# Technical Service Bulletin

Ascom® Wireless Solutions Inc.

Product: DCT1900 Radio Exchange
Purpose: To communicate the modular cabinet back plane power limitations.
Date: February 18, 2005

**Modular Cabinet Back Plane Power Limitations**

Due to power limitations of the back plane, not all board combinations will be allowed and thus port counts for line connections, speech paths and base stations may be restricted in certain configurations. Additional cabinets may be needed to accommodate circuit boards due to power distribution and thus 9 circuit boards in a single modular cabinet is not always possible. A maximum of 4 cabinets are allowed per radio exchange (stand alone system). If the backplane power limitation is exceeded with incorrect board placement as distribution the result will be erratic system behavior at possibly system resets. Also, if there is a need for additional cabinets, there must be at least 2 boards present in the cabinet in order to meet a minimum cabinet configuration.

**Board Requirements for Power**

Although the Modular Cabinet has space for 9 boards, not all board combinations are allowed due to power limitations of the DC/DC converter on the backplane. This converter is specified as follows:

| | |
|---|---|
| +5V | can supply 40W at maximum |
| +12V | can supply 12W at maximum |
| -12V | can supply 12W at maximum |
| Total | must be <40W |

Table 1 shows the power consumption per board type. From this table, it can be calculated if a configuration matches the power requirements. The values given to the ±12V of the LTU indicates the power consumption in the case where all LTU circuits are off hooks.

***Note:***

*Due to a minimum required power consumption from the DC/DC converter, at least two boards must be present in each cabinet.*

# Technical Service Bulletin

Ascom® Wireless Solutions Inc.

Product: DCT1900 Radio Exchange
Purpose: To communicate the modular cabinet back plane power limitations.
Date: February 18, 2005

| Board Type | 5 V | +12 V | -12 V |
|---|---|---|---|
| CPU-2 REX-BRD9032 | 6 W | | |
| CPU REX-BRD0004 | 9.6 W | 1 W | 1 W |
| SPU-S REX-BRD0017 | 3.55 W | | |
| SLU REX-BRD0015 | 6.9 W | | |
| CLU-S REX-BRD0016 | 3.45 W | | |
| CLU REX-BRD0014 | 3.6 W | | |
| DTU-E1,CCS/CAS REX-BRD0002 | 4.5 W | | |
| DTU-T1,CAS REX-BRD0021 | 6 W | | |
| DTU- T1 CCS REX-BRD0021 | 6 W | | |
| LTU REX-BRD0007 | 1.5 W | .75 W | .75 W |
| LTU-2 REX-BRD0007 | 2.5 W | | |
| DLU REX-BRD0023 | 6.5 W | | 1.2 W |

Table 1 – Power Consumption Per Board Type

**Backplane Specs**
The backplane is provided with a rectifier bridge and a DC/DC converter.

| | | |
|---|---|---|
| Input voltage | : | 36 to 42Vac, or 44 to 58Vdc |
| Maximum input power | : | 230W for AC, or 570W for DC |
| Ouput on 5V, +12V and –12V | : | Total maximum is 40W |
| 5Vdc output | : | Max. 40W |
| +12Vdc | : | Max. 12W |
| -12Vdc | : | Max. 12W |
| 48Vdc output (not regulated) | : | Max. 160W if AC input, or max. 530W if DC input |

**Reference**
TPM (LZB 119 2663, R7) Sec 3 Ch 5 and Sec 4 Ch 2 available on Ascom's PD website:
http://www.ascomwireless.com/pd/
Technical Service Bulletin (Board Positions) – TS-0503

**Additional Information**
If you have any questions about this bulletin, please contact your AWS Regional Channel Manager.