



# Grandstream Networks, Inc.

## GRP26xx & GBX20 Technical Bulletin **Power Consumption Guide**



# GRP26xx & GBX20 Technical Bulletin - Power Consumption

## Power Dissipation and Advertisement

| Product             | Version | Power Adapter(5VDC) |            |                     | 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)   | Power(W)            | Power(W)    | Power(W)   | Power(W)            |                                    |
| GRP2612W            | V1.5    | 0.99                | 1.59       | 2.15                | 1.52        | 2.30       | 2.97                | 1                                  |
| GRP2612W            | V2.1    | 1.20                | 1.79       | 1.88                | 1.74        | 1.82       | 2.11                | 1                                  |
| GRP2612P /GRP2612 G | V1.5    | 0.98                | 1.32       | 1.75                | 1.49        | 1.94       | 2.46                | 1                                  |
| GRP2612             | V1.5    | 0.99                | 1.31       | 1.76                | N/A         | N/A        | N/A                 | N/A                                |
| GRP2613             | V1.4    | 1.16                | 1.50       | 2.06                | 1.66        | 2.02       | 2.66                | 1                                  |
| GBX20               | V1.2    | 1.07                | 1.25       | N/A                 | N/A         | N/A        | N/A                 | N/A                                |
| GRP2601P            | V1.3    | 1.05                | 1.41       | 1.41                | 1.56        | 1.81       | 1.81                | 1                                  |
| GRP2603P            | V1.1    | 1.02                | 1.38       | 1.38                | 1.47        | 1.74       | 1.74                | 1                                  |
| GRP2604P            | V1.2    | 1.01                | 1.11       | 1.20                | 1.65        | 1.84       | 1.88                | 1                                  |
| GRP2601             | V2.1    | 1.29                | 1.55       | 1.55                | N/A         | N/A        | N/A                 | N/A                                |
| GRP2604             | V1.2    | 1.06                | 1.14       | 1.14                | N/A         | N/A        | N/A                 | N/A                                |
| GRP2602P /GRP2602 G | V2.1    | 0.90                | 1.25       | 1.66                | 1.41        | 1.90       | 2.41                | 1                                  |

| Product | Version | 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)   | Power(W)            | Power(W)    | Power(W)   | Power(W)            |                                    |
| GRP2614 | V1.6    | 1.51                 | 2.17       | 3.24                | 2.32        | 3.01       | 4.02                | 0                                  |

|                         |      |      |      |      |      |      |       |   |
|-------------------------|------|------|------|------|------|------|-------|---|
| GRP2615                 | V1.1 | 1.32 | 1.93 | 6.37 | 2.22 | 2.87 | 7.41  | 0 |
| GRP2615<br>+1*GBX2<br>0 | V1.2 | N/A  | N/A  | 4.56 | N/A  | N/A  | 5.56  | 0 |
| GRP2616                 | V1.1 | 1.39 | 2.04 | 6.12 | 2.49 | 2.90 | 7.85  | 0 |
| GRP2614                 | V2.1 | 1.50 | 2.91 | 2.91 | 2.51 | 3.42 | 3.42  | 0 |
| GRP2615                 | V2.1 | 2.16 | 3.54 | 8.89 | 2.98 | 4.26 | 10.21 | 0 |
| GRP2616                 | V2.1 | 2.53 | 3.55 | 8.95 | 2.99 | 4.30 | 10.32 | 0 |
| GRP2624                 | V1.1 | 1.45 | 2.44 | 7.41 | 2.62 | 3.19 | 9.21  | 0 |
| GRP2634                 | V1.1 | 1.46 | 2.85 | 7.96 | 2.82 | 3.57 | 9.47  | 0 |
| GRP2670                 | V1.2 | 4.33 | 5.02 | 9.39 | 4.69 | 5.97 | 10.64 | 0 |
| GRP2650                 | V1.1 | 2.25 | 3.39 | 9.24 | 3.44 | 4.36 | 11.56 | 0 |
| GRP2650<br>+1*GBX2<br>0 | V1.1 | N/A  | N/A  | 5.63 | N/A  | N/A  | 6.65  | 0 |
| GRP2636                 | V1.0 | 1.70 | 3.24 | 9.00 | 2.40 | 4.34 | 11.30 | 0 |

| Product         | Version | Power Adapter (PSU 12VDC and USB 5V) |                |                         | PoE (48VDC)    |                |                         | Class Advertisement (IEEE 802.3af) |
|-----------------|---------|--------------------------------------|----------------|-------------------------|----------------|----------------|-------------------------|------------------------------------|
|                 |         | Idle State (W)                       | Work State (W) | Power Not to Exceed (W) | Idle State (W) | Work State (W) | Power Not to Exceed (W) |                                    |
| 1*GBX20 (12VDC) | V1.2    | 1.06                                 | N/A            | 3.95                    | N/A            | N/A            | N/A                     | N/A                                |
| 3*GBX20 (12VDC) | V1.2    | 3.81                                 | N/A            | 7.13                    | N/A            | N/A            | N/A                     | N/A                                |

◦ Class Advertisement Refer to Table 2 for IEEE 802.3af Classification at PD.

## PD Power Classification

| Class | Usage   | Max Power Range used by the PD (Phone) |
|-------|---------|--|
| 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 | Not Allowed | Reserved for future use (for example: IEEE802.3at) |

*PD Power Classification (IEEE 802.3af)*

## Test Condition Terminology

The following test condition terminology was used in Table 1.

- **Idle State**

The phone has completed the boot-up process.

The SIP application was running PCMA codec with SRTP.

The idle screen was shown on the LCD.

LCD Backlight (Normal brightness).

PD Power Classification (IEEE 802.3af).

- **Work State**

The phone was setup as described in the Idle State.

The maximum number of calls were established for each Unit Under Test (UUT).

The Handsfree mode was activated for each UUT and was set to maximum volume.

The LCD displayed at the Diagnostic screen during the test.

- **Power Not Exceed**

External USB device in Max Power.

GXP17XX USB port loads=0.3A.

Ring state or Called state.