Regulation 801/2013
Standby & Off-Mode
Network Standby

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Definitions - 1275/2008 aka Lot 6

**Off-mode** can be achieved via a **hard off switch** or via a **soft button**.

- “condition in which the equipment is **connected to the mains power source** and is not providing any function;

**Standby** in Lot6 is a **deep sleep mode**

- “condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and **provides only the following functions**, which may persist for an indefinite time:
  - **reactivation function**, or reactivation function and only an indication of enabled reactivation function, and/or
  - **information or status display**.
Scope - 1275/2008 aka Lot 6

Telecom products intended for domestic environment ( = intended to meet Class B (EN55022) emission limits for EMC)

1. "electrical and electronic household and office equipment (hereafter "equipment"), means any energy using product which
(a) is made commercially available as a single functional unit and
is intended for the end-user,
(b) falls under the list of energy using products of Annex I,
(c) is dependent on energy input from the mains power source in order to work as intended, and
(d) is designed for use with a nominal voltage rating of 250V or below, also when marketed for non-household or non-office use;

- Exemption: products with a low voltage external power supply:
  - output voltage < 6 V
  - output current > 550 mA
## Requirements - 1275/2008 aka Lot 6

<table>
<thead>
<tr>
<th>Mode</th>
<th>Tier 1 7 Jan 2010</th>
<th>Tier 2 7 Jan 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-mode</td>
<td>1 W unless inappropriate</td>
<td>0.5W unless inappropriate</td>
</tr>
<tr>
<td>Standby without display</td>
<td>1 W unless inappropriate</td>
<td>0.5W unless inappropriate</td>
</tr>
<tr>
<td>Standby with display</td>
<td>2 W unless inappropriate</td>
<td>1 W unless inappropriate</td>
</tr>
<tr>
<td>Power Management</td>
<td>N/A</td>
<td>shall automatically switch into Standby or Off-mode unless inappropriate</td>
</tr>
</tbody>
</table>
General - 801/2013 aka Lot 26

- **Amendment** to the standby regulation 1275/2008
- Scope of 801/2013 remains the same
- Extra requirements for networked products
- Networked products need to have power management into a network standby mode, with target limits
- Drawback of horizontal regulation:
  only least efficient product categories can be the benchmark for the limit
- Some products will already have a specific regulation
  e.g. Computers, TVs
Definitions - 801/2013 aka Lot 26

- ‘Network port’ means a wired/wireless interface of the network connection at the equipment through which the equipment can be remotely activated.

- ‘Networked Equipment’ means equipment that has the ability to be connected to a network and has one or more network ports.

- 3 classes of products:
  1. **HiNA**: equipment with router, switch, wireless access point, VoIP phone, Video phone as main function
  2. **Equipment with HiNA functionality**: eq. that includes a router, switch, WAP as side function
  3. **LoNA**: all the rest of networked equipment

 Need to declare in test report which interfaces are network ports, need to declare if product is HiNA or eq. with HiNA functions.
Does device have port(s)?

- **No**
  - **HiNA Equipm?**
    - **Yes**
      - Is a reactivation mechanism by a NW remote trigger available for this type of port?
        - **Yes**
          - Is the device implementing on this port a reactivation mechanism by a NW remote trigger?
            - **Yes**
              - Will this port be declared in technical doc as network port?
                - **Yes**
                  - Device is a "networked equipment"
                - **No**
                  - **More port(s) to be assessed?**
                    - **Yes**
                      - **Select a non-assessed port**
          - **No**
            - Select one port
    - **No**
      - **Select one port**
- **Yes**
  - Device is not a "networked equipment"
Requirements

- When networked equipment is **not providing its main functions** and when other energy-using product(s) are not dependent on its functions, equipment shall, unless inappropriate for the intended use, **offer a power management function**, or a similar function, that switches equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically **into a mode having networked standby**.

- Some products are exempted from the targets

Within 20 minutes

<table>
<thead>
<tr>
<th></th>
<th>Tier 1 (1-Jan-2015)</th>
<th>Tier 2 (1-Jan-2017)</th>
<th>Tier 3 (1-Jan-2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HiNA</td>
<td>12 W</td>
<td>8 W</td>
<td>8 W</td>
</tr>
<tr>
<td>Eq. with HiNA</td>
<td>12 W</td>
<td>8 W</td>
<td>8 W</td>
</tr>
<tr>
<td>LoNA</td>
<td>6 W</td>
<td>3 W</td>
<td>2 W</td>
</tr>
</tbody>
</table>
## Requirements

- **Tier 1 - 1\textsuperscript{st} Jan 2015:**

<table>
<thead>
<tr>
<th>HiNA</th>
<th>must be able to deactivate wireless network port</th>
<th>when all netw. ports are deactivated then standby needs to be $&lt;0.5\text{W}$ (if standby exists)</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eq. with HiNA</td>
<td>when all netw. ports are deactivated then APD into $&lt;0.5\text{W}$ unless inappropriate</td>
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<td></td>
</tr>
<tr>
<td>LoNA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Tier 2 - 1\textsuperscript{st} Jan 2017:**

<table>
<thead>
<tr>
<th>HiNA</th>
<th>must be able to deactivate wireless network port</th>
<th>when all netw. ports are disconnected then standby needs to be $&lt;0.5\text{W}$ (if standby exists)</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eq. with HiNA</td>
<td>when all netw. ports are disconnected then APD into $&lt;0.5\text{W}$ unless inappropriate</td>
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</tr>
<tr>
<td>LoNA</td>
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<td></td>
<td></td>
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</tbody>
</table>

**LoNA**
Networked Equipment

- Implement off or standby mode
  - Off/standby inappropriate?
    - no: Implement power mngmt into off/standby
    - yes: Provide justification for not having power mngmt into off/standby
  - yes: Provide justification for not having off/standby

- Implement power mngmt into off/standby
  - Power Mngmt into off/standby inappropriate?
    - no: Implement networked standby
    - yes: Provide justification for not having power mngmt into off/standby

- Implement networked standby
  - Network Standby inappropriate?
    - no: Implement other requirements
    - yes: Provide justification for not having networked standby
Measurement

1. The unit is put in the on mode.
2. For each type of network port: connect 1 randomly chosen network port to the appropriate network, disconnect all other network ports, the unit is allowed to go into the network standby mode, check that the power is below target after 20 minutes
3. Reactivate the equipment back in on mode
4. Repeat steps 1-3 for all other types of network interfaces
   - Every measurement must be below the target for the product to comply
Information requirements

- **Websites**
  - the power of each network standby state as measured according to the measurement methods described in the regulation (one network port at a time)
  - the period of time after which the power management function, or a similar function, switches the equipment automatically into standby and/or off mode and/or the condition providing networked standby,

- **Websites & user manuals**
  - the power consumption of the product in networked standby if all wired network ports are connected and all wireless network ports are activated.
  - Guidance on how to activate and deactivate wireless network ports.

It is allowed that the second power value may sometimes exceed the network standby limits given in the regulation.
Back up slide - considerations

- Choose to take the lot 6 or the lot 26 train
- Decide whether or not to declare network port / network equipment having wake-up functionalities
- Claim inappropriateness
- Implement auto-deactivation of network ports to achieve targets
- Implement a detection of disconnection of cables
- Deactivate non-network ports upon delivery to remain under targets