What is claimed is:

1. A method for monitoring a payment machine, implemented by a monitoring device, comprising:

monitoring a payment machine's interaction with a mobile terminal for collecting payment information from the mobile terminal, wherein the interaction is independent of the monitoring device;

determining a communication time interval based on a transaction time associated with the interaction between the payment machine and the mobile terminal, wherein the communication time interval is shorter than the transaction time;

obtaining current geographic position information of the payment machine and a current timestamp;

in response to determining that the payment machine is collecting payment information from the mobile terminal, sending, in a low-power-consumption communication mode and at the determined communication time interval, attribute information of the payment machine to the mobile terminal, causing the mobile terminal to send the attribute information to a server for monitoring an operation status of the payment machine, wherein the attribute information comprises:

the obtained geographic position information and the timestamp, and

a unique identification ID and an expected deployment location of the payment machine that are written in an internal memory of the monitoring device.

2. The method of claim 1, wherein the payment machine is offline.

3. The method of claim 1, wherein the attribute information of the payment machine further comprises one or more of a machine model, production date, hardware function, a firmware version, and expected scenario information of the payment machine.

4. The method of claim 1, further comprising, subsequent to obtaining current geographic position information of the payment machine and a current timestamp:

updating the attribute information of the payment machine with the obtained current geographic position information and the current timestamp.

5. The method of claim 1, wherein the sending, in a low-power-consumption communication mode, attribute information of the payment machine to the mobile terminal comprises:

sending the attribute information of the payment machine using Bluetooth, NB-IoT, or

CAT M1.

6. The method of claim 1, wherein the sending attribute information of the payment machine to the mobile terminal comprises:

sending encrypted cyphertext of the attribute information of the payment machine to the mobile terminal.

7. The method of claim 1, wherein the payment machine is within a predetermined distance from the monitoring device.

8. A method for monitoring a payment machine, comprising:

interacting, by the payment machine with a mobile terminal, to collect payment information from the mobile terminal, wherein the interaction is independent of a monitoring device;

sending, by the payment machine, the payment information to a host for processing an offline payment;

monitoring, by the monitoring device, the payment machine's interaction with the mobile terminal to obtain the payment information;

determining, by the monitoring device, a communication time interval based on a transaction time associated with the interaction between the payment machine and the mobile terminal, wherein the communication time interval is shorter than the transaction time;

obtaining, by the monitoring device, current geographic position information of the payment machine and a current timestamp;

sending, by the monitoring device, in a low-power-consumption communication mode, attribute information of the payment machine to the mobile terminal, wherein the attribute information comprises:

the obtained geographic position information and the timestamp, and

a unique identification ID and an expected deployment location of the payment machine that are written in an internal memory of the monitoring device; and

sending, by the mobile terminal, the attribute information to a server for monitoring an operation status of the payment machine.

9. The method of claim 8, wherein the attribute information of the payment machine further comprises one or more of a machine model, production date, hardware function, a firmware version, and expected scenario information of the payment machine.

10. The method of claim 8, wherein at least part of the attribute information of the payment machine is stored on the monitoring device during pre-deployment.

11. The method of claim 8, wherein the payment machine is deployed within a predetermined distance from the monitoring device.

12. The method of claim 8, further comprising, subsequent to obtaining current geographic position information of the payment machine and a current timestamp:

updating the attribute information of the payment machine with the obtained current geographic position information and the current timestamp on the monitoring device.

13. The method of claim 8, wherein the sending, by the monitoring device, in a low-power-consumption communication mode, attribute information of the payment machine to the mobile terminal comprises:

sending the attribute information of the payment machine using Bluetooth, NB-IoT, or CAT M1.

14. The method of claim 8, wherein the sending, by the monitoring device, attribute information of the payment machine to the mobile terminal comprises:

sending encrypted cyphertext of the attribute information of the payment machine to the mobile terminal.

15. A device for monitoring a payment machine, comprising one or more processors and one or more non-transitory computer-readable memories coupled to the one or more processors and configured with instructions executable by the one or more processors to perform operations comprising:

monitoring a payment machine's interaction with a mobile terminal for collecting payment information from the mobile terminal, wherein the interaction is independent of the monitoring device;

determining a communication time interval based on a transaction time associated with the interaction between the payment machine and the mobile terminal, wherein the communication time interval is shorter than the transaction time;

obtaining current geographic position information of the payment machine and a current timestamp;

in response to determining that the payment machine is collecting payment information from the mobile terminal, sending, in a low-power-consumption communication mode and at the determined communication time interval, attribute information of the payment machine to the mobile terminal, causing the mobile terminal to send the attribute information to a server for monitoring an operation status of the payment machine, wherein the attribute information comprises:

the obtained geographic position information and the timestamp, and

a unique identification ID and an expected deployment location of the payment machine that are written in an internal memory of the monitoring device.

16. The device of claim 15, wherein the attribute information of the payment machine further comprises one or more of a machine model, production date, hardware function, a firmware version, and expected scenario information of the payment machine.

17. The device of claim 15, wherein the operations further comprise, subsequent to obtaining current geographic position information of the payment machine and a current timestamp:

updating the attribute information of the payment machine with the obtained current geographic position information and the current timestamp.

18. The device of claim 15, wherein the sending, in a low-power-consumption communication mode, attribute information of the payment machine to the mobile terminal comprises:

sending the attribute information of the payment machine using Bluetooth, NB-IoT, or CAT M1.

19. The device of claim 15, wherein the sending attribute information of the payment machine to the mobile terminal comprises:

sending encrypted cyphertext of the attribute information of the payment machine to the mobile terminal.

20. The device of claim 15, wherein the payment machine is within a predetermined distance from the monitoring device.