

MCMURDO 'SPECIAL' D CONNECTORS

(100 operations)

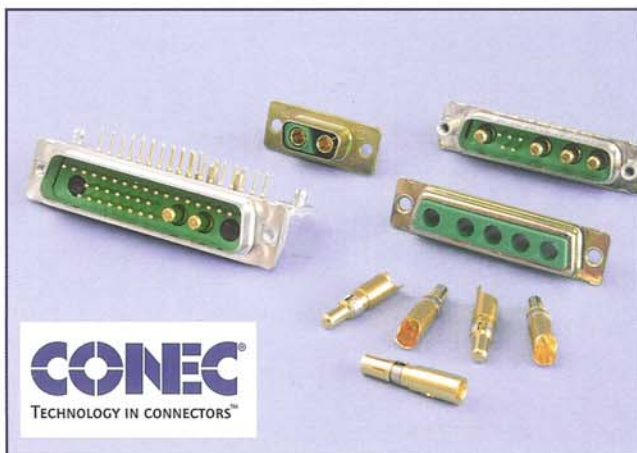
Cost effective D connectors with gold plated, stamped and formed contacts. 90° PCB version with integral solderable board locks to effect retention and grounding whilst the circuit board is processed. Solder bucket, straight or 90° PC termination styles. Threaded inserts on 90° PC version as standard accept a wide range of mounting hardware. Yellow chromate steel or tinned and dimpled shell for EMI grounding.

ITW **McMurdo**
Connectors



MIXED LAYOUT D

Mixed layout, D connectors offer integration of signal, 50/75 ohm coax, High Power and High Voltage contacts in one shell. The screw machined signal contacts can include solder bucket, solder pin, wire wrap and crimp. Connector variations include polarised shells, diverse mounting options including cable and PCB, standard fixing holes, float mount and fitted screwlocks. Mixed layout connectors can have factory 'fitted' contacts to eliminate inventory and assembly errors.



CONEC
TECHNOLOGY IN CONNECTORS™

WATERPROOF D-SUBS

Waterproof to IEC 529, IP67 Specifications. Electronic equipment used in harsh environments require connectors that can withstand moisture, dust and the ingress of other harmful materials.

This water resistant D-Subminiature connector 'system' includes standard D configuration as well as High Density, mixed layout, and Filtered options, all of which can be used in applications where moisture, high humidity, water or dust could be a problem. Socket and plug connectors are available with solder cup, straight or right angled PCB contacts. These types are UL and CSA approved.

Because of the wide range of configurations available, these connectors are built to order, but we will stock your ongoing requirements.

Available from 9 to 78 ways plus combination mixed layout and EMI/RFI filtered series.



L, C, LC & 'π' FILTERED D SUB-MINIATURE CONNECTORS

Standard d-sub connectors can not guarantee protection from EMI/RFI, even when enclosed in shielded hoods. Filter d connectors and adaptors are an ideal solution to reduce or eliminate EMI. Filtered d type connectors are available as solder bucket and straight or right angled PCB, in standard, high density and dual-port configurations. Filtered, mixed layout d connectors are ideal for power line filtering. Their small size means that they can be installed directly onto the backplane, back panel, or power supply cable. These connectors and Adaptors are UL and CSA approved.

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Because of the wide range of configurations available (including waterproof IP 67), these connectors are normally built to order, but we will stock your ongoing requirements.

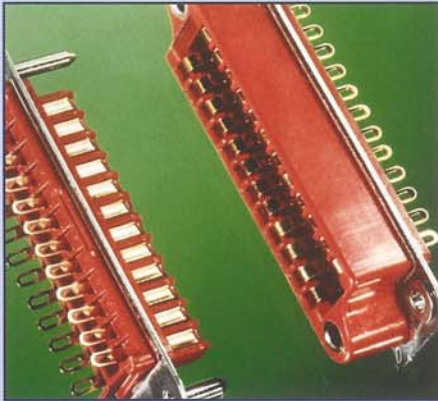
Because of the wide range of configurations available (including waterproof IP 67), these connectors are normally built to order, but we will stock your ongoing requirements.

L Filters ~ cost-effective Ferrites are ideal for applications where low levels of EMI filtering or elimination of parasitic frequencies are required.

C Filters ~ this series of filters uses 'thick planar' technology

LC Filters ~ LC filters utilise both ferrite and planar techniques and increase insertion loss by circa 5dB dependant on the frequency range.

'π' Filters ~ using planar technology these connectors offer an insertion loss of 45dB at 100 MHz and as high as 90dB at higher frequencies.



MCMURDO RED RANGE

These cost efficient rack and panel connectors are capable of handling 5 Amps per contact (all contacts simultaneously) at 100°C ambient and 750V rms. The moulded high impact DAP insulator will withstand -50°C to 125°C. Rugged and heavy duty they are superb in industrial/commercial equipment like bank ATM, vending and office machines, gaming equipment, mobile radios, TV cameras and industrial control applications where larger gauge wires of up to 16AWG are required. The strong, low insertion force, self-wiping contacts are designed such that the plug and socket will self-align, making them ideal as power edge card connectors for inaccessible applications such as the rear of sliding trays and panels, on cable ends or even as battery connections in hand held measuring instruments.

MICRONECTOR 200/300

This range of high density, low frequency, connectors is a low cost 2mm pitch product with proven reliability, enabling 'Board-to-Board', 'Board-to-Wire', or 'Wire-to-Wire' interconnections. The 2mm pitch layout and low profile of 10mm enables a 40% space saving over conventional 2.54mm systems. An optional spring latch is available to ensure security of interconnection between mated pairs. Available with male straight and 90 degree p.c. terminations and female straight p.c. and crimp terminations. Approved to BS 9525 - F0033.



CMM 220, 2MM PITCH CONNECTORS

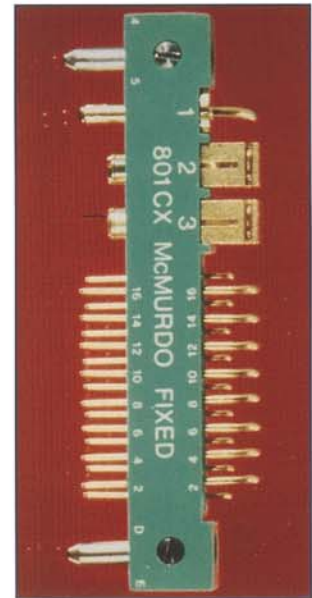
The CMM220 is a cost-effective 2mm pitch, mixed layout connector with proven high reliability under extreme environmental conditions including vibration. A choice of High Frequency, High Power, LF signal and optical fibre configurations are possible in the same moulding. An integral jacking mechanism ensures security in use whilst the high temperature insulator allows infra red or vapour phase soldering techniques. The CMM220 has been developed for the aerospace, instrumentation and control, military and transportation markets.



HE801/SERIES 127 MIXED LAYOUT PCB

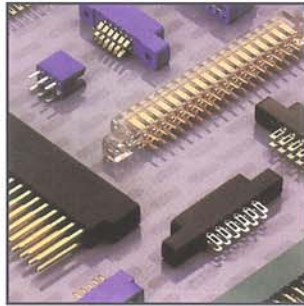
Designed for maximum versatility in board layout, these two part PCB type connectors utilise a 1.27mm (0.05") staggered pitch with 2.54mm (0.1") between rows. The signal connectors are available in 9 sizes and from 17 to 96 ways. The connector moulding can have from 3 to 6 cavities capable of accepting either coaxial or High Power contacts from 5+3 to 53+3 combinations.

Coaxial contacts are available for frequencies up to 2GHz, power up to 25A. All contacts are removable/replaceable. There is a wide range of termination, jacking and polarising options. Much used in high reliability scenarios like Railways, Avionics, Radar and underwater sonar electronics.



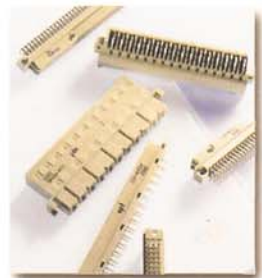
EDGE CARD CONNECTORS 0.100", 0.125", 0.150" & 0.156"

Modular 0.1" pitch and 'discrete' edge card connectors. Sizes from 2 to 85 contacts single, or 4 to 170 dual readout. Available with solder eye, straight or 90° PCB, extender card or wire wrap terminations. The 140° C moulding has a choice of mounting configurations and polarising keys. Designed for 100 or 250 operations. Selective or fully plated contacts. 'Burn-in' connectors capable of 220°, 240° or 260°C can be manufactured to order.



DIN 41612 & 41617

These very popular two part PCB edge connectors were designed to provide a reliable yet inexpensive PCB interconnection. Available in Class II (suitable for 400 operations), versatility comes from a choice of between 15 and 96 press-fit (DIN 41611 Part 5) or solder contacts; standard and reverse DIN; mixed layout and full or partial contact loading. Dual leaf socket contacts ensure reliability, whilst protective 'first mate last break' pre-mate contacts and screw machined boardlocks can be included. The DIN 41612 and sister series DIN 41617 are suitable for a wide range of applications.



PC/104 PLUS PRESS-FIT CONNECTORS

The stackable PC/104 bus enables additional PC/104 modules to be added to a single board computer. 'ept' has developed a new electromechanical connection with the 'PC/104 Plus' press-fit technology connector system. This connector system presents the J3 PC/104 Plus spec connector in a 2mm grid that offers female 4x30 contact connectors, 4x30 contact shrouds, and 2x30 contact pin headers as a standard. PC/104 Plus 'press-fit' connectors offer a large number of advantages ~ male and female connectors can be pressed in with the same tool in one single step ~ offering significant time-savings in production. No costly manual soldering, no solder bridges and the shroud makes PCB stand-offs unnecessary.

'ept' HARD METRIC 2MM CONNECTORS

The ept line of 2mm 'Hard Metric' connectors are classic, reliable two piece pin and socket connectors that offer a full range of configurations to meet CompactPCI™ applications. The newest specification for PCI-based industrial computers, CompactPCI™ utilises the Eurocard form factor popularized by the VME bus. ept 'hm' 2mm is a gas tight, high density pin-and-socket connector which meets the IEC-1076 international standard. Its low inductance and controlled impedance

make it ideal for PCI signalling. The connector has 47 rows with 5 pins per row giving a total of 220 pins (15 pins are lost to the keying area).

An additional external metal shield is also provided. The large number of ground pins ensures adequate shielding and grounding for low ground bounce and reliable operation in noisy environments.

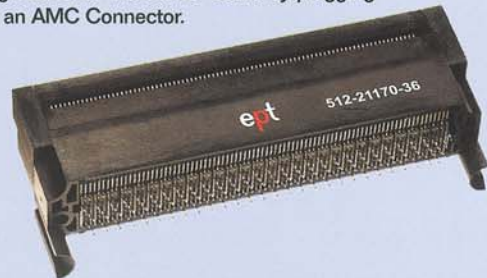


ept
...the better connection

ATCA, AMC & TCA CONNECTORS FROM 'ept'

These brand new connectors are first off the PICMG® (PCI Industrial Computer Manufacturers Group) standards grid. The PICMG® Advanced Mezzanine Card (AMC) specification defines the base-level requirements for a wide-range of next generation, high-speed (up to 12.5 Gbps) mezzanine (or "secondary") cards optimized for, but not limited to, AdvancedTCA® Carriers. This base specification defines the common elements for each implementation including mechanical, management, power, thermal, and interconnect. Target interfaces include PCI Express, Advanced Switching, Serial Rapid IO, and Gigabit Ethernet.

AMC defines a modular add-on or "child" card that extends the functionality of a Carrier board. Often referred to as mezzanines, these cards are generally known as "AMC Modules" or "Modules". AMC Modules lie parallel to and are integrated onto the Carrier board by plugging into an AMC Connector.



Carrier boards may range from passive boards with minimal "intelligence" to high performance single board computers. First to market ~ ept 12.5 Gbps AMC Connectors for ATCA and ITCA Bus offer the superb mechanical stability expected from Flat Rock, Pressfit Technology coupled with outstanding signal transmission capability.

For the AdvancedTCA® Platform, ept offers the AMC connector in a rectangular B plus version to connect the AMC card with the carrier board.

For the new MicroTCA® platform ept developed a pressfit card edge connector in a straight version.

Both ept AMC-connectors are available from stock now and do not require anything other than the simple flat rock tool for installation.



MIL-C CIRCULAR CONNECTORS

High (38999), Medium (26482) and Low Density (5015) multi-pin, screw threaded or bayonet locking, circular connectors used in commercial, military and aerospace environments including sensors, mobile military equipment, radios, trucks, ships, aircraft, tactical missiles and fighting vehicles; as well as robotics, communications, medical equipment and machine tools. Pin densities to 150 and voltages from 'Instrument' to 300 and 500 rms.

MEDICAL & INSTRUMENTATION

The S1 miniature multipin circular solder connector is push-pull self latching and polarised by single or double keys and keyways. Reliable, spacesaving and stylish this series is rated for -55° to 125° C. 3,000 mating cycles, 2-19 contacts and is interchangeable with Lemo B or ODU equivalents.

The S2 Series is similar but polarised by an hermaphroditic half-moon shaped insulator and is 360 degree shielded for EMI/RFI continuity. 2-10 contacts 3,000 mating cycles. The plastic bodied S3A Series is a multipin solder connector with single key and keyway mating; useful in the -40° to 100° C. range, has 2-19 contacts 3,000 mating cycles, and is intermateable with the equivalent Lemo series.

The W8 Series is a nylon waterproof circular connector system with 2 through 8 125 volt, 5A rated solder contacts providing an environmentally robust and reliable bayonet coupling in a connector of compact size and simple operation.

It is popular in GPS, outdoor measurement and industrial automation. IP67 to withstand immersion in 1 metre of water for 30 minutes. Rated -45° to 85° C. and 300 cycles.



DIN 43650 SOLENOID CONNECTORS

Industry standard, 2 and 3 contact, panel and cable mounting, vibration proof, gasket-sealed screwlock connectors; IP 65 sealable Forms A, B and C. Form A, Form B, and Form C, have 18 mm, 10 mm, and 8 mm contact separations, respectively. Their black, grey or transparent body mouldings are suitable for ambient temperatures from -40 to $+125^{\circ}$ C and the screw type; snap-inserted, silver plated contacts are rated at 10 Amps. Right angled cable-mount models are available, with rewirable or overmoulded cable options in PVC and Polyurethane. Sockets are available with in-built electronic components in a host of protection circuit configurations; incorporating LED indicators, varistors, diodes rectifiers etc. for overvoltage protection.



G.C.E. CABLES

G.C.E. Cavi Elettrici is a medium sized cable manufacturing group with much experience in the design and production of those power, control, electronics, machine tool and custom cables for low voltage applications popular in the UK.



G.C.E. provide the highest levels of service and quality associated with experienced staff, new production plant and quality assurance to ISO 9001 and hold numerous approvals and certification by VDE, IMQ, HAR and DESINA. As well as European standard cables, UL and CSA listed, approved and certified types are manufactured.

As a major supplier to the European machine tool industry the G.C.E. factories support the DESINA® concept of decentralized cabling as a basis for factory standards.

Cable insulating and sheathing materials used are many and various ranging from PVC to TPR and PUR, and braided copper and/or Aluminium foil screens.



CABLE HARNESSING

In2Connect have over 40 years experience in advising on specification and design of high performance cables and connectors to solve customers' specific interconnect problems. To add value to our connector offering we can supply UK manufactured, 100% tested, labelled and bagged cable assemblies in low or high volume and will supply to the exact length required.

We are able to convert any of our connector products into cost-effective, quality cable assemblies ~ connector to connector, connector to open end, or panel to almost anything... saving you TIME plus the cash outlay in expensive machinery or materials wastage.



FLEXIBLE PRINTED CIRCUITS

Flexible printed circuits were designed as a space and weight saving replacement for traditional cabling and connectors in point-to-point interconnections. There are primarily 4 types of flexible circuit ~ Single-sided, Double sided, Multilayer and Rigid-Flex.



The lack of mechanical connectors and elimination of manual wiring in an integrated circuit reduce wiring errors and greatly increase signal quality and impedance, whilst the circuit fits into spaces that no standard cable and connector harness would.

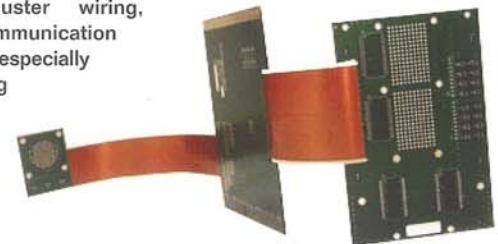
The circuit laminate for plated-through-hole and multilayer boards is generally constructed from woven glass reinforced epoxy resin with electrodeposited copper foil tracks in thicknesses of 18 microns (half-ounce) and track spacing from 0.005" to 0.002". Flame Retardant 'FR4' (IPC 4101/21) or High Temperature FR4 (IPC 4101/24/26/28) laminates are the mainstay of the printed circuit industry.

Single sided are normally specified for dynamic flexing applications such as printers, disk drives, and internal laptop to screen wiring. Such AFC products have reliably undergone 500 million flex cycles without failure.

Double sided and multilayer are used in relatively static applications where increased circuit density is required.

Rigid-flex types combine elements of flexible circuitry with rigid boards, almost entirely negating the use of mechanical connectors, and are great for motor vehicle dashboard cluster wiring, hand-held communication devices, etc. ~ especially those requiring strain free bonding of SMT devices.

These hybrid hard board/flex circuits can have up to 20 layers of flex interconnects, sandwiched between rigid outer layers.



The AFC "prototype-to-production" program lowers overall production costs, eliminates the need for multiple suppliers, and saves time in creating circuits for Military aircraft, Missiles, Cockpit radios, Radar guidance and flight control systems, Ground support instrumentation, Satellite systems, and Navigational instruments; as well as medical and industrial process control.

CALMONT WIRE & CABLE, INC.

In2Connect represent Calmont Wire and Cable, Inc. of the USA. Founded in 1958, Calmont are an ISO 9001 Registered cable maker providing unique technical solutions for critical applications ~ from simple hook-up wire to complex, multiway, wires and cables. Every product manufactured is made to customer, UL or MIL specs.



Working with PVC, Polyethylenes, Silicones, ME Fluorocarbons, Polyurethane, TPE, etc. Calmont's performance is unrivalled for applications that require high reliability, small diameter, low noise, chemical resistance or maximum flex life.

Calmont's Rapid Prototyping Service offers your concept, whether simple or complex ~ turned into a prototype and delivered within 2 to 3 weeks!