Application Stories for M1000 SMS Direct
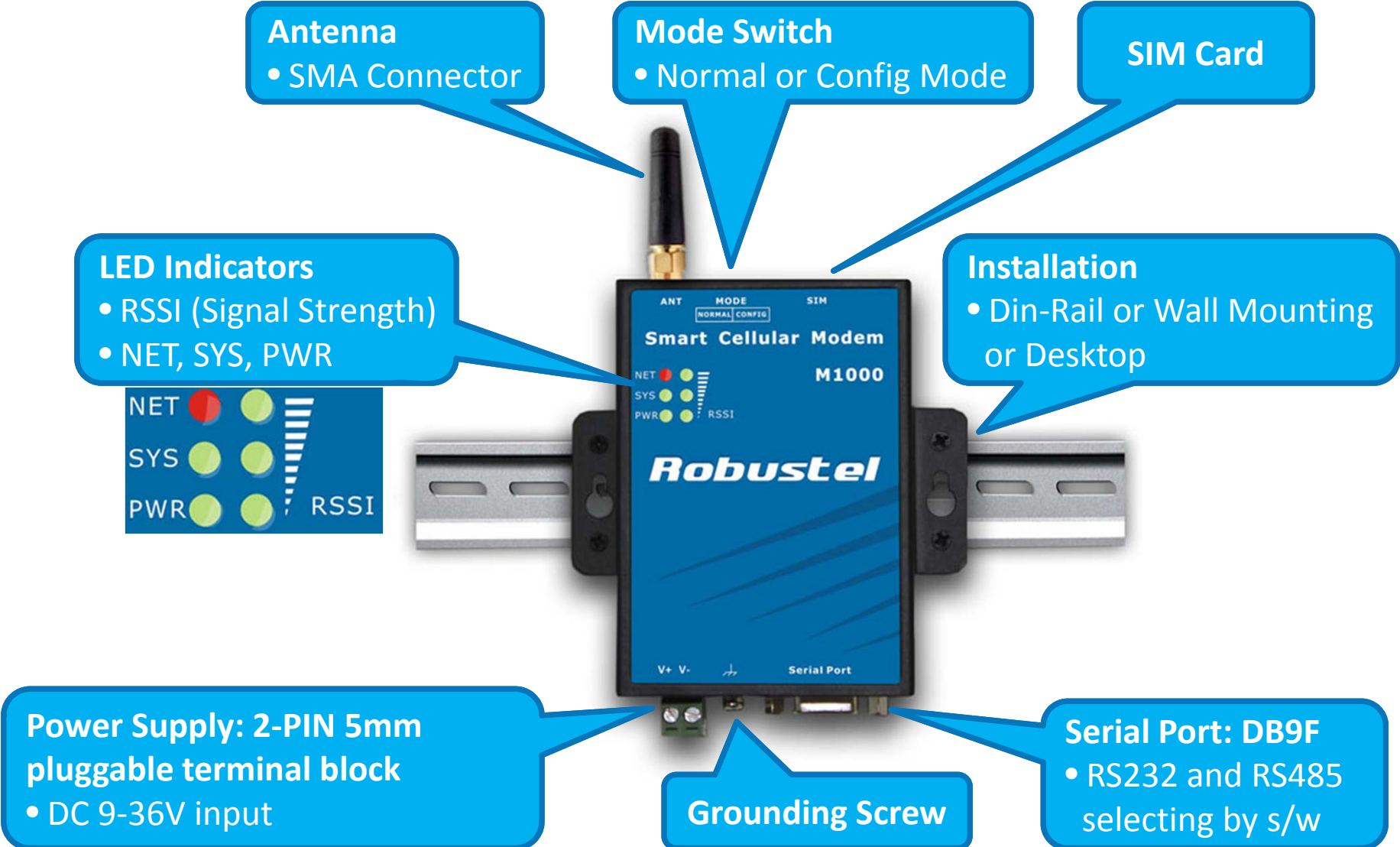
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Contents

- **M1000 Overview**

- **SMS Direct Overview**

- **Applicable Model List**

- **Application Cases**

M1000 Overview: Features and Specifications

- Rugged design with highly EMC performance

- Din-Rail mounting installation

- 3 level RSSI LED indicators

- Wide range power supply range from 9 to 36VDC

- Wide range temperature range from -25 to 70oC

- Auto Reboot to keep modem 24x7 running

  - ✓ Auto reboot at preset time of a day

  - ✓ Auto reboot via telephone call

  - ✓ Auto reboot via SMS

- Read modem status via SMS

- SMS Direct function

- Firmware upgrade via serial interface

M1000 Overview: Appearance

Antenna
• SMA Connector

Mode Switch
• Normal or Config Mode

SIM Card

LED Indicators
• RSSI (Signal Strength)
• NET, SYS, PWR

NET ● ●
SYS ● ●
PWR ● ● RSSI

Installation
• Din-Rail or Wall Mounting or Desktop

ANT   MODE   SIM
NORMAL CONFIG

Smart Cellular Modem
M1000

NET ● ●
SYS ● ●
PWR ● ● RSSI

Robustel

V+ V-   Serial Port

Power Supply: 2-PIN 5mm pluggable terminal block
• DC 9-36V input

Grounding Screw

Serial Port: DB9F
• RS232 and RS485 selecting by s/w

SMS Direct Overview

Robustel's proprietary SMS Direct has the following features:

- Transparently converts serial data to short message or vise versa without using AT Commands.

- Text, binary, and Unicode formats are supported.

- Verification of Incoming Caller ID is implemented to block uncertified users.

- The configuration profile can be easily stored, and then copied to other modems.

Possible Applications:

- Update the message on a highway LED signage display panel

- Place refill orders for vending machines

- Handle maintenance for remote rental equipment

- Create SMS alarm for legacy device

SMS Direct: Configuration GUI

| Com | Basic | SMS Direct | Advanced | Reboot | Networks | Init. String | Phon ◀ ▶ |

*SMS Direct is only availble under Config Mode
*Set phone NO.in Phone Book->SMS IN, SMS OUT

☐ Enable SMS-IN   ☐ Enable SMS-OUT

SMS-IN Data Format
- ◉ Text ASCII
  - ☐ From Mobile
- ○ Unicode (UCS2)
- ○ Binary (8 bits)

SMS-OUT Data Format
- ◉ Text ASCII
  - ☐ To Mobile
- ○ Unicode (UCS2)
- ○ Binary (8 bits)

☐ Auto Add Timestamp
(dd.mm.yy hh:mm:ss)   Max. SMS/Day [0]

Receive
[   ]   [Clear]

Send
[AT   ]   [Send]

*Note: advanced settings for SMS Direct.

Data Packing
Interval Timeout (1*100ms) [2]   (2 - 100)
Packet Length [0]   (0 - 160)
Delimiter 1 [00]   (Hex) ☐ Enable
Delimiter 2 [00]   (Hex) ☐ Enable
Delimiter Process [Do Nothing ▼]

Auto SMS
☐ Enable   at: [00:00]   *Set phone NO. in Phone Book->SMS Control
Content (Text Only) [   ]

| SMS Direct | Advanced | Reboot | Networks | Init. String | Phone Book | Debug ◀ ▶ |

Note: The Phone NO. must be written in international format, starting with "+" followed by the country code.

e.g.: +156789, in which +1 is the USA country code, 56789 is the phone No.

Item	Phone NO.	Call Reboot	SMS Reboot	SMS In	SMS Out	SMS Control
1	+86123456789	☐	☐	☑	☐	☐
2	+86987654321	☐	☐	☐	☑	☐
3		☐	☐	☐	☐	☐
4		☐	☐	☐	☐	☐
5		☐	☐	☐	☐	☐
6		☐	☐	☐	☐	☐
7		☐	☐	☐	☐	☐
8		☐	☐	☐	☐	☐
9		☐	☐	☐	☐	☐
10		☐	☐	☐	☐	☐

Applicable Model List

- M1000-SC55IA
- M1000-SC55IB
- M1000-SC52IA
- M1000-SC52IB
- M1000-SC37IA
- M1000-SC37IB
- M1000-JC65IA
- M1000-JC65IB

Please refer to M1000 datasheet for further information.

Application Cases

LED Signage

PLC Alarm Monitor

Vending Machine Monitor

Slot Machine Monitor

Gaming Machine Monitor

CNC Machine Monitor

LED Signage

Industries such as transportation or finance often use LED signage to present information, such as traffic congestion information or real-time stock quotes.

Cellular technology can allow such messaging and communication for previously untapped, hard-to-wire locations, such as on highways and on buildings.

The SMS Direct function allows users to remote update the information via our M1000 modem or mobile phone, after receiving the SMS from remote site then the M1000 connecting to the LED signage will automatically output the information from serial port with defined format, such as ASC II or Unicode. Verification of incoming Caller ID is implemented to block uncertified users.
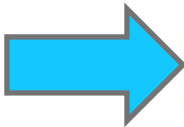
**Enabled
SMS Direct → SMS Out**
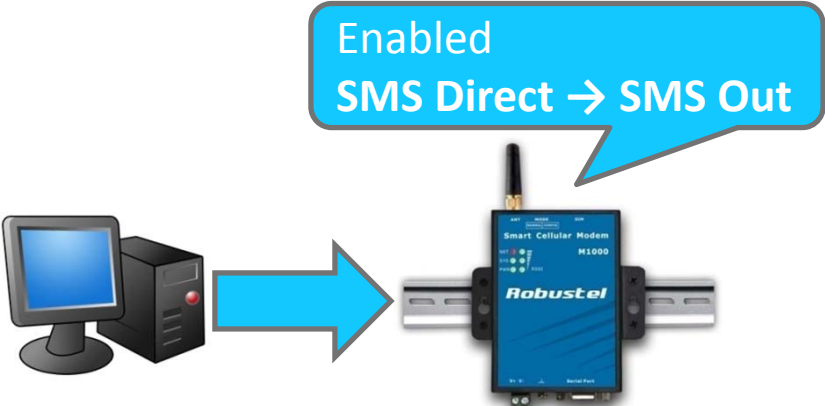
Right Lane Closed 100 m

Right Lane Closed 100 m

**Enabled
SMS Direct → SMS In**

GSM

**LED Signage
on Highway**

PLC Alarm Management

An error occurred

Enabled
SMS Direct → SMS Out

PLC

GSM

Enabled
SMS Direct → SMS In

An error occurred

Ran out of drink

An error occurred
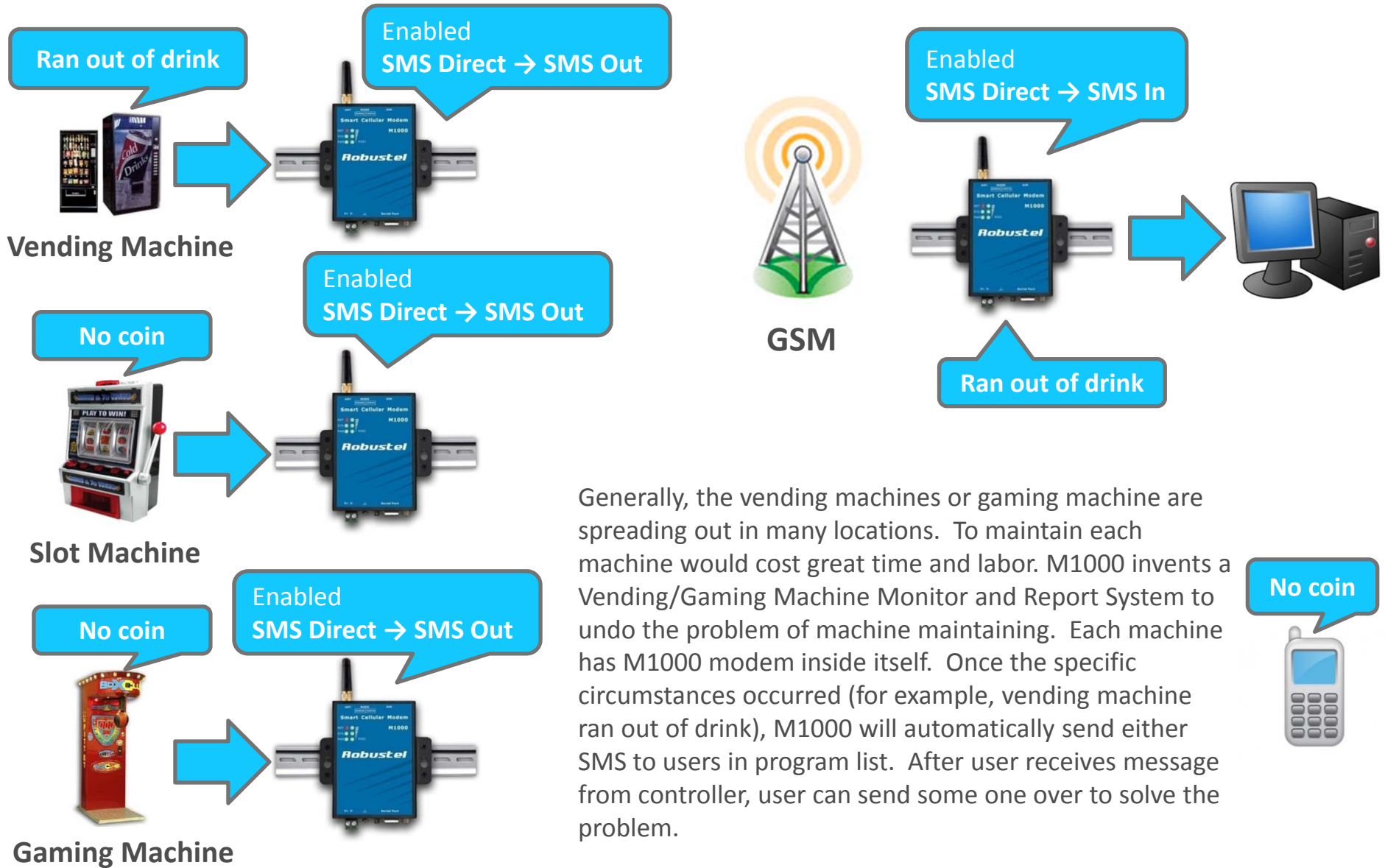
Enabled
SMS Direct → SMS Out

CNC Machine
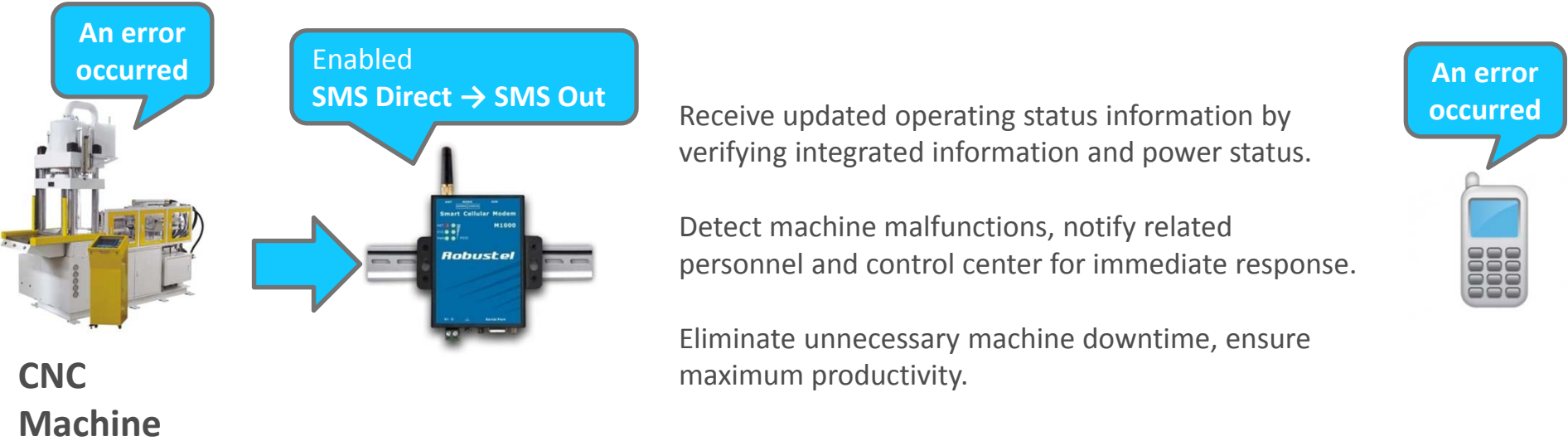
Receive updated operating status information by verifying integrated information and power status.

Detect machine malfunctions, notify related personnel and control center for immediate response.

Eliminate unnecessary machine downtime, ensure maximum productivity.

An error occurred

Vending Machine Management

Ran out of drink

Enabled SMS Direct → SMS Out

Vending Machine

Enabled SMS Direct → SMS In

GSM

Enabled SMS Direct → SMS Out

No coin

Ran out of drink

Slot Machine

Enabled SMS Direct → SMS Out

No coin

No coin

Gaming Machine

Generally, the vending machines or gaming machine are spreading out in many locations. To maintain each machine would cost great time and labor. M1000 invents a Vending/Gaming Machine Monitor and Report System to undo the problem of machine maintaining. Each machine has M1000 modem inside itself. Once the specific circumstances occurred (for example, vending machine ran out of drink), M1000 will automatically send either SMS to users in program list. After user receives message from controller, user can send some one over to solve the problem.

Thank you!

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