

# ME8000 - Remote Tank Level Monitoring System

## DATA SHEET

### FEATURES

- automates inventory and supply of chemical stock levels on multiple sites.
- time stamps every batch quantity, and records last 2000 operations - ideal for traceability of batches.
- remotely verifies site tank levels and status, from an office PC location and in the field via mobile phones.
- easy to setup, install and control via simple SMS messages.
- minimal extra wiring needed to monitor/control a site.
- immediate unsolicited reporting of alarms (e.g. low tank level), direct to selected personnel e.g. delivery driver, dispenser technician.
- remote control via any authorised SMS-capable mobiles.
- communication via GSM (metropolitan) or CDMA (rural) mobile networks to an office PC and/or mobile phones.
- incorporates into existing ManuFlo Admixture systems e.g. ME2000, UIC/A, ME995.
- Australian-made by Manu Electronics and E-State Automation.



ME8000 monitor/controller

The system to monitor and report chemical usage in tanks at remote sites is made up of ME8000 hardware units and "CellVisor" PC software (available from Manu Electronics) and SMS-capable mobile phones, which all communicate via GSM (generally metropolitan) or CDMA (generally rural) mobile networks.

ME8000 units at remote sites:

- are connected to flowmeters to monitor and store information on tank levels, and to issue alarms if necessary.
- have a mobile modem and antenna and do not require a wired telephone connection.
- use SMS text messaging to issue alarms to nominated recipients and to receive authorised user commands e.g. to change alarm setpoints or remotely turn on controlled outputs.
- have on-board non-volatile memory. Time-stamped events are logged for usage summary reports, and to allow later analysis of problems at the site being monitored. Up to 2000 events can be logged.
- transmit a watchdog message each day at a predetermined time to selected mobile phone(s) or to an optional PC-based central monitor.

The accompanying "CellVisor" monitoring and control software, on an office or home Personal Computer, can dial the remote sites via mobile or land modem to monitor current tank levels, and to retrieve logs, site status and alarms. The software can be run on any Windows PC with one serial (RS232) Communication port available, and provides an alarm/event report which can be printed between any selected dates for any selected site. All report data can be exported as a "flat" file suitable for importing into Microsoft Excel for generation of custom reports.

### Product Codes:

ME8000	ME8000- modem type - supply voltage - extra inputs - outputs (optional) (optional)			
	GSM or CDMA	240 or 110	116	04
	e.g. "ME8000-GSM-240" is an ME8000 monitor/controller, with GSM Modem and Antenna, 240 vac supply, 8 inputs, and no outputs.			
for PC	8K - CVSW	CellVisor PC Software, on CD.		
	8K - PCM - GSM	PC mobile modem: GSM, antenna, power pack, serial comms cable.		
	8K - PCM - CDMA	PC mobile modem: CDMA, antenna, power pack, serial comms cable.		

**ManuFlo**™ ®  
Flow Measurement Products

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**Technical/Electrical Specifications**

**ME8000**

**Power**

**on-site controller/monitor**

- External 240 vac (standard), or optional 110 vac.
- quiescent current drain is about 90mA.

**Inputs**

- 8 Digital Inputs standard (option for extra 8 inputs, for 16 inputs in total).
  - protected to +/- 36V DC
  - can count pulses up to a frequency of ~5kHz.

**Outputs (optional)**

- 4 Digital Outputs @ 100mA each

**Modem (Fitted Internally)**

Either:

- Giga 3000 CDMA Modem - generally for rural areas; or
- Wavecom GSM Modem - generally for metropolitan. The GSM Modem **requires a SIM card (not supplied)** with a voice number and a data number.
- pre-fitted to enclosure.

**Antenna**

**Enclosure**

- Rating IP56
- Access
- Flowmeter Connection
- 198mm W, 263mm H, 85mm D
- Sealed Polycarbonate enclosure with lid
- 4 stainless steel screws secure the lid
- external 10-pin plug-in/plug-out wiring connection harness.

**Operating Conditions**

- -40° C to +60° C.
- 5% to 95% non-condensing humidity.

**PC requirements**

**Drive**

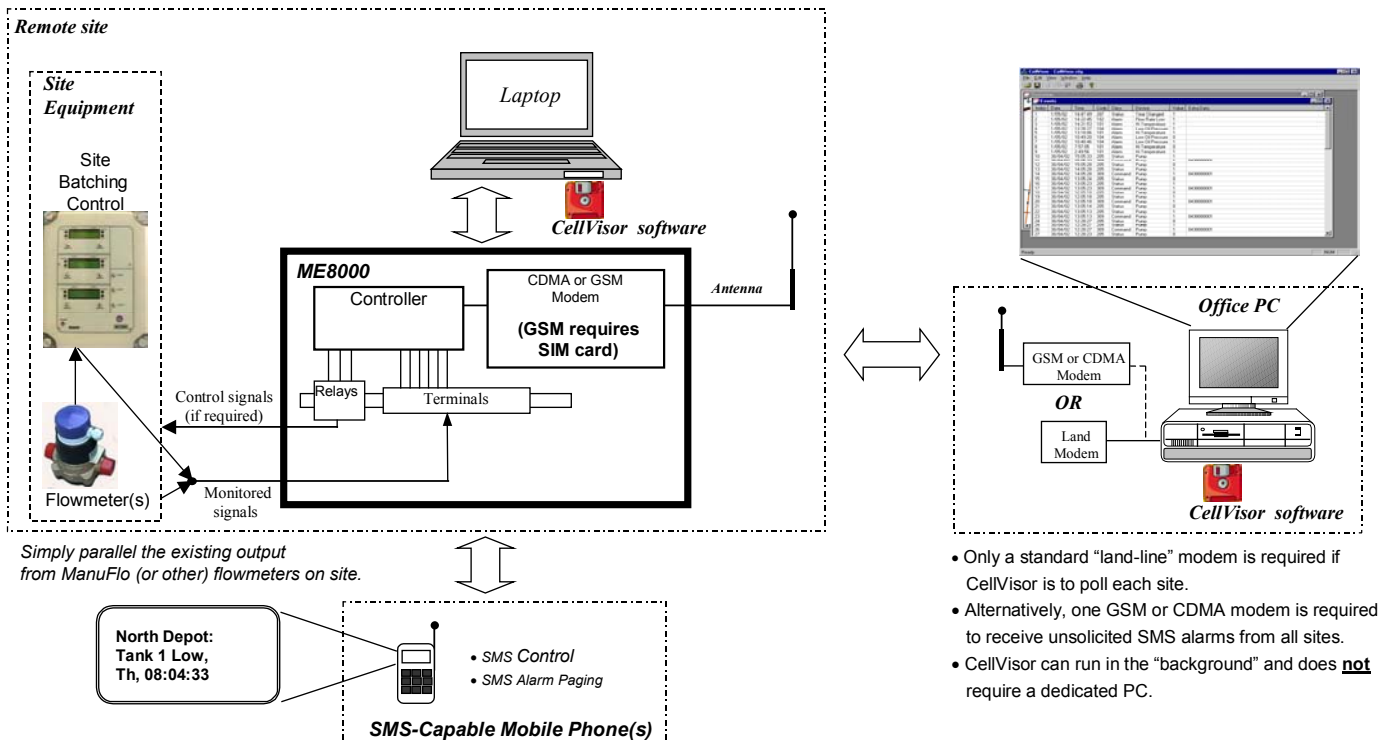
**Hard disk space**

**Operating system**

**Communications**

**for “CellVisor” software**

- CD drive required, to be able to load *CellVisor* Software
- 1.5 MB for program , plus 160K for downloaded event data from each ME8000.
- Current Windows operating systems.
- modem, either
  - land modem (requires serial communication port if external), or
  - GSM or CDMA mobile modem, and one serial (RS232) communication port for modem connection, and power point for modem power pack.



- Only a standard “land-line” modem is required if CellVisor is to poll each site.
- Alternatively, one GSM or CDMA modem is required to receive unsolicited SMS alarms from all sites.
- CellVisor can run in the “background” and does **not** require a dedicated PC.

*Due to continuous product development, specifications and design may change without notice.*