





## Your One Stop for Technology

### M2M = Machine to Machine GSM / Internet connectivity

You may not have heard of **M2M** but it is the hottest news in the teleco and instrumentation world.

To get the full story of **M2M** open these websites.  
[www.nokia.com](http://www.nokia.com)-[www.opto22.com](http://www.opto22.com)-<http://m2m.opto22.com/>

Type **M2M** in the search engines.  
Have a read, it is easy going and very interesting.

Also if you are interested, email MasTec and we will send to you a bundle of PDFs about **M2M**.



This is threshold technology, with less responsibility for better and easier services for all M2M connections.

**M2M** is going to be one of the biggest growth areas for any technology in the next 3-5 years. Nokia is saying this will be a \$100

billion new industry.

In a nutshell, it is transparent connection of machine to machine, using GSM via internet gateways.

So what is classified as a machine? Keep reading.

There is no need for any writing of middleware software, just connect the machine on the remote end ( e.g. appliance, instrument, house, car, truck, boat, factory, machine, computer etc), then at the other end any where in the GSM world, connect your other machine, usually a computer or embedded process for reading or controlling the remote end.



Thats it! --- literally that is it. They can talk, **M2M across the internet and GSM links**.

If you like, you can also send SMS via a handset to control also.

Nokia is investing in installation of GSM-Internet gateways around the world that will manage all the traffic.

NZ's Gateway is slated to come on-line Q3-Q4 2003.

Nokia has **M2M** GSM modules (above) and kits. You can buy these modules and kits via MasTec. These tiny modules have analog and digital I/O on them.

We have already developed a preliminary LabVIEW driver for the M2M Nokia model 30 module.

We plan to make drivers available to programmers in LabVIEW, Measurement Studio, VEE, Softwire, VB, C, C++, Lookout, Factory Floor etc.

We will also be offering **M2M** seminars shortly.  
We will also keep you up to date on progress.

**We stock USB - PCMCIA - PCI comms Products**  
We have 1, 2, 4 and 8 port RS\_232 systems.  
Even low profile 3.3 Volt PCI boards.

I am guessing you are wondering about a typical application?

Go to the websites and read the several papers already published, they are interesting, then use your imagination.



**Opto 22 Awards & Recognition**  
**Control Engineering 2002 Editor's Choice Award**

Selected from among several thousand entries, Opto 22 SNAP-M2M has been awarded Control Engineering's 15th annual Editor's Choice Award, honoring the most outstanding products for 2002. SNAP-M2M was one of four winners recognized in the "Embedded Control" category. The selection of SNAP-M2M marks the third year in a row and the

fourth time in five years that Control Engineering has recognized Opto 22.

MasTec will be using **OPTO 22 and Nokia's technology with other products to build custom solutions for clients.**



Opto 22/Nokia M2M system

We have already demonstrated SMS M2M in NZ.

### MasTec Technology Quick Points

**Advantech** Targets residential gateway & smart building markets with WINDOWS CE.NET 4.2 for handhelds.

**APC** Smart-UPS® 750/1000 Rack-Mount - **only 1U!**

**Loan and Trial** a Quatech ThinQ Ethernet Serial Server

**ADLINK** Introduces Industry Leading NuPRO-900 SBC Featuring Dual Intel® Low Voltage Xeon Processors, 8GB DDR, and Dual 64-bit Gigabit Ethernet



**ADLINK** Introduces its Cutting-Edge 9U Height 21-Slot 6U CompactPCI Blade Server Sub-system with PICMG 2.16 & 2.9 Compliance. This one very powerful box, that takes the above processor boards etc to

make super servers.

**ICS** has a GPIB-USB Driver that is LabVIEW compatible.

**MasTec** has a large stock of GPIB cables:- 0.5, 1, 2, 4 and 8 meters, double shielded and metal connectors.

**Welcome to Christian Moxon**  
Christian is our new Programmer at MasTec.  
He is completing in C++ a Factory Time program!??

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V i s i t o u r W e b S i t e a t