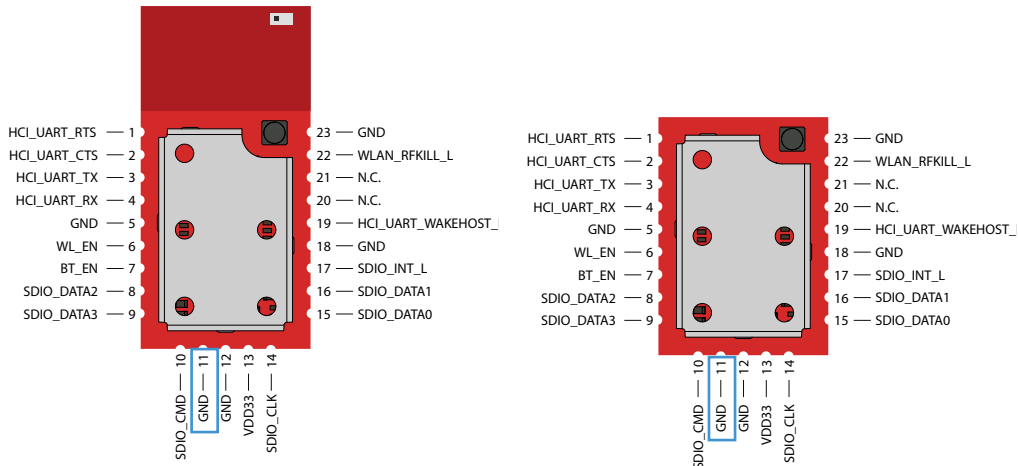


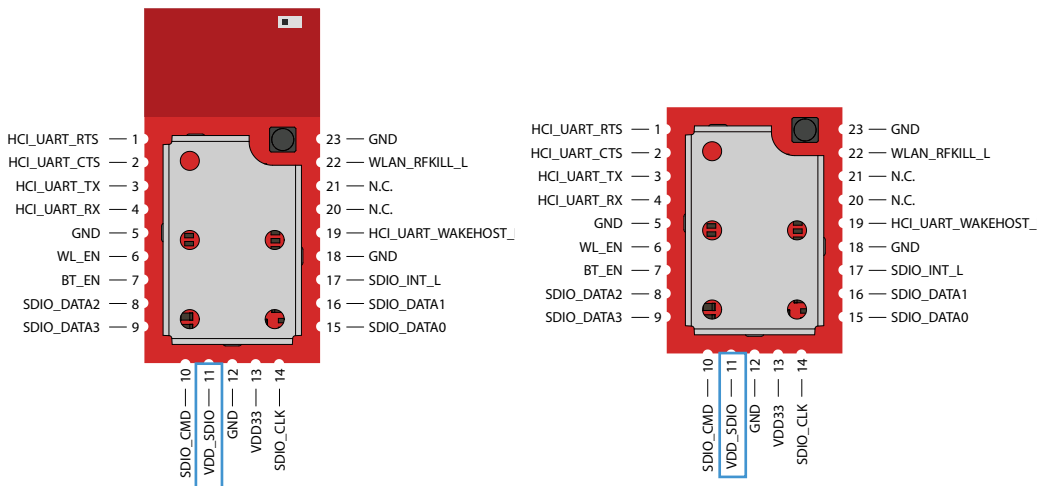


Module

Old revision

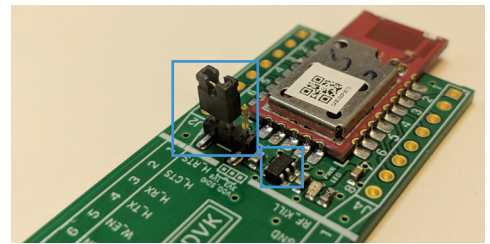
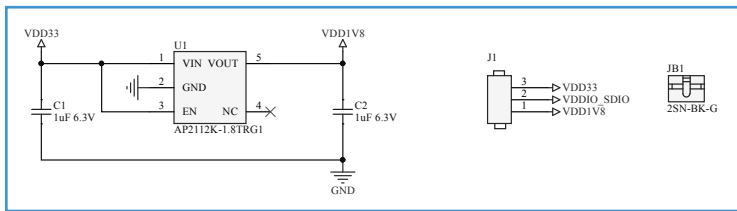
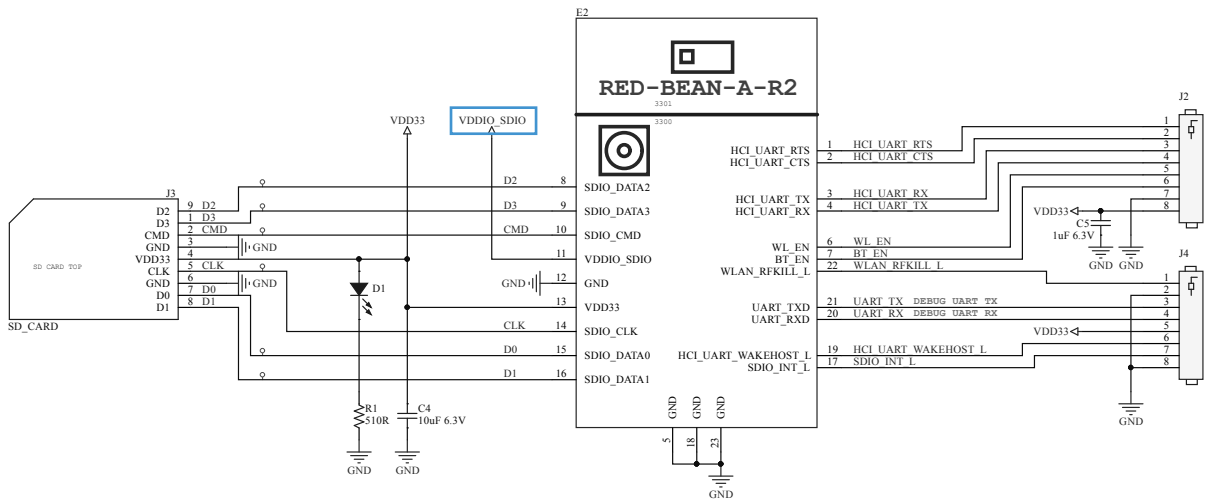


New revision



Pin number 11 is changed from GND (ground) to VDD_SDIO (Voltage supply input 1.8V or 3.3V). The change was done to add support for SDIO3 mode. Use pins 11, 13 for module powering. For SDIO3.0 mode use 1.8V, in SDIO2.0 mode module can be powered 1.8V or 3.3V. SDIO3 mode support allows achieving higher throughput (see test report below). Older version with SDIO2 support will not be produced in the future. If you already have a design based on the current revision and would like to continue using it, get in touch with us at: info@8devices.com.

Development kit



RED bean development kit has been updated to support multiple voltages for pin 11 powering. Older version with SDIO2 support will not be produced in the future. Additional jumper with pins and voltage conversion chip (3.3 to 1.8V) was added on the new revision, which is marked on the schematics and picture above.

Test report

The new RED bean module version was tested using Marvell ARMADA 3700 (ESPRESSObin) CPU board. The below image is a screenshot of UDP traffic measurement showing 350+ Mbps throughput after SDIO3 support was added to the RED bean module. Software image with sources and how to guide for ESPRESSObin board are available on our wiki: <http://www.8devices.com/wiki/>.

[3]	385.0-386.0 sec	38.6 MBytes	324 Mbits/sec	0.031 ms	4982/32502 (15%)
[3]	386.0-387.0 sec	32.5 MBytes	273 Mbits/sec	0.086 ms	7823/31036 (25%)
[3]	387.0-388.0 sec	35.5 MBytes	298 Mbits/sec	0.044 ms	7126/32480 (22%)
[3]	388.0-389.0 sec	36.6 MBytes	307 Mbits/sec	0.036 ms	6461/32579 (20%)
[3]	389.0-390.0 sec	37.0 MBytes	310 Mbits/sec	0.052 ms	5538/31896 (17%)
[3]	390.0-391.0 sec	39.4 MBytes	330 Mbits/sec	0.030 ms	4148/32248 (13%)
[3]	391.0-392.0 sec	39.7 MBytes	333 Mbits/sec	0.034 ms	4042/32327 (13%)
[3]	392.0-393.0 sec	40.3 MBytes	338 Mbits/sec	0.038 ms	3134/31871 (9.8%)
[3]	393.0-394.0 sec	40.6 MBytes	341 Mbits/sec	0.035 ms	3368/32329 (10%)
[3]	394.0-395.0 sec	38.1 MBytes	320 Mbits/sec	0.034 ms	4754/31950 (15%)
[3]	395.0-396.0 sec	39.2 MBytes	329 Mbits/sec	0.034 ms	4208/32143 (13%)
[3]	396.0-397.0 sec	35.4 MBytes	297 Mbits/sec	0.064 ms	5894/31128 (19%)
[3]	397.0-398.0 sec	38.5 MBytes	323 Mbits/sec	0.044 ms	5643/33090 (17%)
[3]	398.0-399.0 sec	40.9 MBytes	343 Mbits/sec	0.029 ms	3021/32187 (9.4%)
[3]	399.0-400.0 sec	35.7 MBytes	300 Mbits/sec	0.032 ms	6071/31560 (19%)
[3]	400.0-401.0 sec	35.3 MBytes	296 Mbits/sec	0.037 ms	7434/32581 (23%)
[3]	401.0-402.0 sec	34.4 MBytes	289 Mbits/sec	0.036 ms	6806/31373 (22%)
[3]	402.0-403.0 sec	36.5 MBytes	306 Mbits/sec	0.049 ms	6706/32766 (20%)
[3]	403.0-404.0 sec	36.0 MBytes	302 Mbits/sec	0.035 ms	6384/32043 (20%)
[3]	404.0-405.0 sec	41.2 MBytes	346 Mbits/sec	0.033 ms	2807/32225 (8.7%)
[3]	405.0-406.0 sec	42.0 MBytes	352 Mbits/sec	0.041 ms	2194/32133 (6.8%)
[3]	406.0-407.0 sec	42.7 MBytes	358 Mbits/sec	0.038 ms	1619/32089 (5%)
[3]	407.0-408.0 sec	42.3 MBytes	355 Mbits/sec	0.038 ms	2018/32201 (6.3%)