# Pinouts of Laptop/Notebook Batteries:

| Type | Manuf. | Notebook | Remark | Pin1 | Pin2 | Pin3 | Pin4 | Pin5 | Pin6 | Pin7 | Pin8 | Pin9 | Pin10 | Source | Added |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40001926 | ? | ? | | | | V+ | | | | | | GND | | Hannes | 160708 |
| 755-4S4000-S1S1 | ? | ? | 14.8V 4Ah | V+ | V+ | C | D | 300R to GND | GND | GND | X | X | X | Hannes | 190215 |
| BTP-34A1 | ? | ? | 14.8V 4Ah | GND | empty | ? | ? | ? | ? | ? | V+ | X | X | Hannes | 170325 |
| BTP-S31 | ? | ? | 10.8V 5.4Ah, Note2b?, stops charging >13V? | GND | ? | ? | ? | ? | V+ | X | X | X | X | Hannes | 171129 |
| AS07B41 | ACER | ? | ? | BAT+ | BAT+ | 10k Temp? | SCL | SDA | GND | GND | x | x | x | Florian | 190809 |
| AS10B5E | ACER | ? | 11.1V 6Ah | BAT+ | BAT+ | EN | ? | SCL | SDA | GND | GND | x | x | Florian | 190809 |
| AS10D31 | ACER | Travelmate 5740 | 10.8V 4.4Ah | BAT+ | BAT+ | EN | TEMP | SCL | SDA | GND | GND | x | x | Florian | 190118 |
| AS10D81 | ACER | ? | 10.8V 4.4Ah | BAT+ | BAT+ | EN | TEMP | SCL | SDA | GND | GND | x | x | Florian | 200129 |
| GRAPE32 | ACER | ? | 10.8V 4.4Ah; 11.1V 4.0Ah, Note2 | GND | ? | ? | ? | EN(GND) | ? | BAT+ | x | x | x | Hannes | 180325 |
| GRAPE34 | ACER | ? | 14.8V 4.8Ah | GND | SCL | SDA | ? | EN(GND) | ? | BAT+ | x | x | x | Florian | 190617 |
| A1175 | Apple | 15-inch MacBook Pro | | GND | ? | ? | ? | ? | BAT+ | x | x | x | x | Hannes | 170210 |
| 7564 ? | ASUS | EeePC 4G-BK022 | | GND | +V | | | EN | | | | GND | | nathandumont.com/.. | 131205 |
| A32-K72 | ASUS | ? | 10.8V 5.2Ah | GND | GND | | EN 10k V+ | | | | V+ | V+ | | Wolfgang | 150103 |
| A41-X550A | ASUS | R510L | 14,4V 2,6Ah | GND | GND | GND | SDA | SCL | ? | ? | V+ | V+ | | Florian | 190207 |
| 3R305 | DELL | D500/D600 | Note2b | GND | GND | ON/OFF | ? | GND | SDA | SCL | V+ | V+ | X | X laptop-junction.com/.. | 131203 |
| 75UYF | DELL | C510/C610 / C840 | Note2b | GND | NC | Sys | GND | SDA | SCL | V+ | X | X | X | Hannes | 190424 |
| | DELL | E4300 | Note2b | BAT- | | | /Ena | | | | | V+ | X | Hannes | 131203 |
| | DELL | Inspiron 6400/M70 | Note2b | GND | GND | BAT_VOLT | SYSPRES#(GND) | BAT_PRES# | SDA | SCL | V+ | V+ | X | Hannes | 190424 |
| M5Y0X | DELL | Latitude E6430 | 11.1V 9Ah | GND | GND | ? | ? | ? | SDA | SCL | BAT+ | BAT+ | | Florian | 190524 |
| EM-G320L1 | Elitegroup | ? | 14.8V 2.2Ah | V+ | empty | C | D | T | GND | GND | X | X | X | Hannes | 170325 |
| 4UR18650F-2-5 | Fujitsu,u.a. | ? | 14.8V 3.2Ah | GND | ? | ? | Ena | ? | V+ | X | X | X | | Hannes | 170326 |
| 4UR18650F-2-QC-EF3 | Fujitsu | ? | 14.8V 4Ah | V+ | ? | ? | ? | GND | X | X | X | X | | Hannes | 170326 |
| 3S4400-* | Fujitsu | Amilo M1425 | Note2b? | GND | TEMP | ? | ? | ? | SMBD | SMBC | ? | ? | V+ | Hannes | 190424 |
| BP-8389 | Fujitsu | Amilo K 7600 | 11.1V 6.0Ah | GND | Key | GND | T | D | C | V+ | V+ | X | X | Hannes | 190410 |
| BTP-52EW | Fujitsu | ? | 14.8V 4.4Ah | V+ | V+ | Bus? | Bus? | temp? | GND | empty | GND | | | Wolfgang | 160726 |
| FPCBP59 | Fujitsu | ? | | V+ | V+ | EN | Bus? | Bus? | Bus? | temp? | empty | GND | | Wolfgang | 150103 |
| FPCBP331 | Fujitsu | ? | 10.8V 4.4Ah | V+ | V+? | ? | ? | SCL | SDA | TEMP? | empty | GND | | Florian | 190118 |
| FPCBP429 | Fujitsu | ? | 10.8V 6,7Ah | V+ | ? | ? | EN(3,7V) | SCL | SDA | EN(4V) | x | GND | | Florian | 190912 |
| SQU-809-F01 | Fujitsu | ? | 11.1V 4.4Ah, Note1 | GND | ? | ? | ? | ? | ? | V+ | X | X | | Hannes | 190329 |
| UN34AS1-S1 | Gericom | ? | 11.1V 6Ah | V+ | V+ | C | D | T | GND | GND | | | | Hannes | 160721 |
| NC6120, 364602-001, 365750-001, 372772-001, 398854-001, HSTNN-C12C, PB994A, HSTNN-IB05, HSTNN-LB05, PB994, HSTNN-I03C, HSTNN-I05C | HP | ? | 10.8V/7.8Ah | GND | GND | T | C | D | V+ | | | | | Hannes | 160709 |
| HSTNN-CB47 | HP | ? | ? | GND | GND | 10k Temp? | ? | SDA | SCL | BAT+ | BAT+ | X | X | Florian | 190809 |
| HSTNN-DB30 | HP | ? | 10.8V/43Wh | GND | ? | ? | E | ? | V+ | X | X | X | X | Hannes | 170405 |
| HSTNN-IB2P, 632427-001, VH08083 | HP | ? | 14.8V/83Wh | BAT+ | BAT+ | SDA | SCL | ? | GND | GND | GND | | | Florian | 190523 |
| HSTNN-UB73, 509459-001 | HP | ? | 10.8V/55Wh | GND | GND | 8,7k Temp? | ? | SCL | SDA | BAT+ | BAT+ | | | Florian | 190730 |
| 42T4504 | IBM Lenovo | T60? | | V+ | V+ | Bus? | Bus? | temp? | GND | GND | | | | Wolfgang | 150103 |
| 42T4649 | IBM Lenovo | X200 | 10,8V/7,8Ah | V+ | V+ | SCL | SDA | temp? | GND | GND | | | | Florian | 190207 |
| 42T4653 | IBM Lenovo | ? | 10,8V/4,9Ah Note1 | V+ | V+ | SCL | SDA | temp? | GND | GND | | | | Hannes | 190606 |
| 42T4670 | IBM Lenovo | ? | | V+ | V+ | SCL | SDA | temp? | GND | GND | | | | Florian | 190118 |
| 42T4694 | IBM Lenovo | ? | | V+ | V+ | Bus? | Bus? | temp? | GND | GND | | | | Wolfgang | 150103 |
| 42T4879 52+ | IBM Lenovo | X220T | | V+ | V+ | SCL | SDA | Temp (10k) | GND | GND | | | | Florian | 190207 |
| 08K8039 | IBM Lenovo | ? | | GND | temp? | Bus? | Bus? | V+ | | | | | | Wolfgang | 150103 |
| 02K6817 | IBM Lenovo | ? | | GND | temp? | Bus? | Bus? | V+ | | | | | | Wolfgang | 150103 |
| 45N1001 70+ | Lenovo | T430/530 | 10.8V/5,2Ah | V+ | V+ | SCL | SDA | Temp (10k) | GND | GND | | | | Florian | 181211 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45N1011 70++ | Lenovo | T430/530/ W530 | 11.1V/8.4Ah | V+ | V+ | SCL | SDA | Temp (10k) | GND | GND | | | | Florian | 181211 |
| 45N1775 68 | Lenovo | T450s | 11.1V/2,09Ah | V+ | V+ | SCL | SDA | Temp (10k) | GND | GND | | | | Florian | 190207 |
| BTP-C0BM | MEDION | ? | 11.1V/4.0Ah | GND | 10k Temp? | ? | SCL | SDA | BAT+ | | | | | Florian | 190822 |
| BTP-C2BM | MEDION | MD96850 MD96640 | 11.1V/7.8Ah | GND | | | | | V+ | | | | | Wolfgang | 160726 |
| A32-A15 | MSI | ? | 10,8V/4,4Ah | BAT+ | BAT+ | TEMP? | SDA | SCL | EN | EN | GND | GND | | Florian | 190523 |
| BTY-L74 | MSI | ? | 11,1V/4,4Ah | GND | GND | 10k Temp? | SDA? | SCL? | EN | EN | BAT+ | BAT+ | | Florian | 190723 |
| PCGA-BP2NX | SONY | ? | 14.8V/4Ah | V+ | empty | ? | ? | ? | ? | /Ena(1k zu GND) | GND | GND | X | Hannes | 170325 |
| | Toshiba | Satellite C675D | | GND | GND | SCL | SDA | Temp? | SysPresent | ? | BAT+ | BAT+ | | kuzyatech.com/.. | 131205 |
| PA2510U | Toshiba | ? | | GND | | | | | | temp? | | | V+ | Wolfgang | 150103 |
| PA3107U | Toshiba | Satellite Pro 4600 | ON: beide Zusatzpins verbinden | GND | | | | | | temp? | | V+ | | Wolfgang | 150103 |
| PA3480U | Toshiba | ? | | V+ | x | ? | /Ena | ? | ? | ? | GND | X | X | Hannes | 200125 |
| PA3534U | Toshiba | ? | Note2b? | GND | GND | SCL | SDA | 10k Temp? | /Ena | ? | ? | V+ | X | Hannes, Florian | 190722 |

- Note1: Battery only starts charging when empty or discharging directly before charging.
- Note2: Needs single bus communication before charging.
- Note2b: Needs bus communication for charging (details unknown).
- Note3: Needs continuous bus communication every <30s for charging (for Dell: see details below).

Pinzuordnung: so wie der Akku in Laptop kommt und der Laptop dann aufm Tisch stehen würde, ist oben. Dann werden die Kontakte von links aufsteigend nummeriert.


# DELL-battery charge-enable:

DELL-Akkus müssen zur Aktivierung der Ladung mittels SMBUS-Kommunikation dazu motiviert werden.

- I2C-Adresse: 0x0B (Standard-Adresse eines SMBus-Akkus)
- Daten: 0x00 0x0A 0x00 (Register 0x00 = ManufacturerAccess-Register)

getestet mit:

- Type 4R084 (Aktivierungssequenz reicht einmal)
- Type 75UYF (Latitude C510/C610/C840 Akku) (Aktivierungssequenz reicht einmal)
- Type NT349 (Sequenz muss mindestens alle 30s wiederholt werden)
- Type U4873 (Precision M90)(Aktivierungssequenz reicht einmal)

# MSI BTY-L47 charge-enable:

Um den Akku zum Laden zu bewegen ist es notwendig, die Enable-Pins auf GND zu ziehen und an den SMBus Pins 3,3V (z.B. über 10k) anzulegen. Buskommunikation ist nicht nötig.

# Bestimmen einer unbekannten Anschlussbelegung:

Hier kommt in naher Zukunft(TM) eine kleine Anleitung, wie sich die unbekannte Pinbelegung eines Akkus recht einfach bestimmen lässt.