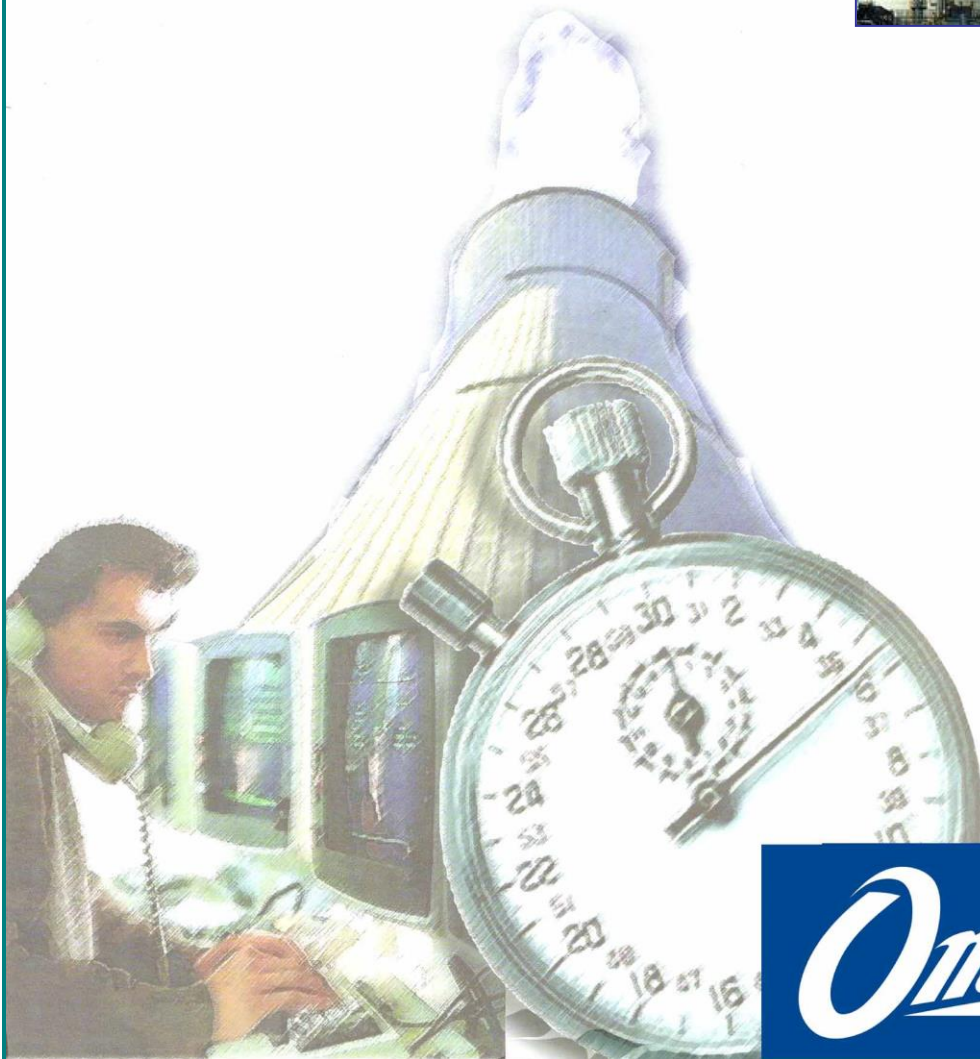
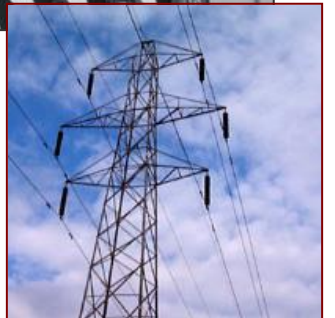
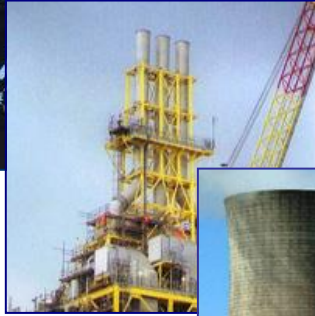


# TELETERM M3 SERIES RTU's



*Omniflex*

# OUTLINE

## Corporate Overview



**a name  
synonymous  
with quality**

**OMNIFLEX** has been designing and manufacturing electronic products and systems for the automation and control industry since 1965.

Through our world wide partner network, we specialise in providing solutions to industry in the fields of Remote I/O, RTU's, Data Acquisition, Alarm and Event Management and Signal Conditioning.

Four decades of experience in innovating products and systems such as these have resulted in a refined range of solutions for monitoring and control of industrial processes. These proven solutions are being relied upon every hour of every day by major corporations around the world.

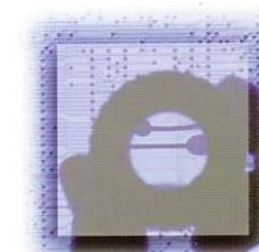
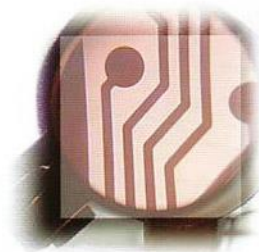
Whether it is one point or ten thousand points, there is an OMNIFLEX solution to your need. Hallmarks of these solutions are reliability, flexibility, and ease of use, which synergise to become your trusted eyes and ears, providing timely information to assist you to better manage your business.

An investment in products that carry such a large responsibility requires confidence in our track record and the continued expansion of some of the world's giant industries using OMNIFLEX technologies, is sufficient testimony to this support.

Don't ask us – ask our loyal customer base.

[www.omniflex.com](http://www.omniflex.com)

*your link to reliable solutions in Remote Data  
Acquisition and Control*



# STRATEGY

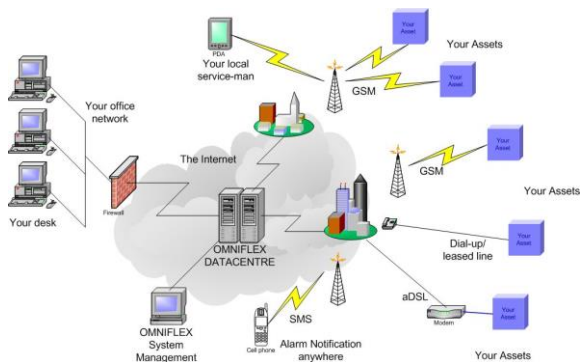
## Getting the most from your remote assets

### What is M2M?

"M2M" is the latest buzzword that encapsulates the technology of "machine-to-machine", communications. "M2M" is an enabling technology in remote sensing and asset management.

The TELETERM M3 Series is a state-of-the-art RTU system designed to enable you to communicate with a wide range of devices and machines using any of a number of networking means including licence free radio, existing plant cabling, Ethernet, the internet and mobile phone networks.

Everyone is aware of the enormous advances to efficiency and productivity that the latest communications technology and the Internet have brought to our society. Now you can harness this technology to remotely manage your assets – regardless of where they are located!



### Why Now?

These technologies are now embedded in the Teleterm M Series providing the ideal cost effective interface to your assets or processes.

Monitoring and control is now simple – regardless of the communication means you choose - and it is available now.

### TELETERM 3M Series

The TELETERM Range has been designed from the ground up as a key component in the provision of M2M solutions.

Each TELETERM RTU provides the all important link between your asset and the communications infrastructure.

This is a new breed of RTU that has the power of the Internet built in to the core, using its state-of-the-art communications capability to connect you to your assets wherever they may be.

Deploying TELETERM RTU's in your asset management application can provide benefits that can show immediate returns.

### Data2Desktop

OMNIFLEX has also created a compatible data service that brings your data directly from the Teleterm M series to your desktop. It is aptly called the Data2Desktop service and uses the power of the Internet to enable remote asset management over very wide areas at a surprisingly reasonable cost.

**Data2Desktop**  
*Everything communicates*

Ask your Omniflex representative how a Data2Desktop with Teleterm M Series solution can increase your organisation's performance.

Can you sleep easy knowing that your assets are performing to their optimum?

## FEATURES

### ❖ *Wide Range of Communications interface*

Communicate using GSM, CDMA, UMTS, SMS, GPRS, Ethernet, RS232, RS422, RS485, Dial-up, Leased Line, Licence-free FSHH radio or existing conventional plant cabling up to 10km.

### ❖ *12 Universal Inputs and Outputs*

Configure the M3 with your choice of Digital or Analogue inputs or outputs

### ❖ *Serial Port with multiple protocol support*

Use Modbus Master or Slave, or install a protocol of your choice in RS232 or RS485.

### ❖ *9-30Vdc wide operating voltage range*

Power from 12V or 24Vdc or batteries or solar.

### ❖ *SD Memory Card Slot*

Insert a Memory Card for gigabytes of long term data logging and storage.

### ❖ *Battery Backed Real-time clock*

Use the clock to schedule reporting or control functions or log data.

### ❖ *In-built Supply Voltage and ambient temperature monitor*

Monitor the ambient temperature and supply voltage for early warning of system problems.



## FUNCTIONS

### ❖ *Internet Compatible Remote Telemetry*

Built-in TCP/IP stack supporting the most popular Internet protocols.

### ❖ *Programming Language Support*

Program local control functions using the ISaGRAF IE61131 graphical programming environment

### ❖ *Log data on delta, Change-of-State or periodically*

Log Data for extended periods to memory card

### ❖ *Accumulate Meter Pulses*

Connect to Utility Meters and monitor Rates and Totals

### ❖ *Compatible with Conet OPC Servers*

Communicate directly

with your SCADA using the compatible range of Conet/OPC Servers

### ❖ *Alarm Reporting by exception*

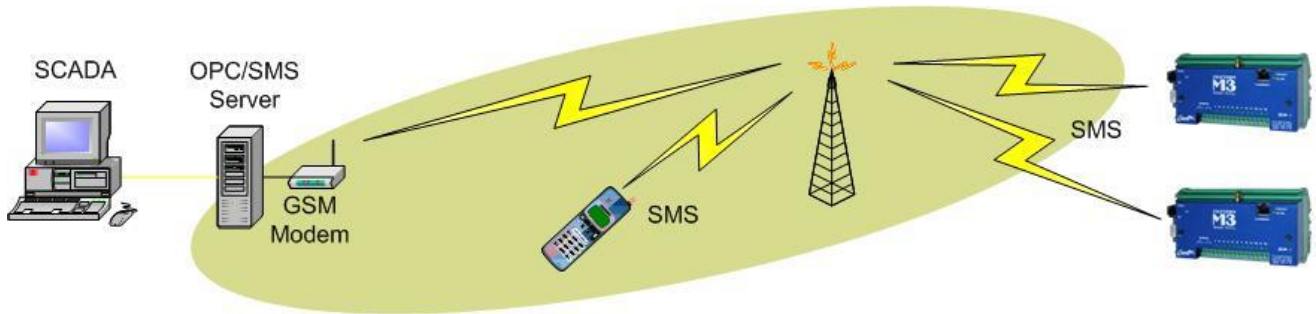
Send alarm notification on any event using the means of your choice

❖



# Methods of Wireless Communications

## SMS COMMUNICATIONS TO SERVICE PERSONNEL AND/OR SCADA SYSTEM



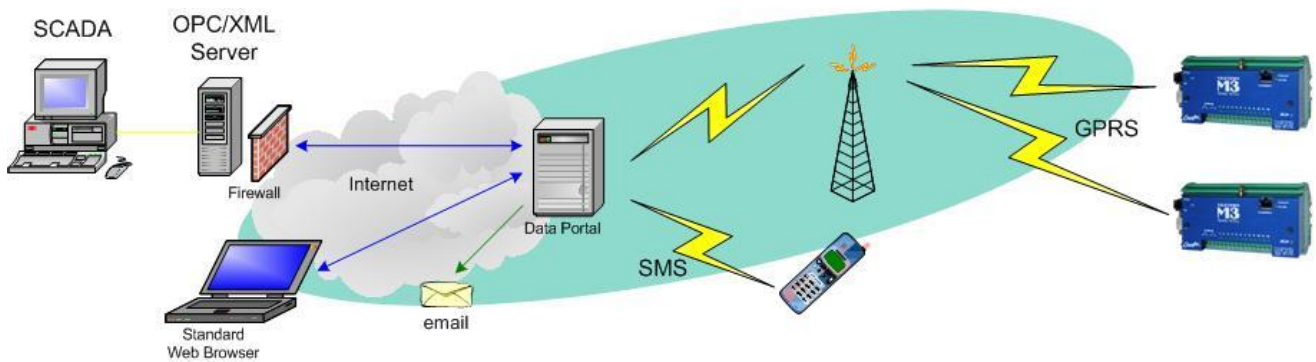
### Features

- Minimum infrastructure overhead costs
- High per SMS message cost
- SMS Messages not guaranteed, nor traceable.

### Applications

- Best for very low message incidence and non-critical alarms.

## GPRS DATA COMMUNICATIONS WITH WEB-BASED DATA MANAGEMENT



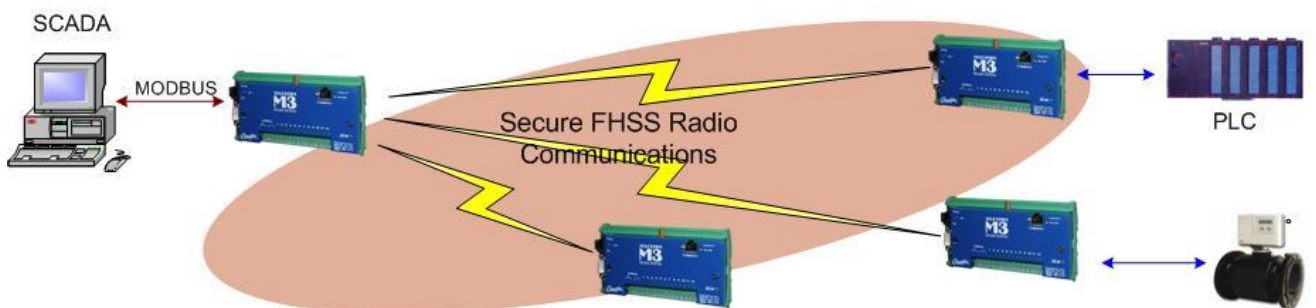
### Features

- Low infrastructure overhead costs
- Reliable low cost message transport
- Full web based message tracking and remote control.

### Applications

- Best for remote monitoring, control and alarm management reporting.

## SECURE FREQUENCY HOPPING SPREAD SPECTRUM RADIO COMMUNICATIONS UP TO 6KM



### Features

- Reliable low cost communications in high noise
- Operates in licence free frequency bands
- High data rate for fast response

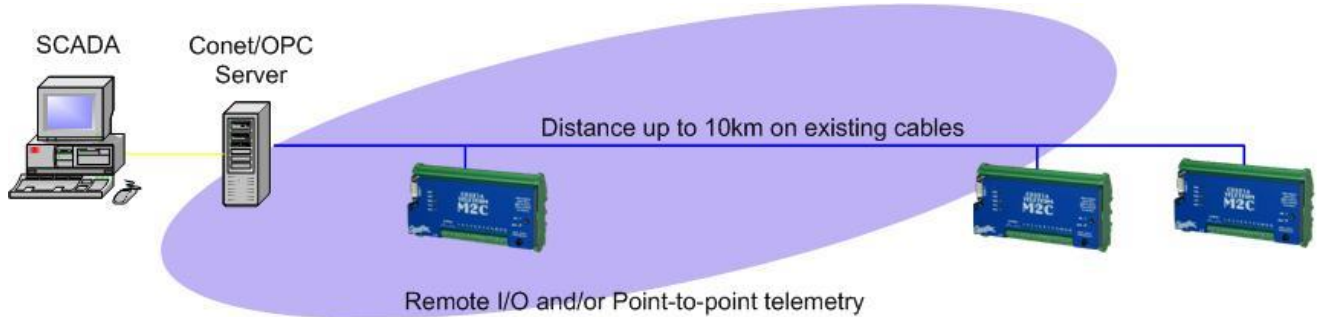
### Applications

- Best for remote I/O over short to medium distances where cable access is impossible.

# ARCHITECTURE

## Methods of Wired Communications

### REMOTE I/O OVER EXISTING CABLES UP TO 10KM



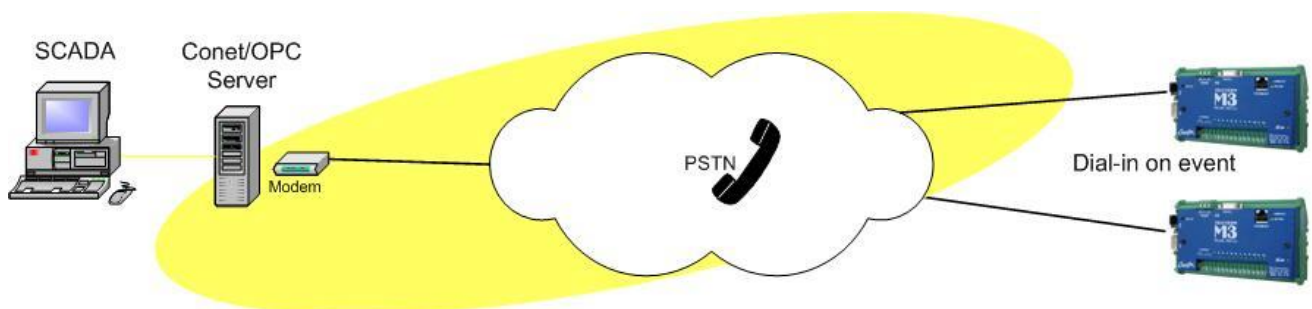
#### Features

- Uses existing plant cabling
- Up to 126 RTU's per network
- Event driven communications for fast response.

#### Applications

- Ideal for remote communications within an existing plant where the cost of laying cable is prohibitive, but some cables already exist.

### REMOTE MONITORING AND CONTROL OVER DIAL-UP TELEPHONE LINKS



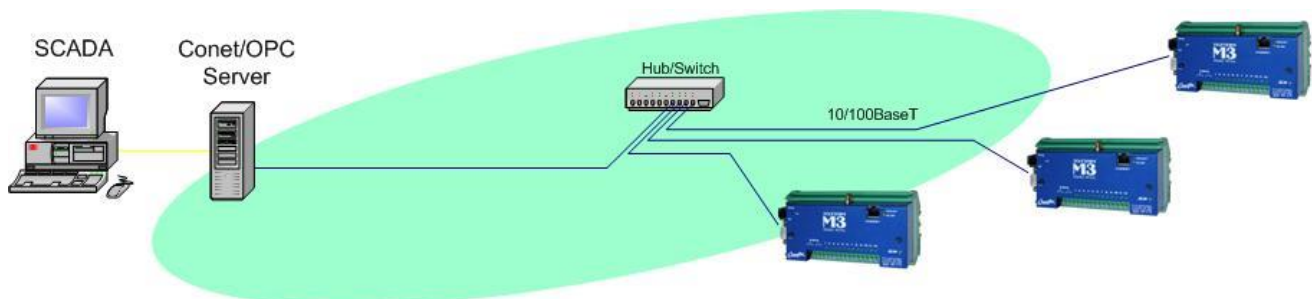
#### Features

- Interface to any modem or virtual serial link
- Event driven dial-on-demand.
- Local data logging to reduce communication costs.

#### Applications

- Ideal for RTU applications where existing PSTN lines are available, call costs are low and real-time response is not required.

### REMOTE I/O OVER ETHERNET



#### Features

- Integrated 10/100BaseT Ethernet Link
- Modbus/TCP and Conet/e protocol support
- Low cost mixed I/O direct to Ethernet

#### Applications

- Best for applications with existing Ethernet infrastructure and requirement for only a few mixed signals from each location.

# PRODUCTS

## Features Common to all Teleterm M3 variants

All Teleterm M3 RTU's are equipped with the following features:

- One Programming Port
  - One RS232/RS422/RS485 Serial Port
    - Modbus Master/Slave as standard
  - 12 Input/Outputs individually configurable as:
    - Digital Input
    - Counter Input
    - Hour Counter Input
    - Analogue Input (0-5V or 0-30V) with four configurable set points
    - Digital Output
    - Pulse Output
- See datasheet for full specifications

- SD Memory Card Slot for local logging
- Battery Backed Real-time Clock
- 9-30Vdc Power Input
- Low Power mode for Solar applications
- 10/100 Ethernet port (optional on M2 models)



Basic Teleterm M3e RTU  
with 10/100 Ethernet Port  
(Model C2360B-0)

Each of these two basic models can be ordered with these additional features:

- ISaGRAF Programmable in all five standard IEC61131-3 languages.
- Additional Serial Protocol software “plug-ins” to suit your application.
- Additional Communications port  
Select from the following list:
  - Two additional serial ports
  - GSM
  - 3G UMTS/HSDPA (Telstra NextG compatible)
  - licence-free FHSS peer-to-peer Radio
  - Conet industrial LAN (existing cables up to 10km)



Companion Power Modules

- Model C2194A PTC for AC power with battery backup
- Model C2195A PTS for Solar power with battery backup



## *Flexible Communications*

### **M3Ge with GSM/GPRS RTU**

- GSM/GPRS Network Compatible Port
- Built in Ethernet
- Internet compatible telemetry
- Event driven alarm functions
- Send/Receive SMS messages
- Compatible with the Omniflex Data2Desktop Service



### **M3Ge with 3G HSDPA+/UMTS RTU**

- HSDPA+ UMTS Port (Telstra NTT compatible - quad band)
- Built in Ethernet
- Internet compatible telemetry
- Event driven alarm functions
- Send/Receive SMS messages
- Compatible with the Omniflex Data2Desktop Service



### **M3Re FHSS RADIO RTU**

- Built in Ethernet
- Equipped with licence free radio port.
- Secure radio communications with DES encryption
- Full Peer-to-peer network communications
- Multiple Channels in the same location.



### **M3Se Serial RTU**

- Built in Ethernet
- Equipped with two additional RS232 ports (1xRS485).
- Can drive external modems, digital radios etc.
- Can run Modbus if required (Master/Slave)
- Switchable power output for powering a modem.



### **M2C Conet RTU**

- Conet/c twisted pair communications Port
- Operates over existing plant cabling up to 10km
- Selectable 62.5/7.8 kbit/second baud rate
- Subscription enabled event driven communications
- Time-stamped events at source to 10ms



# APPLICATIONS

## *The versatile solution to remote asset management*



### WATER

Reservoirs, pumping stations, remote flow monitoring, loss aggregation, water treatment, waste water, dosing systems, dam levels



### ELECTRICITY

Remote meter reading, LV distribution monitoring, demand control, load management



### BUILDING AUTOMATION

Heating, ventilation, air-conditioning, refrigeration, standby generators, computer rooms, intrusion alarms,



### AGRICULTURE

Irrigation, green houses, silo monitoring, pumping stations, bore-holes, wineries



### ENVIRONMENTAL

Emission stacks, weather stations, storm water, gas monitors



*The Total Solution*

Other solutions from OMNIFLEX include:

□ **MAXIFLEX PROCESS AUTOMATION CONTROLLERS**

A universal communications gateway, remote I/O and control solution for industrial data integration needs.



□ **OMNI16 ALARM ANNUNCIATORS**

A range of safety certified field-proven alarm annunciators for all your critical alarm needs.



□ **OMNITERM SIGNAL INTERFACE**

A wide range of signal conditioning capability in a surprisingly small range of products, providing reliable . This is the direct result of the attention paid to lowering the cost of ownership of your signal conditioning.





*Solutions by Design*