing techniques and the extensive testing employed at various phases. Our products are designed with an open architecture configuration for maximum flexibility. DRS provides its customers and end-users with engineering services that modify or adjust its standard products to meet their specific needs and requirements.

RAPID PROTOTYPING CAPABILITY

DRS Tactical Systems has the capability and experience to rapidly design and manufacture engineering prototypes and turn these prototypes into production level equipment. This skill allows us to start environmental evaluations including thermal, shock, vibration, and EMI early in the program. This approach gives us time to discover technical problems and make design adjustments without affecting our customer's program schedule.

We have extensive experience customizing our standard family of products to meet specific program requirements. Customization includes case modification, custom interface design, BIOS modifications, application software, specialized keyboard development, and specialized display system development.

PRODUCT SUPPORT

DRS Tactical Systems is committed to providing sustaining In-Service Support for all products. This includes installation planning and support, user/maintenance training, obsolescence management and technology insertion and upgrades.

DRS has an established repair and return process that is focused on customer satisfaction and low cost. Upon receipt of the failed unit from the customer, DRS will expeditiously, and within the constraints of the availability of materials, prioritize repairs to the returned unit.

DRS TACTICAL SYSTEMS
3520 US Highway 1
Palm Bay FL 32905-2710

+1 321.727.3672
Fax: +1 321-725-0496
www.drs-ts.com

Lynwood House, The Trading Estate
Farnham, Surrey
England GU9 9NN

+44(0)1252.730500
Fax: +44(0)1252.730530
www.drs-rse.com

Designed by: A G Marketing Services +44(0)1252 721274 / Revised and Produced by: Jones & Jones Advertising, Inc., 772-778-8787

Corporate website: www.drs.com