



# MasTec Limited



Your One Stop Shop for:

Automation	: Distributed I/O, SCADA, Field Buses
Instrumentation	: Data Acquisition, Logging, GPIB, PXI
Signal Conditioners	: Analog, 4-20mA Loop, Isolators
Protocol	: Fiber and Copper Converters, Drivers
Imaging	: CCD Cameras, Scanners, Capture cards
Motion	: Stepper and Servo Controllers and Amps
Industrial	: Critical and Embedded Computers
Comms	: RS-232/422/485/Ethernet/Radio/Switches
Internet	: DAQ, Distributed I/O, Asset Management
Panels	: Digital meters and controllers
Displays	: LCD Operator Interfaces with Touch
QA	: Gauging, Sensors and Transducers
QA Profilers	: 2D scanner and camera, tolerances, metrics
AC&DC Power	: Power Supplies, UPS, Inverters and Converters
Life Science	: Bio-Medical Amps, Conditioners and Software

Edition 9

Jan-Feb 2002

## Happy New Year 2002

*Hope you all had a nice Holiday, we had a lot of fun moving, also did a little relaxing with the family and got away for a few days.*

*Well, here we go again 2002. No doubt you have seen we have moved to new premises in Auckland, the suburb is Ti Rakau which is on the border of Pakuranga, East Tamiki and Botany Downs. We have a new display room with more of our products on show.*

*Some other changes, Alasdair Falconer is now our first outside sales person knocking on doors in Auckland.*

*Also the new catalogs are now ready to print, so put your order in for our first catalog ever.*

*In the past we did small 4 page newsletters. We plan to grow the catalog each year. So any suggestions or needs let us know.*

## LabVIEW Training Courses

Auckland Jan 30 Feb 1 : This course is filling up quickly, please book ASAP.

CHCH Feb 6, 7, 8 : Still booking this one, we plan three courses in CHCH 2002.

Auckland Mar 6, 7, 8 : Let us know what you need, we are doing Advanced LabVIEW in all courses now, so if you have a very important person needing advanced training this is the one to send them on. We will do courses between those dates if you require them.

A group in Wellington is looking for more people and also another group in CHCH.

Let me know if you want to join any of these courses [info@mastec.co.nz](mailto:info@mastec.co.nz)

## MasTec has moved, Update your records

### MasTec Ltd

The Ingenious Devices and SmartWorks Company

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Email [info@mastec.co.nz](mailto:info@mastec.co.nz) : Web Site [www.mastec.co.nz](http://www.mastec.co.nz)

We do not have a PO Box, just straight into the office from the friendly postie.

Product clearance and specials on our web

<http://www.mastec.co.nz/clear2.html>

## Summary of main points this Issue

1/	Catalog	:	Order your MasTec 2002 16 page catalog today.
2/	DasyLab	:	High Lite Free Demo CDs
3/	DIN Rail PSU	:	Low Cost and High Isolation 24 VDC Power Supplies
4/	TIC Imaging	:	Advanced 2D Profilers Image Inspection
5/	Conditioners	:	DAQ signal conditioning box with selectable terminals
6/	Projects	:	Programming, Integration and Consulting
7/	Training	:	LabVIEW, Lookout, Factory Floor Courses
8/	Z World	:	Now up/down load and debug Rabbit micros on internet
9/	ETCS	:	PC Scope boards and more
10/	OPTO 22	:	Ultimate I/O distributed Controllers and I/O
11/	Flite's	:	CPLD/FPGA Trainer is now available
12/	Sealevel	:	USB to 2/4 port RS-232 comms box
13/	Japan	:	New force gauges and stands for QA work
14/	DT	:	A new family of USB DAQ boxes
15/	Micronor	:	Large bore rotary encoders
16/	ICS	:	GPIB DAQ box/ Serial DAQ box
17/	NI	:	FP-2000 Field Point controller embeds LabVIEW.
18/	CEC	:	Web-DAQ a 500KHZ analog DAQ server for the internet
16/	Filters	:	Frequency devices new desktop analog filters
17/	Z World	:	Convert any serial instrument to an internet product
18/	Advantech	:	DAQ, Automation, Embedding, Network, Kiosk, Medical
19/	ADLink	:	8 slot PXI chassis with integrated 6.4: TFT display
20/	Pulnix	:	New High Res 1300*1000 high frame rate cameras
21/	NI	:	Camera-Link 1.8GHZ Image capture cards
22/	Sheldon	:	LabVIEW closed loop control DAQ boards with DSP ( up to 750KHZ)
23/	MasTec	:	Laboratory Grade Power Supplies up to 2500 watts
24/	Omega	:	I Series DPM and Controllers, Universal inputs, excitation etc
25/	MOXA	:	Industrial 10/100 Ethernet switches, redundant PSU, Class 1, Div 2
26/	Splat	:	New expansion board give 3 temperature inputs an 2 level detectors
27/	TIC Pressroom	:	Squareness Gauge for printing presses, also side lay errors
28/	ADAM	:	We just shipped our first ADAM Genetics CD for all the body people!

Projects, Consulting, Training, Virtual Instrumentation software, DAQ, GPIB, PXI, SCADA, Distributed I/O, Industrial & Embedded Computing, PC/nonPC Instruments, Automation, Process Control, Loggers, Encoders, Quality Assurance, ATE, T&M, Image Inspection, Conditioners, Comms, Cameras, Motion, Scales, Gauging, Transducers, Process Controllers, Solid State Relays, Relays, Contactors, Power Semi, AC & DC Power, UPS

## MasTec 16 Page Colour Catalog

Pleased order the new MasTec Ltd's 16 page colour catalog for 2002.

You can order by emailing [info@mastec.co.nz](mailto:info@mastec.co.nz): either a PDF version or a paper version.

The "Product type and Manufacturer boxes" below are the basic contents for the ML 2002 catalog.

### Product Type List:

#### Instrumentation & Automation

Software Training Courses

Projects, Consulting, Integration, Design Instrumentation Software

SCADA, OPC & PLCs

MS OS, Office, Compilers, Active X tools

Data Acquisition & DSP

Real Time DAQ & Control

Ethernet, RS485 & CanBus Distributed I/O

Real Time Asset Management

USB, Firewire & Printer Port I/O

Serial Comms & Serial Conversion

Ethernet to RS-232/422/485 Comms

Micros & Embedded Computers

Industrial Computers & RAID Drives

POS, Panel & Luggable PCs

Operator Interfaces & Touch Panels

Signal Conditioners & Isolators

Product clearance and specials on our web

<http://www.mastec.co.nz/clear2.html>

Encoders  
Gauges, Transducers, Sensors  
CCD Cameras, Lens, Lights  
Loggers, Recorders, Strip Charts  
PXI & Compact PCI  
VXI, VME, GPIB & GPIB Cables  
Panel Meters, Process & PID Controllers  
PC & Bench Instruments  
Imaging & Inspection Systems  
Motion & Servo & Stepper Motors  
Acoustics & Vibration  
Math Analysis & 2D-3D Graphics  
Quality Assurance & SPC  
Neural Networks & Fuzzy Logic  
**AC & DC Power**  
Solid State (SSR) & Contact Relays  
AC-DC Level Shifters & Isolators  
AC & DC Power Supplies  
UPS & AC Power Protection  
Inverters, Converters & Chargers  
Sealed & Wet Lead Acid Batteries  
**Life Science, Medical & Biological**  
Medical Grade Hardware & Software  
Life Science Research Hardware & Software  
Respiratory & Exercise Physiology  
Anatomy & Physiology Training CDs

### **Manufacturers**

ADAC, ADAM, ADI, Addison Wesley, Adlink, Advantech, Agilent, Alpha Power, Alpha Electronics, APC, APCS, Arbor, Autoplex, Aver Media, Basler, BetaControl, Blackwell Scientific, Brankamp, Bravo, CEC, Celesco, Codinor, Commtest, Computer Boards, Control, ConPro, Cotek, Dalsa, Dataforth, DataPac, Data Translation, Decision, Deltonic, Designtech, DSE, Eagle, Energizer, ETE, Eltrotec, Exide, Faro, Flite, Frequency Devices, Grass, GRI, Hamamatsu, Heart Interface, Hiber Tech, ICP DAS, ICS, Innovative, Energies, Integral, Integral, Jumo, Kintek, Kroeplin, Lighten, Lion, McGraw Hill, Mark-10, Measurement Computing, Meter Drive, Mettler Toledo, Micronor, Mitutoyo, Moxa, Mesa, MuTech, National Instruments, National Electric, Omega, OPTO 22, Panamax, Panametrics, Panasonic, PK, Power Box, Power Kinetics, Prentice Hall, Pulsotronic, Pulnix, PXIT, Quality by Vision, QIC, Quatech, Rabbit, Silicon Imaging, Silver Platter, Small World Systems, Spiracell, SPLat, Sterling Power, Technman, Technology In Co-ordination, Telebyte, TrippLite, Unimeasure, Vacumed, Versatile Technologies, VMIC, Wylam Hill, Zumbach, Z World

### **DasyLab:- Free Demo CDs**

Have you seen DasyLab, it is another Graphical programming system like LabVIEW, VEE and Softwire. It has been around for years and is supported by many manufacturers.

It is easy to use and in many cases you can be collecting data from a DAQ card, writing data to disk, doing analysis and plotting graphs in just a few minutes of wiring.

If you don't want to get involved with complexities of the other three graphical methods maybe DasyLab is for you.

This German/USA made product is compatible with many DAQ companies products including Advantech DAQ and ADAM 4000 series, National Instruments DAQ, SCXI, Measurement Computing ( Computer Boards ) and also Adlink DAQ cards and NuDam RS-485 products, Data Translation, MetraByte and Omega.

This is the best package for doing ADAM 4000 /5000 or NuDAM 6000 programming.

**Ask for your colour product brochure and a free Demo CD.**

**Low Cost DIN Rail 5 and 24 volt Power Supplies  
Also High Isolation DIN Rail 24 volt Power Supplies  
Also Panel 24 volt and 5/24 volt Power Supplies**

**Product clearance and specials on our web**  
<http://www.mastec.co.nz/clear2.html>

We have a large range of DIN Rail Signal Conditioners from Dataforth, Advantech, APCS, OMEGA and others. All use 5 volt supplies.

We have low cost DIN Rail 5 volt supplies.( 5VDC 0.5 amps \$110NZ)

Also for high isolation systems we have an excellent range from Dataforth that can provide up to 5amps at 24VDC.

We have had the Adlink 24volt 3A model NDP-243 for sometime. They also now have a new model NDP-243U which is 5/12/24 volts with current of 3/1/1 amps for those voltages. Very useful supply for developers.

### **TIC= Technology in Co-Ordination iMate 2000 and iMate 2001 and now Beta iMate 2002**

MasTec Ltd and QIC Pty (Melbourne) have just releases via TIC their development company three new image inspection tools.

These are made in NZ with our own design and programming team.

MasTec and QIC are now deeply involved in Inspection with Cameras and Scanners, with systems installed in NZ and Australia.

**iMate 2000:** A complete Lab Inspection system, Die Cast Inspection Tower with Camera and 1 to 200 zoom Lens, Lights, X-Y-Z Table, PC Capture with Measurement, File Making, Emailing, Faxing and Reports.

**iMate 2001:** A complete manual Lab or Production Line Inspection system, Scanner or Camera, PC Capture and Advanced Measurement Reports.

**iMate 2002:** An advanced 2 D Profiler automated Inspection system, Scanner or Camera, PC Capture and Very Advanced Measurement, Reports. We are just adding and beta testing thin multi-layer film measurement, pattern matching, automatic measurement off recipes and many other advanced features, such as SPC links and reports

Do you need a QA 2 D Profile measurement on products you manufacturer??

Let us know, we are at the fore front of this product development and can supply a system that will do specifically what you require.

### **Universal DAQconnect Signal conditioning/connection box with selectable terminals**

MasTec Ltd have released their new Open Architecture DAQ Conditioner/Connect boxes

Inside the **Universal DAQconnect** chassis are either Dataforth 5B series signal conditioning backplanes or Din Rails for modules.

On the front panel of the **DAQconnect** chassis are the input terminals. Select your input terminals from these types: Thermocouple, Lemo, Banana, BNC, DIN, Screw terminal, RCA, 9 Pin D Sub. The terminals may be a mixture of these also.

On the back of the **DAQconnect** chassis are the output terminals. Select your output terminals from 50 pin Ribbon, 37 Pin D Sub, DIN, Screw terminal.

Tell us your DAQ card/board system type and we will supply a cable to connect to your system or you can terminate your way.

If you don't need conditioning but you just need a termination chassis, we will can use the **Universal DAQconnect** with feed-throughs from your input cables to your output cables.

The latest addition to the DAQConnect is the new **DAQconnect-control** chassis we have just finished designing. It adds the ability to put analog output modules in the chassis as well as adding OPTO 22 digital I/O conditioners. The OPTO 22 addition makes it possible to add isolated solid state relays both AC and DC types and also isolated AC and DC level shifters.

**Product clearance and specials on our web**  
<http://www.mastec.co.nz/clear2.html>

This means a real world digital input could be a 10-280VAC or 5-200 VDC that gets level shifted down to TTL levels for the DAQ card.

If you are using multifunction DAQ cards and they have both analog and digital I/O lines the new **DAQconnect-control** will connect real world signals with isolation right into your card safely.

As a side note, if you are running timers also, the same box will condition all those 24 VDC control signals for controlling counters and timers on the same DAQ card.

Termination for the real world side of digital section is screw terminals. Outputs are via the same cable as the analog section

We can also supply 24VDC supplies for powering conditioners and loops.

## Projects and Integration

We are seeking programming projects to do. In many cases we can save you buying a software development package and build your software for you at a lower cost than the development purchase price.

If you are going to evolve the project, we can do the first cut for you and get it right from the beginning making the project stable from the outset. You then take our work and expand and grow it as required. We can also train the programmer/s who will do this and teach them successful techniques and methods.

Most of you know we do custom projects, have for years, and have built hundreds of different products for end users.

The work of Projects at MasTec Ltd has increased over the last two months.

Some examples of recent projects:

**Coffee Making Machine---Radio Packet Monitoring---Industrial Grade Strip Chart and Logger---Isolated Analog Conditioner System---Gas Turbine Vibration Monitoring---Servo Control System for Mobile Cameras---Printing Press Alignment Control and Monitoring---2D Image Profiling---Automotive Air Bag Installation System etc**

Our development tools are: LabVIEW, BridgeVIEW, Softwire, VB, C/C++, Dynamic C for Z World, LabWindows CVI and OPTO 22 Factory Floor

## Training Courses

Here is our LabVIEW training schedule for 2002 Q1,

Auckland Jan 30, 31 Feb 1

CHCH Feb 6, 7, 8

Auckland Mar 6, 7, 8

We will do courses between those dates if you require them. A group in Wellington is looking for more people and another group in CHCH also.

Let me know if you want to join [info@mastec.co.nz](mailto:info@mastec.co.nz)

### MasTec Ltd Courses:

<b>Basic I:</b>	For Beginners, start knowing nothing, end up capable.
<b>Basic II:</b>	How to plan for applications and then do it.
<b>Advanced:</b>	Advanced LabVIEW programmers, best for teams or developers.
<b>Data Acquisition:</b>	Covers all the DAQ methods in detail, ADC, DAC, DIO, Counters.
<b>Network Measurements:</b>	Remote Data Acquisition, Execution, Email
<b>Machine Vision:</b>	Capture, Display all the way to Advanced Analysis
<b>Data Logging &amp; SCADA:</b>	Large Channel Count systems SCADA

**Product clearance and specials on our web**

<http://www.mastec.co.nz/clear2.html>

<b>Signal Processing:</b>	Both Time and Frequency Domain Analysis
<b>LabWindows CVI Basic I:</b>	Create Apps, DAQ, GPIB and Instrument Drivers
<b>LabWindows CVI Basic II:</b>	Advanced Apps, Active X, TCP, Data Sockets etc
<b>TestStand:</b>	Learn to Build your own ATE systems
<b>Lookout:</b>	Learn to build SCADA rapidly
<b>Instrument Control:</b>	IVI based Instrument Control says it all!
<b>Factory Floor:</b>	Build in OPTO 22s Flow Chart programming environment

**DasyLab** Courses will be added in 2002.

Get the most of your investment in software.  
 Get the most out of your programmers.  
 Produce better products and services.  
 Start the project correctly.  
 Save money over the long haul with better designs and methods.  
 Learn to program correctly.

Email for your info pack

Enroll today [info@mastec.co.nz](mailto:info@mastec.co.nz)

It is intensive training and the results are immediate.

### **Remote Program/Debug via the Web with Rabbit/Link**

**A developer's dream come true.**

Are you a developer of micro based systems. Here is something very useful. If you connect a Rabbit/Link card between any Rabbit based Micro system (at the remote end) it will allow you to compile, run and debug your multitasking C /Assembler programs on that remote micro over a network or across the Internet.

Now that's useful.

This is a big step for gaining control of all those installations you have all over the country. No more service calls to download new code or install new chips.

This could be the beginning of a new service to leverage yourself above lesser technology.

The same card can also be used by the Remote Rabbit to send emails or send HTML web pages.

### **PC Scope boards at the Right price Logic Analysers and Arbs**

We have found a new company making supexcellant products for use in building automatic test systems or virtual test instruments in a PC.

These come bundled with DLL software.

These cards can be linked to any other software packages with DLLs.

Scopes, Arbs and Logic Analyser cards or external boxes for PCs.

<b>Scope :</b>	100MHZ or 150MHZ dual channel \$1350 NZ
<b>Arbitrary Waveform Generator :</b>	20/10MSPS dual channel
<b>Combo :</b>	100MHZ Scope/500 pico second Logic Analyser
<b>Wobbler:</b>	For measuring frequency characteristics

Software extra, scope software is \$50 NZ

### **Ultimate I/O the latest OPTO 22 Distributed System**

OPTO 22 builds Distributed I/O systems, in fact they invented most of the technology back in the 1970/80s.

**Product clearance and specials on our web**  
<http://www.mastec.co.nz/clear2.html>

Distributed I/O solves many problems in a typical plant. All those long 4-20mA loops running back to PLCs are no longer needed, the I/O modules are mounted on a backplane with a comms brain is right where the measurement points are. Data is moved around the plant on Ethernet, RS-485, Fiber or radio.

This means it is easier to manage installation and later supporting the plant.

The limitation with the older OPTO 22 distributed I/O was in the controller area. Typically a controller was used to manage all the I/O across the network. For slow processes and small I/O counts this was fine, but with modern plants requiring faster response, and huge I/O counts, another technology had to come. It has arrived.

How about this: Now each backplane has a powerful controller looking after all the TCP, Radio and comms and also all the distributed OPTO 22 I/O modules, analog, digital, power, comms etc.

Yes, this is not a Brain like the older SNAP or G4 or Classic but a fully programmable controller. Program each controller with Flow Charts just like Factory Floor and down load.

The Ultimate I/O is able to control its own I/O and also memory map across the TCP connection to other Ultimate I/O backplane and read data or control the I/O.

This new system is very powerful! A bunch of controllers distributed around a plant all talking to one another across radio or ethernet, very cool.

Develop flow chart programs and down load to each of the controllers individually to build a very powerful and complex system.

We recommend you get on the web and look at this, it is so good.

It changes the paradigm

### **Flite's new CPLD/FPGA Trainer is now available**

This is a must for Universities and Technology courses learning CPLD ( Complex Programmable Logic Devices) and FPGA ( Field Programmable Gate Arrays)

Connect the Training Box to a PC and you are ready to learn.

Software tools are the powerful set from Altera called MAX+Plus II baseline design software.

Chips are the Altera Flex EPF10K devices

Includes a host of useful tools, switches, LEDs, 7 segment displays, LCD display, keypad, A/D, D/A, 8051 micro and more.

### **USB to RS-232/422/485 converters**

Sealevel has been in the comms business since 1985.

Their new single and multiport RS-232/422/485 converter to USB boxes are just what is required to bring more comms lines into a PC or Laptop.

You do not need to open the chassis of you PC anymore, just plug the USB cable into the PC or laptop and you can have 4 Comms ports right away.

**Easy to install and use.**

Of course they also make a large range of plug in Comms boards for applications that are best that way.

Ask for your Sealevel catalog.

### **Force Gauges**

Japan Instruments have released two new Force Gauges, one analog needle display, the other LCD digital display.

These gauges are available with many different test stands for QA setups.

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<http://www.mastec.co.nz/clear2.html>

They can be used in the following tests: extension, compression, touch, insertion, withdrawal, fracture, bending, adhesion, elasticity, hardness and viscosity, pop, tension, tensibility and contact point force measurement.

### **USB DAQ**

Data Translation have a whole new family of USB connected 100KHZ 16 channel DAQ boxes with high specs with a utility to acquire and an SDK for software linkage.

This is a great way for Laptops to get DAQ, quick and easy.

If you are in a lab with multiple PCs and you want to share the same DAQ device for research, then using these new DT USB port DAQ devices is another good way to easily move things around. No more opening chassis to swap cards.

### **Micronor Large Bore Shaft Encoders etc**

Just in case you are wondering, yes, we sell loads of these Micronor encoders.

Anyone wanting to know position from rotating shafts will use them.

Micronor have also released a range of large bore hollow shaft encoders up to 42 mm.

Also the new ENI58 models have up to 36,000 increments per rev. Wow

Micronor's new encoder with free programmable limit switches makes for safe control systems. It is so easy to set the start and stop limit switches on these encoders.

Finally the new explosion proof encoders expand the Micronor family into Intrinsically safe areas.

Ask for your Micronor catalogs

### **GPIB DAQ/ Serial AQ**

ICS have released two new DAQ modules.

The Model 4867 is an IEEE-488.2 compatible, GPIB Controlled Data Acquisition and Control Module with Analog I/O, Digital I/O, Relay Drivers and Temperature measuring capability.

The 4867 has six 0 to 5 volt analog outputs and six programmable analog inputs. Its 32 heavy duty digital lines can be configured as inputs or outputs in groups of 8 lines. The 4867 also has six relay driver outputs for operating external relays and four type J thermocouple inputs for measuring temperature. The 4867 is an IEEE-488.2 device and all of its functions are controlled by SCPI commands.

The Model 2367 is a serial version of the 4867 with user selected RS-232, RS-422 and RS-485 serial interfaces. The RS-485 interface is network addressable and up to sixteen 2367's can be run on the same RS-485 network.

We can help you with GPIB interfacing and also Serial comms if you want to use these devices.

### **LabVIEW Contoller**

National Instruments have released the new Fieldpoint FP-2000 controller which allows distributed I/O Fieldpoint systems to be controlled by LabVIEW programs embedded in the FP-2000 controller not in a PC.

It is real time control and will make very stable systems.

This is a big step for systems builders. Other than the real time LabVIEW DAQ and PXI products from National Instruments, this is the first non PC based LabVIEW programmable controller.

Watch this space more is coming.

### **Web DAQ?!**

CEC has a product called WebDAQ which is exactly that. Analog inputs, 32 Channel 500KHZ ADC, connects as a web server and spits data back when required.

Has a large buffer memory (up to 128megs).

Configure over the internet and then retrieve data as required or on criteria.

Very useful to setup to monitor those devices that are hard to reach with a PC. Just plug this into an Ethernet Switch or Hub and run a cable and collect data.

### **Analog Filters**

Frequency Devices have released a new tuneable filter instrument in a box, with 12 presets between 10HZ to 50KHZ, <90dB THD, gains 0, 10, 20 dB with low and high pass 8 pole Butterworth or Bessel configurations.

### **Make Internet Ready Devices**

Z World has released **Devicemate**, a low cost development system of hardware and software that will link any serial device to the internet either through ethernet or serial comms connections.

Devicemate allows Internet users to monitor and supervise the internet enable serial device.

If you already make serial devices, then release a new model range with this Devicenet. Now all your old devices are internet devices

### **Advantech Product Range Enormous**

Advantech is becoming increasingly important in the MasTec range of products. Looking at the sales over the last three months the Advantech sales have increased by 150%.

A short note will explain why this is happening.

Advantech has 5 main business focus areas.

**Automation:** Industrial Computers, Panel PCs, Distributed DAQ, Signal Conditioners, Plug in DAQ and Control Cards, Industrial Comms, Single Board computers, Compact PCI etc

**Embedded Computing:** Embedded software, All in one Biscuit PCs, Mini Biscuit and Webcon, Half size CPU Cards, POS control cards, Solid State Disks, PC/104 modules and Panel PCs.

**Web Appliances:** Home terminals, Web Payphones, Kiosk Panel PCs, Kiosk Open Frame Panel PCs and Monitors.

**Network Computing:** IndusMission Critical Computers, Compact PCI, eServers, Raid Storage, Multiprocessor CPU boards, high slot count Industrial/e Server computers, Rack computers from 2U high and wall mount computers.

**Medical Grade:** Five Medical Grade Panel Computers.

For your next project in any of these areas, contact us with your spec we will have a solution for you and would like to help.

### **PXI Chassis with LCD display**

Adlink have released their first 8 slot PXI chassis with or without an integrated 6.4" TFT SVGA LCD display, also has a 280 watt ATX supply.

PXI is rapidly becoming the platform of choice to build ATE inside.

This product reduces the cost to enter considerably.

### **Hi Res Hi Frame rate CCD Cameras**

Pulnix have released anew camera TM-1300 1300\*1000 high frame rate camera

**Product clearance and specials on our web**

<http://www.mastec.co.nz/clear2.html>

Silicon Imaging have released several new cameras that have variable size frame and rates. It is possible with small frames to sample at 1000HZ.

Both camera types use the new Camera-Link 1.8GHZ PCI interface.

### **LabVIEW DAQ and DSP**

Sheldon Instruments make a set of boards for LabVIEW programmes who need DAQ and also DSP.

These boards transparently do any NI DSP on the boards at high rates, setting the CPU free to do more work.

If you need closed loop control, these boards can manage it at blistering rates. A simple PID can run at 750KHZ.

Pricing is very reasonable

### **Laboratory Grade Power supplies**

Give us a call on these items. We are able to supply low wattage all the way to high wattage with great specs and reasonable prices.

We supplied a 0-64 VDC 0-10 amp Lab grade unit as this is written at 75% of competing vendor pricing.

### **MOXA Industrial Ethernet Switches**

Yes, you do need Industrial grade for factories and tough environments.

Moxa have extended the temperature range 0-70 degrees C, they have redundant power supplies, they are DIN Rail mount and rugged steel case, High MTBF, auto sense 10/100 and full and half duplex, also meet Class 1 Division 2 hazardous location certs.

The MOXA Range is called N Switch and comes in 4, 8 and 16 switch modules.

### **SPlat=Replace PLCs**

If you are not up to C programming and need to do some simple control, then the Splat range is for you.

These are small controllers like Z worlds but are programmed to replaced PLCs, doing simple tasks.

Learn to program a SPlat takes usually about 30 minutes. Ask for you Splat catalog.

### **Press Squareness Gauge**

Technology in Control have released a new product called TIC Pressroom.

This device is for used in presses, (paper, foil, metal, plastic) to measure squareness of the web and also the sidelay.

The TIC Pressroom. Squareness Gauge display errors in squareness and side lay on a touch panel mounted in the press area.

### **ADAM Genetics**

For all you Bio Med, Life Science types, we have just shipped our first ADAM Genetics.

Have a look on the website [www.adam.com](http://www.adam.com) for the details.

Send us an order when you are suitably impressed.

## Directory of Manufacturers by Product Type:

If you are looking for DAQ products we are a special company, selling almost all major manufacturers.

### Alarming, Security and Surveillance

AVER	Out of the box, surveillance and security on the web.
Decision	Out of the box, surveillance and security on the web.
OPTO 22	Real Time asset monitoring and management on the web.
Pulnix	Smart cameras, movement detection and recognition

### Batteries

Panasonic 65amphr	UPS and Emergency Lighting batteries 6 -12 VDC to
Spiracells	Marine, Cranking, DeepDischarge batteries 6-12V 65amphr

### Data Acquisition

Advantech  
ADAC  
ADLink  
Computerboards=Measurement Computing  
Data Translation  
Eagle Technology  
ICP DAS  
National Instruments  
Small World Systems  
VMIC

Adlink make Advantech equivalents.

Eagle make NI plug compatibles.

Computerboards make Metrabyte equivalents.

### DC-DC Converter

Innovative	All ranges boxed or open frame, Isolated Switch mode
Lighten	24VDC to 12VDC 3 to 40 amps Switch mode
Sterling	24VDC to 12VDC 30 amps Marine Switch mode

### Distributed I/O

ADLink	NuDAM, better ADAMs
Advantech	ADAM also don't forget the 5000 ADAMs also
Computerboards	Metrabus, very fast, up to 4000 I/O
National Instruments	FieldPoint
OPTO 22	Best, Masters of Distributed I/O, huge range.

### Education Electronics

Flite	UK's leader in analog, digital and micros
Z World	Ready to run Micro kits in C

### **GPIB Manufacturers**

Computerboards	Boards
Hockey Lin	Best, GPIB Cables, we stock them.
ICS	Instruments, DAQ, DI/O
National Instruments	Boards and Drivers

### **Imaging and Cameras**

ADLink	Low cost mono and colour image capture
Data Translation	Huge range of image capture and software
Integral	Huge range of image capture, great drivers
Mutech	Huge range of image capture, great drivers
National Instruments	Huge range of image capture and software
Pulnix	Cameras, cameras, cameras

We also have cameras from various sources.  
Just ask and we should have access to that brand.  
We also have very low cost cameras.

### **Industrial Computers and Microcontrollers**

ADLink	Everything, including Compact PCI
Arbor	PC-104
Advantech	Everything, chassis, Panel, Rack etc
Computerboards	PC-104 DAQ
Computerboards	8 slot PCI chassis expansions for desktop PCs, read carefully
Designtech	Low Cost Operator ASCII Touch Panels
Dinosaur	14-20 slot PCI computers, Yes
Flite	All sorts of micros, HC11, Z80, 68000, 8086
Kintek	Touch Panel PCs and Luggables
MESA	PC-104 and Tiny PCs with built in displays
National Instruments	PXI
PXIT	PXI for Telecoms
Z World	The Microcontoller king, Rabbit and Z180 kits

### **Industrial SCADA Software for PLCs, Field Buses**

BridgeVIEW	LabVIEW for Industrial
Factory Floor	Best, Flow Chart building for OPTO 22
In-Touch 7	SCADA with Distributed I/I in ADAMs
IsaGRAF	IEC-1131-3 SoftLogic for PLC in a PC
Lookout	Guaranteed to be easiest SCADA to use, money back

### **Instrumentation Software for DAQ, Serial and GPIB**

DADiSP	
DAQ Bench	Active X builder
DASYLab	
HP VEE	Instruments and Test
HP VEE Lab	
IsaGRAF	IEC-1131-3 SoftLogic for DAQ
LabVIEW	Best, We have a special on at present save 15%
LabWindows CVI	C Code Generator
Softwire	The latest icon language that makes VB as you wire, YES

Product clearance and specials on our web

<http://www.mastec.co.nz/clear2.html>

Snap-Master  
TestPoint

**Free demos on most software.**

**Note: Softwire II won "Best in Test" software in the USA 2000. It is low cost, internet, excel and database ready, TCP, serial, GPIB and DAQ. All Active X and event driven. Like LabVIEW and it does make very good VB code as you build. We have Softwire demos and the VB Programming kits if you don't own Visual Basic. The VB kit gives you the ability to run Softwire and VB programs without making an EXE.**

**Inverters (DC-230VAC)**

Cotek (sine)	12, 24 and -48VDC to 230 VAC 50HZ 600VA and 1500VA
Lighten (QSW)	12 and 24 VDC to 230 VAC 50HZ 75VA to 1200VA
Sterling (QSW)	12 and 24 VDC to 230 VAC 50HZ 600VA, 1800VA, 2400VA

**Inverters Chargers (AC- DC-230VAC plus large charger)**

Heart (QSW)	12 and 24 VDC to 230 VAC 50HZ up to 3000VA
Sterling (QSW)	12 and 24 VDC to 230 VAC 50HZ 600, 1800, 2400VA
TrippLite	12, 24 and 36VDC to 230 VAC 50HZ 512VA to 3600VA

**Loggers**

CommTest	Filed Configurable, with LCD trend.
Computerboard IQ Series	Best, baby field loggers, PC Controlled
NI PC based Loggers	Use your Laptop.
Omega	AC power, large I/O and ruggedised
Silicon Beach	Large I/O and ruggedised

**Power Supplies**

Adlink	Panel mount 24VDC 1-3 amp supplies
Dataforth	DIN Rail mount 24VDC up to 5 amps supplies
Flite	Bench Top Supplies, multi out, meters serial-GPIB Control
Innovative Energies	Ask, almost every type, linear and switch mode
Lighten	Bench Top adjustable Supplies, multi out, meters etc
TrippLite	Bench Top Linear 13.8 VDC from 10 to 60 amps

**Serial Comms RS-232, 422 and 485:**

Dataforth	DIN Rail and Box Protocol Converters
Decision	ISA and PCI low cost boards
MOXA	ISA, PCI, PCMCIA, Ethernet Comms
Computerboards	ISA, PCI, PCMCIA
Control	Best, Rocket Port
National Instruments	ISA, PCI, PCMCIA
OPTO 22	Isolated Industrial 2/4 wire RS-485
Telebyte	Everything, Protocol Converters etc

### **Servo and Stepper Motion**

ADLink	Low cost 2, 4 and 6 axis boards with drivers for LabVIEW
Decision	Low Cost low power stepper systems.
National Instruments	Huge range of boards and software

### **Signal Conditioning:**

Computerboards	Extension boards, TC, RTD, Strain etc
Dataforth	Best, DIN Rail and 5B Back Plane Converters
Decision	Low cost, 4-20 mA output RTD and TC.
Frequency Devices	Analog Filters
National Instruments	Extension boards, TC, RTD, Strain etc
Omega	Huge range of DIN Rail
OPTO 22	BackPlane modules, ethernet, serial or parallel

### **Solid State Relays and Relays:**

Adlink	Lots of SSR and Relay accessories
Computerboards	Lots of SSR and Relay accessories
National Instruments	Lots of SSR and Relay accessories
OPTO 22	Best, They invented the things. Stocked
Omega	100amp 600 VAC High Current SSR Models
Omega	40amp 200 VDC High Current SSR Models
Omega	100amp 600 VAC Contactors and Mercury Relays

OPTO 22 goes right up to 575 VAC 45 amps.

OPTO 22 also does DC SSRs 200VDC 5 amps

OPTO 22 also make level shifter isolators, 230 VAC/VDC in 5, 15 or 24 VDC out.

OPTO 22 product modules have a life time guarantee and are isolated to 4000 VAC.

### **Surge Protector:**

Bravo	King, Data cable protectors
Panamax	King, 230 and 110 VAC power surge and line filters
Panamax	Data cable protectors
TrippLite	230 and 110 VAC power surge and line filters
TrippLite	Data cable protectors

### **Transducers**

Omega	Best, biggest range in the world
MasTec Smartworks	Industrial Quality Control sensors etc

### **UPS ( Uninterruptible Power Supplies)**

We are now able to sell Power products directly to the public, that is RRP.

Power Kinetics	Blackout Busters, 9003, 9001 and PRIII redundant UPS
TrippLite	Internet, Omni Smart, Smart UPSs

If you need a products different than in this newsletter, go to our website and have a look. [www.mastec.co.nz](http://www.mastec.co.nz)

Also

Product clearance and specials on our web

<http://www.mastec.co.nz/clear2.html>

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**We also have a huge database of Price Lists in PDF format you can ask for.**

**There are Sale items under Specials on our web for many products also.**

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**Regards**

**Rob Maskell**

**Marketing Director**