

# Grandstream Networks, Inc.

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## UCM6xxx IPPBX Series

### Technical Bulletin - Power Consumption



## DOCUMENT PURPOSE

This document is a technical bulletin describing power consumption details for UCM6xxx IPPBX Series.

UCM6xxx IPPBX series can be powered via

- Universal power supply: Input AC 100-240VAC 50/60Hz; Output 12VDC, 1.5A
- PoE: IEEE802.3af

## TEST CONDITION TERMINOLOGY

The following test condition terminology was used in table 1.

- **Idle State**
  - The IPPBX has completed the boot-up process.
  - The SIP application is running PCMA codec with SRTP.
  - No call state established or incoming ring.
- **Work State**
  - The IPPBX is setup as described in the Idle State.
  - The maximum number of calls are established for each Unit Under Test (UUT).
  - USB port loaded at 200mA.
- **Power Not Exceed**
  - 1REN loaded on each FXS port of UUT and ring established.
  - USB port loaded at 500mA.



## 1. Power Dissipation

Table 1: Power Dissipation and Advertisement

| Product               | Power Adapter (12VDC) |            |                     |           | PoE (48VDC) |            |                     |           | Class Advertisement (IEEE 802.3af) |
|-----------------------|-----------------------|------------|---------------------|-----------|-------------|------------|---------------------|-----------|------------------------------------|
|                       | Idle State            | Work State | Power Not to Exceed |           | Idle State  | Work State | Power Not to Exceed |           |                                    |
|                       | Power (W)             | Power (W)  | FXS Port Loaded     | Power (W) | Power (W)   | Power (W)  | FXS Port Loaded     | Power (W) |                                    |
| <b>UCM6100 Series</b> |                       |            |                     |           |             |            |                     |           |                                    |
| UCM6102/04            | 5.33                  | 9.57       | America             | 9.57      | 7.38        | 11.66      | America             | 11.66     | 4                                  |
| UCM6108/16            | 6.06                  | 10.31      | America             | 10.31     | 7.6         | 12.18      | America             | 12.18     | 4                                  |
| <b>UCM6510</b>        |                       |            |                     |           |             |            |                     |           |                                    |
| UCM6510               | 9.88                  | 17.84      | America             | 17.84     | 9.35        | 21.12      | America             | 21.12     | 4                                  |
| <b>UCM6200 Series</b> |                       |            |                     |           |             |            |                     |           |                                    |
| UCM6202               | 3.39                  | 5.57       | America             | 6.53      | 4.65        | 6.83       | America             | 8.07      | 4                                  |
| UCM6204               | 3.51                  | 5.69       | America             | 6.78      | 5.16        | 8.14       | America             | 8.89      | 4                                  |
| UCM6208               | 3.75                  | 5.45       | America             | 6.29      | 4.99        | 7.05       | America             | 7.87      | 4                                  |

## 2. PD Power Classification

Table 2: PD Power Classification (IEEE 802.3af)

| Class | Usage       | Max Power Range used by the PD (IPPBX)             |
|-------|-------------|--|
| 0     | Default     | 0.44 to 12.95W                                     |
| 1     | Optional    | 0.44 to 3.84W                                      |
| 2     | Optional    | 3.84 to 6.49W                                      |
| 3     | Optional    | 6.49 to 12.95W                                     |
| 4     | Optional    | 12.95 to 25.5W                                     |
| 5     | Not Allowed | Reserved for future use (for example: IEEE802.3at) |

