LinkTx G3

Comprehensive Remote Monitoring and Control via SMS

The Compulogic **LinkTx G3** is an SMS based remote monitoring and control unit, allowing a GSM mobile or GSM enabled computer system to remotely monitor and control systems or equipment based at remote locations. Text messages can be sent to turn equipment on or off, change system parameters and request up to date measurement and alarm information directly to a mobile phone or PC.

Applications Include:

- Equipment alarm notification
- Tele command and control
- Remote diagnostics
- Systems monitoring
- Security systems
- Flood and fire alert
- Temperature monitoring
- Generator & engine monitoring
- Radio base station M&C
- HVAC monitoring and control
- Data centre monitoring
- Environmental monitoring
- Vending management
- Asset protection
- Data collection
- Home automation

With **LinkTx G3** Emergency conditions, temperature, voltage, current and digital readings can be sent to up to 16 GSM mobile telephone numbers and 4 number groups.
The message format and the trigger conditions are fully user programmable.

Additionally, a number of digital outputs are available allowing remote control of external equipment.
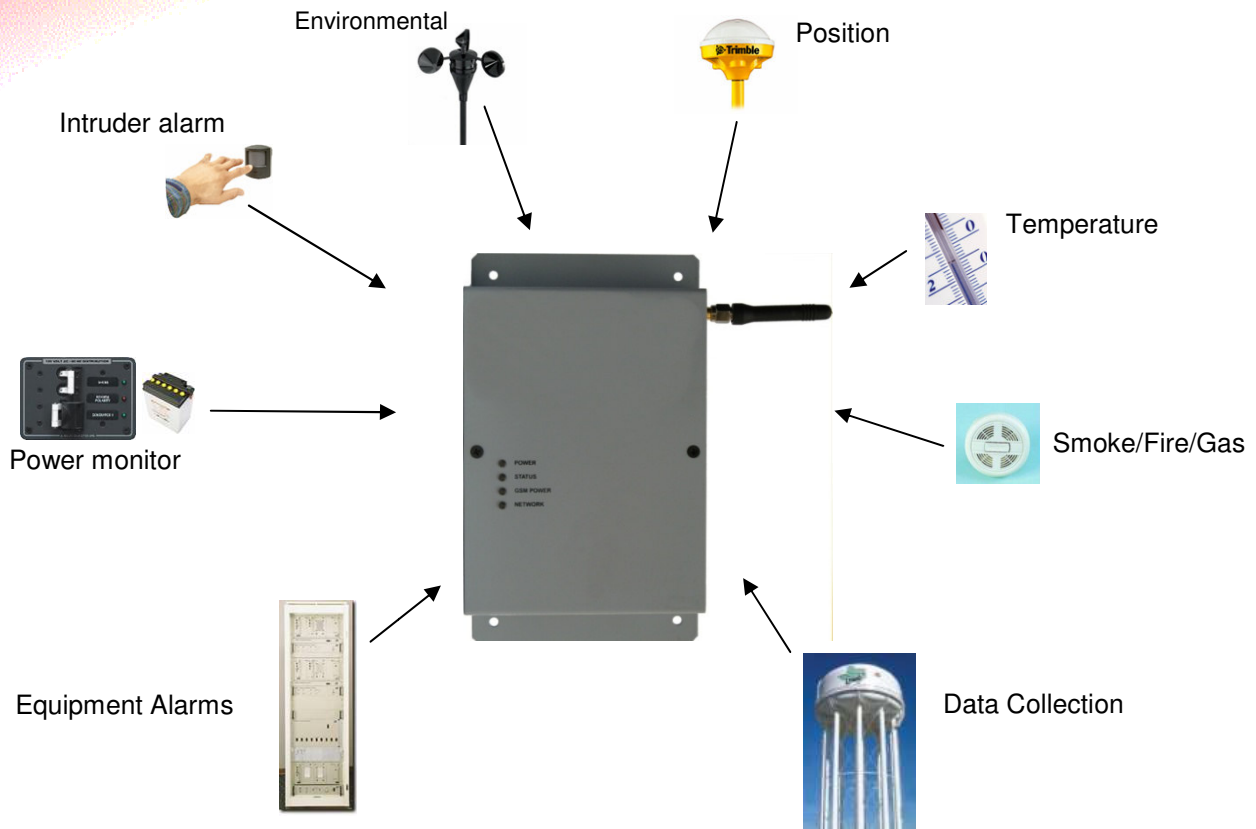
Text message commands may be sent to the LinkTx G3 unit to perform functions such as setting mobile numbers to receive alert messages, setting alert threshold values for measured temperatures, voltages, currents and digital input states.

The system is fully programmable "over the air" via SMS text messages, "dial-up" connection or locally using the serial RS232 interface.

The LinkTx G3 uses a built-in quad-band GSM cellular engine ensuring compatibility with any GSM network worldwide.

LinkTx G3

Remote Monitoring and Control via SMS

Environmental

Position

Intruder alarm

Temperature

Power monitor

Smoke/Fire/Gas

Equipment Alarms

Data Collection

The LinkTx G3 Basic Unit interface capabilities at-a-glance

- 2 x 0-60VDC analogue inputs (1 connected to supply)
- 2 x 0-300Amp DC current transducer inputs
- 2 x Temperature probe inputs
- 4 x Digital inputs
- 1 x Digital Output (change-over relay)
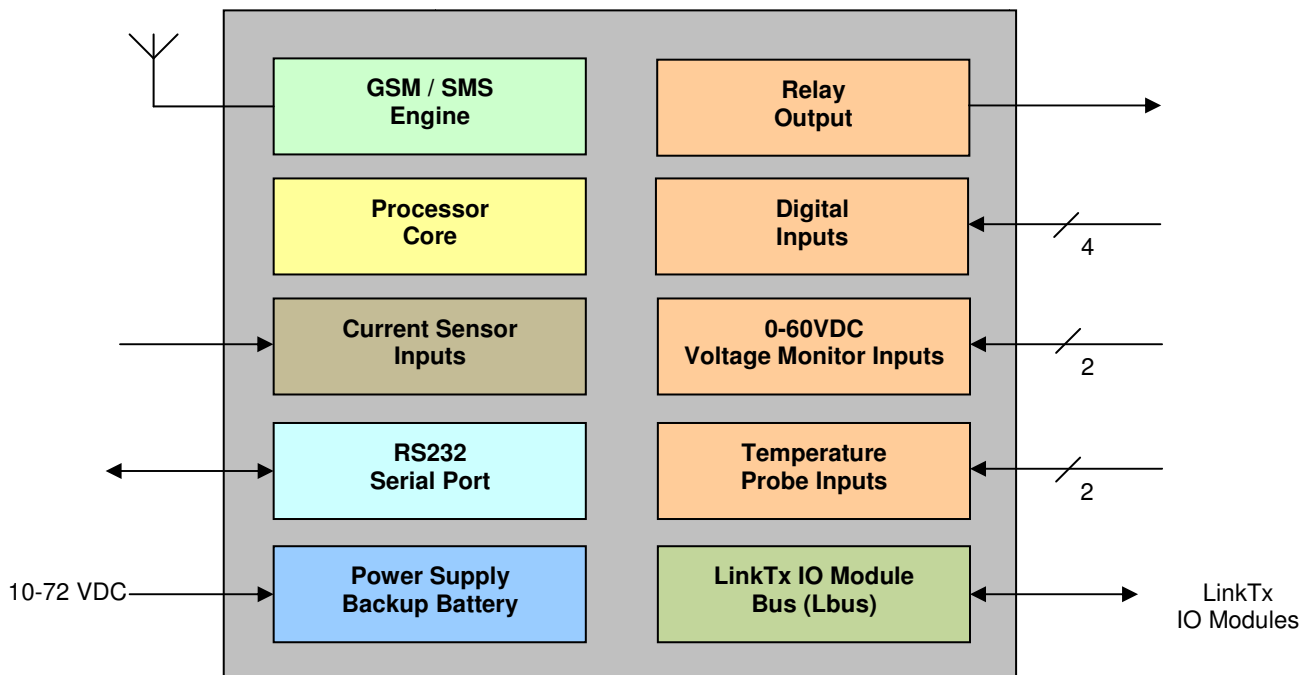- 1 x LinkTx IO module bus
- 1 x RS232 local management port

LinkTx IO Module (up to four per site)

The IO capabilities of the basic unit can be expanded by the addition of one or more LinkTx IO Modules. Each LinkTx IO module provides the following additional interfaces:

- 1 x 0-20VDC analogue input for supply monitoring
- 1 x 4-20mA input
- 8 x Digital inputs
- 4 x 10A changeover relay outputs
- 1 x RS485 serial port
- 1 x RS232 serial port

Other Features

- Quad Band GSM network compatibility
- Internal battery backup
- Wall mounted aluminium enclosure
- User programmable actions for message sending and output control
- Expandable to 36 digital inputs, 17 relay outputs, 8 analogue inputs & 8 serial ports

GSM / SMS Engine	**Relay Output**
Processor Core	**Digital Inputs** — 4
Current Sensor Inputs	**0-60VDC Voltage Monitor Inputs** — 2
RS232 Serial Port	**Temperature Probe Inputs** — 2
Power Supply Backup Battery (10-72 VDC)	**LinkTx IO Module Bus (Lbus)** — LinkTx IO Modules

LinkTx G3 Functional Block Diagram

User Programmable Actions

A powerful feature of the system is the ability to perform actions based on the value of any of the system parameters, i.e. measured values or input and output states.

A set of 36 programmable functions or "rules" are available which specify actions to be taken as a result of individual or logical combinations of input and output states and system parameter values.

Create your own local control system, e.g. temperature controller, with remote control capability and alarm and status reporting via SMS with just a few simple rule definitions.

Another simple example would be to send an SMS message if a digital input was active.

A more complex example would be to send 3 different messages to 5 different numbers & turn on an output if the measured temperature was below a certain value, digital in 2 was active and the time was between 0300 and 0400.

The LinkTx G3 rule processor offers:

- 36 user programmable "Rule" functions
- Access to all IO
- 32 user programmable messages which can contain fixed text and variable "real time" measurement values.
- 16 Programmable GSM numbers
- 4 GSM number groups

Interfaces

LinkTx G3 Unit

Digital Inputs	4 x Switch, Relay Contact or DC voltage up to 30V, threshold 2V
Relay Output	1 x Single pole change-over, 200VDC, 1A
DC Voltage Inputs	2 x 0-60VDC measurement inputs (1 connected to supply)
Temperature Probe	2 x Temperature probe inputs. Range -100 to +100oC, resolution 1°C.
Current Sensor	2 x +/- 300A current sensor inputs for use with Compulogic 300A current sensor
RS232 Serial Ports	1 x RS232 serial port used for local console connection.
Format:	9600bps, 8 data bits, 1 stop bit, no parity
IO Expansion Bus	1 x Lbus IO bus for connection to IO modules

LinkTx IO Module (up to four per system)

Digital Inputs	8 x Switch, Relay Contact or DC voltage up to 30V, threshold 2V
Relay Outputs	4 x Single pole change-over, 250VAC, 10A
4-20mA Current Loop	1 x 4-20mA current loop input with 8 bit accuracy and loop disconnection indication.
DC Voltage Inputs	1 x 0-20VDC measurement input for supply monitoring
RS232 Serial Port	1 x RS232 serial port
RS485 Serial Port	1 x RS485 serial port
IO Bus	1 x Lbus IO bus for connection to LinkTx Master Unit

Functions

Programmable Rules	36 x 160 character user programmable rules which specify actions to be taken as a result of individual or logical combinations of input and output states and system parameter values.
Messages	32 x 160 character user programmable messages. Messages can contain fixed and variable (IO values etc.) data.
Numbers	16 x programmable GSM numbers.
Number Groups	4 x programmable number groups of up to 16 numbers each.
Real-time clock	Can be used in rules to perform time related functions.
Output Timers	All outputs can be set on or off indefinitely or for a user programmed pulse time in minutes.
Minute Timers	2 x User programmable minute timers.

Mobile Networks

Band	Quad-band 850Mhz, 900Mhz, 1800Mhz or 1900Mhz
RF Power	Class 4 (2W) 900Mhz, Class 1 (1W) 1800Mhz, Class 1 (1W) 1900Mhz.
Antenna	external quad band (fitted) via SMA connector
Compatibility	Fully compatible with all GSM networks.

Electrical

Power (LinkTx G3)	8-72 VDC, 65mA average.
Power(LinkTx IO Module)	8-16VDC, 50mA average
Battery Backup	Internal 0.5 Hour battery backup

Environmental

Operating Temperature	-20 - +55oC
Storage Temperature	-40 - +85 oC
Humidity	0-95% non-condensing

Enclosure

Type	Wall mounted powder coated aluminium enclosure
Dimensions	180mm x 105mm x 27mm