Bluetooth Protocol for the ADT680A, ADT680P, and ADT601Ex

1. Connection procedures

1.1 Search for devices

Search for peripheral Bluetooth devices through service UUID and broadcast packets, and initiate a connection after finding them.
The Bluetooth connection interfaces of mobile phones and computers may not be able to display these gauges because they will block Bluetooth devices that are useless to them, so please use professional Bluetooth software to search.

1.2 Get notification and write characteristic value

After the connection is successful, get the notification and write characteristic value based on the service UUID and characteristic value UUID, and open the notification immediately.

1.3 Send handshake command to gauge

For the ADT680A, ADT680AEx, ADT680P, ADT680PEx and ADT601Ex, after the connection is established, the Bluetooth client should send handshake command “SYSTem:BLE:HANDshake” to the gauge, with terminator "\r\n". If the Bluetooth client fails to send handshake command within 30 seconds, the communication will be disconnected.

1.4 Communication

After the handshake connection established, use notification and write characteristics to receive and send SCPI commands from the device.

2. Protocol

Please refer to the programming command documents of the units.

Appendix 1: Broadcast packet data format

(1) FLAG

Length	Type	Content

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1 Byte	0x01	0X06

(2) Device name

Length	Type	Content
1 Byte	0x09	0~11 Bytes

(3) Manufacturer-defined data

Length	Type	VID	Product code	MAC	Flag bit
1 Byte	0xFF	2 Bytes	4 Bytes	6 Bytes	1 Byte

When the highest bit of the flag is 1, authentication is enabled; and when the highest bit is 0, authentication is not enabled.

Appendix 5: UUID definition

Device	Communication Service UUID	Notification Characteristic UUID	Write Characteristic UUID
DPG	0000FFE1-0000-1000-8000-00805F9B34FB	00002AE2-0000-1000-8000-00805F9B34FB	00002AE1-0000-1000-8000-00805F9B34FB

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