Miele@home Gateway XGW 2000 / From Gateway Release Version 2.4

Homebus interface V 1.0

Contents

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1. Homebus interface

Using the Homebus interface, the Miele@home Gateway XGW 2000 offers a simple mechanism to communicate with units connected via the Miele@home powerline system to the Gateway.

1.1 What does the Homebus interface offer?

The following information is made available via the Miele@home Homebus interface:

- Machine identification
- Machine status

Depending on the state of the unit and model, actions such as the following can be carried out:

- Stop
- Start
- Switching on light (cooker hoods, wine storage units, coffee makers). The following table gives a summary of the possibilities for different models.

Product group	Status	Time left	Instructions / Fault	Start	Stop
Washing machines	X	X	X	X	X
Tumble dryers	X	X	X	X	X
Dishwashers	X	X	X	X	X
Wall ovens	X	X	X	-	X
Compact ovens with integrated microwave	X	X	X	-	X
Steam cookers	X	X	X	-	X
Combination steam cookers	X	X	X	-	X
Hob units	X	X	X	-	X
Cooker hoods	X	-	X	X	X
Coffee makers	X	-	X	-	X
Refrigeration units	X	-	X	X	-

1.2 Which units can be used?

The Miele@home Homebus interface supports all Miele@home-enabled units. The range of available functions may vary depending on model.

2. Homebus interface structure

The Homebus interface is provided by the Miele@home gateway web server in XML form.

The interface can be checked by a simple http-request to the gateway.
The URL is <IP-Adresse_des_Gatways>/homebus/ .

The interface is structured such that the entire communication is via http requests. All required parameters are available in the XML structure so that no manual parameter setting is necessary.

Details of the structure are given in the following sections.

2.1 Model summary

The model summary shows all machines connected to the gateway. The model summary provides all information required to create a summary page.

Querying a gateway with IP address 192.168.1.201:

```
http://192.168.1.201/homebus/
```

gives the following result:

```
<DEVICES>
  <device>
    <class>22017</class>
    <UID>6</UID>
    <type>G 1833 SCi </type>
    <name>Geschirrspüler</name>
    <state>3</state>
    <additionalName>GA Küche <additionalName/>
    <room id="11" level="1">Küche</room>
    <information>
      <key name="Gerätestatus" value="Programm gewählt"/>
      <key name="Restzeit" value="2:12h"/>
    </information>
    <actions>
      <action
name="Details"URL="http://192.168.1.201/homebus/device?language
=de_DE&type=DW_G1000&id=DW_G1000.6"/>
    </actions>
  </device>
  <device>
    ...
  </device>
</DEVICES>
```

2.1.1 Model summary tags

<DEVICES>
Covers the list of all units registered to the gateway.

<device>
Covers a single unit.
<class>
The unit classification code in accordance with the following list.

22017	Dishwasher
22018	Tumble dryer
22019	Washing machine
24067	Hob (highlight)
24068	Cooker hood
24070	Wall oven
24072	Oven
24072	Steam cooker
24073	Hob (induction)
24074	Coffee maker
26113	Fridge/freezer combination
26114	Freezer
26115	Refrigerator
26116	Wine storage unit

<UID>
UniqueIDentifier, the explicit value to identify a unit within the unit summary. It is different for every connected unit.

<type>
Gives the model details, here G 1833 SCi.

<name>
The generic name of the connected unit, here a dishwasher (Geschirrspüler). See also <additional name>.
<state>
The current state of the unit. Coded in accordance with the following table.

1	Off
2	Ready
3	Programmed
4	Waiting for start
5	In operation
6	Pause
7	End
8	Fault
9	Programme interrupted
12	Service
13	SuperFrost

14	SuperCooling
144	Default
145	Locked

<additional name >
Additional name for the unit in question. Data is entered via the gateway.

<room>
By entering a room name, a room ID and a floor ID, the precise location of a unit can be given. Data is entered via the gateway.

<information>
Covers a list of name/value keys that show the current state of the unit. With this, "name" gives the name of the information and "value" its value.

<actions>
Covers a list of possible actions which can be carried out at that point in time.

<action>
An action that can be carried out. The name of the action is given by "name", "URL" gives the addresses and all parameters that must be called up in order to carry out the appropriate action.

2.1.2 Model summary DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT DEVICES (device+)>
<!ELEMENT device (class, UID, type, name, state, additionalName?, room?,
information, actions)>
<!ELEMENT class (#PCDATA)>
<!ELEMENT UID (#PCDATA)>
<!ELEMENT type (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT state (#PCDATA)>
<!ELEMENT additionalName EMPTY>
<!ELEMENT room (#PCDATA)>
<!ATTLIST room
    id CDATA #REQUIRED
    level CDATA #REQUIRED
>
<!ELEMENT information (key+)>
<!ELEMENT key EMPTY>
<!ATTLIST key
    name CDATA #REQUIRED
    value CDATA #REQUIRED
>
<!ELEMENT actions (action)>
<!ELEMENT action EMPTY>
<!ATTLIST action
    name CDATA #REQUIRED
    URL CDATA #REQUIRED
>
```

2.2 Model details

The model details give detailed information about the selected unit.

A query of the gateway given as an example at 2.1 (see <action>):

```
http://192.168.1.201/homebus/device?language=de_DE&type=DW_G100
0&id=DW_G1000.6
```

gives the following result:

```
<device>
  <information>
    <key name="Gerät" value="Geschirrspüler"/>
    <key name="Gerätestatus" value="Programm gewählt"/>
    <key name="Restzeit" value="0:12h"/>
    <key name="Programm" value="Stark 65°C"/>
  </information>
  <actions>
    <action name="Start"
URL="http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1
000.6&action=start"/>
  </actions>
</device>
```

2.2.1 Model details tags

<device>
Covers a single unit.

<information>
Covers a list of name/value keys that show the current state of the unit. With this, "name" gives the name of the information and "value" its value.

<actions>
Covers a list of possible actions which can be carried out at that point in time.

<action>
An action that can be carried out. The name of the action is given by "name", "URL" gives the addresses and all parameters that must be called up in order to carry out the appropriate action.

2.2.2 Model details DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT device (information, actions)>
<!ELEMENT information (key+)>
<!ELEMENT key EMPTY>
<!ATTLIST key
    name CDATA #REQUIRED
    value CDATA #REQUIRED
>
<!ELEMENT action EMPTY>
<!ATTLIST action
    name CDATA #REQUIRED
    URL CDATA #REQUIRED
>
<!ELEMENT actions (action)>
```

2.3. Action confirmation

Actions are confirmed by the gateway. Here differentiation is made between a positive confirmation and various negative confirmations with fault indications.

2.3.1 Action ok

```
<ok>
  <action>start</action>
  <cu-type>DW_G1000</cu-type>
  <cu-id>DW_G1000.6</cu-id>
</ok>
```

2.3.2 Action ok tags

<ok>
Covers positive confirmation.

<cu-type>
Shows which unit classification has sent the confirmation.

<cu-id>
Shows the model and UID.

2.3.4 Action ok DTD

```
<!ELEMENT ok (action, cu-type, cu-id)>
<!ELEMENT action (#PCDATA)>
<!ELEMENT cu-type (#PCDATA)>
<!ELEMENT cu-id (#PCDATA)>
```

2.3.5 Action fault

```
<error>
  <error-type>action_execute</error-type>
  <cu-type>DW_G1000</cu-type>
  <cu-id>DW_G1000.6</cu-id>
  <action-id>start</action-id>
  <message>
    Fehler: start Aktion kann derzeit nicht ausgeführt werden
  </message>
</error>
```

2.3.6 Action fault tags

<error>
Covers the fault message.

<cu-type>
Shows which unit classification has sent the fault indication.

<cu-id>
Shows the model and UID.

<action-id>
Shows details of the action that has not been carried out.

<message>
Fault indication in clear text.

2.3.7 Action fault DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT error (error-type, cu-type, cu-id, action-id?,
message)>
<!ELEMENT error-type (#PCDATA)>
<!ELEMENT cu-type (#PCDATA)>
<!ELEMENT cu-id (#PCDATA)>
<!ELEMENT action-id (#PCDATA)>
<!ELEMENT message (#PCDATA)>
```

2.4 Local languages

The Homebus interface supports the languages available on the gateway (German and English – Version July 2009). The language is set via the parameter query <language=xx_XX>.

2.4.1 Examples

A query without the <language> parameter
`http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1000.6`

gives the following result with the set gateway language:

```
<device>
  <information>
    <key name="Gerät" value="Geschirrspüler"/>
    <key name="Gerätestatus" value="In Betrieb"/>
    <key name="Restzeit" value="1:12h"/>
    <key name="Programm" value="Stark 65°C"/>
    <key name="Phase" value="Vorspülen"/>
  </information>
  <actions>
    <action name="Stop"
URL="http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1
000.6&action=stop"/>
  </actions>
</device>
```

A query with the parameter <language=en_EN>

```
http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1000.6
&language=en_EN
```

gives the following result:

```
<device>
  <information>
    <key name="Appliance Type" value="Dishwasher"/>
    <key name="State" value="Running"/>
    <key name="Remaining Time" value="1:12h"/>
    <key name="Program" value="Intensive 65°C"/>
    <key name="Phase" value="Pre-Wash"/>
  </information>
  <actions>
    <action name="Stop"
URL="http://localhost:80/homebus/device?type=DW_G1000&id=DW_G10
00.6&action=stop"/>
  </actions>
</device>
```

A query with the parameter <language=fr_FR> for a currently unavailable language

```
http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1000.6
&language=fr_FR
```

gives the following result with the set gateway language:

```
<device>
  <information>
    <key name="Gerät" value="Geschirrspüler"/>
    <key name="Gerätestatus" value="In Betrieb"/>
    <key name="Restzeit" value="1:12h"/>
    <key name="Programm" value="Stark 65°C"/>
    <key name="Phase" value="Vorspülen"/>
  </information>
  <actions>
    <action name="Stop"
URL="http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1
000.6&action=stop"/>
  </actions>
</device>
```

2.5 Multicast reporting

With multicast reporting, whenever there is a change of state at a unit, a message is sent to the multicast address 239.255.68.139. A listener at this address can then simply determine when the gateway must be polled again. This means that regular gateway polling can be avoided.

2.5.1 Multicast message

The multicast message has the following structure:

```
Package received from /<IP-Adresse_des_Gateways>: <cu-
type>&<cu-id>&<svar>
```

2.5.2 Multicast message structure

<IP-Adresse>
Gateway IP address.

<cu-type>
Shows which unit classification has sent the message.

<cu-id>
Shows the model and UID.

<svar>
Internal variable for later use.

2.5.3 Multicast message example

The multicast message for a unit has the following structure:

```
Package received from /192.168.1.201:
type=DW_G1000&id=DW_G1000.6&svar=deviceState&value=5
```

A subsequent query of the Homebus interface

```
http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1000.6
```

gives the following result:

```
<device>
  <information>
    <key name="Gerät" value="Geschirrspüler"/>
    <key name="Gerätestatus" value="In Betrieb"/>
    <key name="Restzeit" value="0:12h"/>
    <key name="Programm" value="Stark 65°C"/>
    <key name="Phase" value="Vorspülen"/>
  </information>
  <actions>
    <action name="Stop"
URL="http://192.168.1.201/homebus/device?type=DW_G1000&id=DW_G1
000.6&action=stop"/>
  </actions>
</device>
```