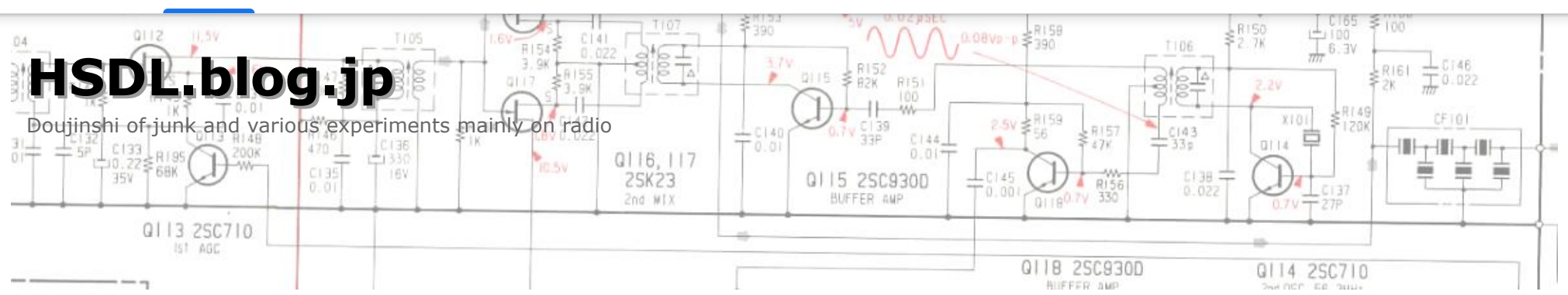


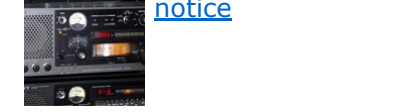
HSDL.blog.jp

Doujinshi of junk and various experiments mainly on radio



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[Revival of dirty radio](#)

[Revival of dirty radio](#)

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[A walker? What is this \(^.^;](#)

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BKV8601

January 29, 2011 01:29

Continued old mother BKV8601 (Part 2)

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[Continued / Old Mother ④ BKV8601 \(Part 1\)](#)

This is the ECS mother BKV8601 that is the contents of BookPC.

★ Parts

As I wrote last time, not only the usual G-Luxon, but also TEAPO aluminum electrolysis is used at key points. I wonder if I was a little disciplined and reflected (^.^ However, G-Luxon was also acquired by TEAPO after that ...

• Capacitor

- 5φ = 31
- 6φ = 5 8φ
- = 16 (8 low ESR products)
- 10φ = 12 (all low ESR products)
- 64 in total

I was quite surprised at the BKi810, but the number of aluminum electrolytic capacitors exceeds that. It is probably the number one aluminum electrolytic density at present (^.^; This is an amplifier for sound output It is effective that it is added. About 20 aluminum electrolytic capacitors can be seen only around this. Since there are too many, I have investigated only a part of the application.

- VRM output (EC31-36): LZ1500μF 6.3V
- VRM output (EC59) , 60): LZ1000μF 6.3V [Omitted]
- VRM input (EC29,30): TEAPO SC1000μF 16V
- Vmem (EC276,277,278): LZ1000μF 6.3V
- Vtt1.5 (EC37): LZ1000μF
- 6.3V Vcc1.8 (EC38): LZ1000μF 6.3V
- Clock_Gen (EC11,12,13): SX10μF 25V
- 12V Input (EC40): TEAPO SC1000μF16V
- UC3843B (C283): Myra 0.015μF
- 100V USB5V (EC26) : TEAPO SH470μF
- for 10V WOL? (EC27): TEAPO SH470μF 10V

- G-Luxon LZ1500μF 6.3V (64mΩ / 810mA)
- G-Luxon LZ1000μF 6.3V (100mΩ / 700mA)
- G-Luxon SX10μF 25V (? MΩ / 30mA)
- TEAPO SC1000μF 16V (43mΩ / 1140mA)
- TEAPO SH470 / 315mA)
- TEAPO SH 100μF 25V (? MΩ / 145mA)

• Inductor

- VRM input (L45): T50-52 equivalent, # 17 × 8 (2.1μH / 2.7mΩ)
- VRM output (L46): T50-52B equivalent, # 17 × 9 (2.7μH / 3.0mΩ)

• Semiconductor

- VRM up / down switch: PHB55N03LT
- VRM controller: L6911B (HIP6004)

<< January, 2011 >>

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- notice Yoshitomi Shibata February 08, 2022 11:14
- notice nori February 07, 2022 20:06
- OHM RAD-V900TV Yoshitomi Shibata November 09, 2021 13:56
- OHM RAD-V900TV Reciprocating November 07, 2021 22:29
- OHM RAD-V900TV Yoshitomi Shibata November 07, 2021 18:23

QR code



Clock_Gen: ICS9248-39
 Super I / O: Built-in in South
 LAN: RTL8139C
 Sound: CMI8738 / PCI-SX
 TV_out: None

★ 1Giga Pro (Samuel2)

The contents of 1Giga Pro is C3 itself of Samuel2 core. There is nothing special to look at in performance, only low price and low power consumption are CPUs for sale. It would have been somewhat better if SSE was installed instead of 3DNow !. Since there is no CMOV, it is hard to say that it is P6 compatible with the K6 to K6III + series. Modern software cannot be launched before speed.

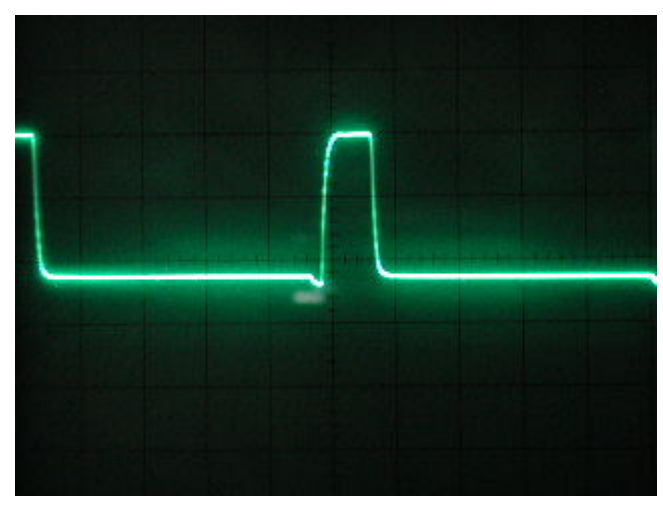
C3 667 (6-10.1W)
 C3 733 (6.6-11.1W)

Vcore 1.60V (about 3.8 to 7A)
 Steady ripple = 25 to 50mV
 Dynamic ripple ΔV = 75mV After

all, the power consumption is extremely low, and the current does not fluctuate depending on the load, so if you are satisfied with the steady ripple, you can almost pass. The output inductor should be slightly larger. However, since the VRM of this mother is a 12V source, it seems that the steady ripple is also quite large.

★ Trying to move It

has become troublesome even though I got the parts for the dedicated power supply as well as the parts for making my own adapter. So I use the ATX adapter used in BKi810. Since 2 pins are not enough, it seems to be deceived by connecting to the next pin. However, in fact, the first investigation was misunderstood, and it turned out that both were connected internally in terms of direct current. You can enjoy it with this (^ ^)



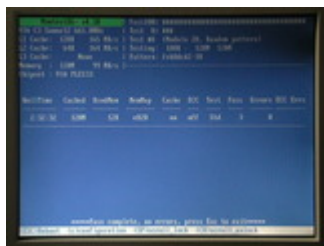
Both ON and OFF are very slow, the efficiency will be quite inferior. The 12V source is not good because it is a CPU that only flows 7A even at the peak. If it was 5V, the waveform would be more beautiful. The CPU would be Since it is a non-exchangeable type, it is easy to adjust the conditions. The gate switching frequency was 193kHz, which is close to the standard. I want to raise the switching frequency more, but I hesitate because it is inefficient and generates a lot of heat. I feel like I can go if it's a rank.

As usual, just attach FDD and start it. VGA boots up and the BIOS screen appears. It's unopened and unused, so it's natural, but it seems to be a working product. BKV8601 appears on the BIOS Post screen, so you can use this as the motherboard name. There is no anxious sound and no suspicious behavior. Then, let's start the test.

★ MEMTEST86 + As you can see when running MEMTEST86 +, the memory is 99MB / s, which is incredibly slow as FSB133. Before that, both L1 and L2 caches are as slow as memory, but is this really practical? It may be slightly better than the S520L, where the mackerel is as slow as the Celeron at FSB 66MHz. Of course, the quality test passed. I don't feel the memory compatibility that is a problem in the FSB133 class. Well, if it's this slow, it won't be compatible (^ ^); ★ Windows test

- GIGABYTE HDD
- HITACHI IC-R75 ICF-28
- intel K7N2G-L K8T Neo mini-loop MLA MS-8881
- MSI netperf P2B-F P35 Neo-F P5B-VM EP P6F2095 P6ISA-II PA61 PCCHIPS PR-315 R-1000 R-P30 RAD-F1691M RAD-F620Z RAD-F770Z RAD-S600N
- RADEON RF-B30 RF-DR100 RF-P50 RTL8169 SAHARA3810 SMS3000BQX2LF Socket423 Socket754 TY-BR30 USB WS440BX XFX Any_good remodeling Akiba patrol
- Capacitor replacement
- Junk essay Ceramic filter Tantalum capacitors
- Bike patrol Local patrol Mobile reception Soot rise Car patrol Received sound West patrol Nishitama patrol Daytime reception Machida patrol Train patrol East patrol Special patrol South patrol Minamitama patrol Disposal of non-performing loans North patrol

and like to try pi-yaki etc. what kind of worst record will come out. Needless to say, I haven't done any ridiculous work to slow down (aiming at the worst record). Do your best to keep records. Is your rival capable of Socket7? = n-yaki: Rival's record = 6 minutes 56 seconds: K6-2 [115x3.5] GA-5AX + (NT4.0) 8 minutes 33 seconds: P55C [125x2.0] GA-5AX + (98SE)

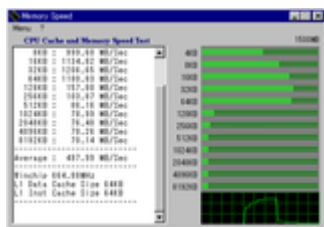


10 minutes 12 seconds: K6-2 [100x3.0] 5114VU (98SE)
 10 minutes 57 seconds: P55C [66x3.5] NPV20 (Note)
 17 minutes 57 seconds: P54C [60x2.0] P55T2P4 (NT4.0)

ASUS P55T2P4 [Rev2.1]
 Fujitsu NPV20
 GIGABYTE GA-5AX + [Rev5.2]
 Mitac 5114VU (Presario 7360)

By the way, in HSDL, Win9x is usually installed from HDD. This is faster, more stable and quieter. This time, I attached FBEX to the master of the primary IDE and DTLA-305020 to the slave and started it. Then the slave is displayed with a capacity of 65GB, and it is not recognized at all on the OS. The capacity was recognized by normal 20G by explicitly specifying the slave in LBA mode in the BIOS settings. People who have (or had) similar troubles should give it a try. Also, it may become 33 or 66 each time it is started. This hasn't been resolved yet, but it seems that there is no choice but to align the device standards.

★ Looking only at the benchmark FSB and clock, I feel like I can use it.



The L2 cache doesn't make any sense. Or is this working normally? By the way, Auto is extremely slow, so I made it a forced 4Bank interleave, but it seems meaningless. I did it with normal 98SE, so I couldn't measure 3DM2000 and 2001. However, since 3DM99 is like this, it feels like "you should know it by pushing". GOGO bench that can be trusted to some extent as a CPU bench. It was evaluated as the slowest CPU among the CPUs measured so far. On the contrary, it may be better to find out what this CPU is good at ... FR1.01 of DX5 is 3.261, which is also slow. Attention pi-yaki defeated rival P54C by 23 seconds at 17 minutes and 34 seconds! (^_^; I hate it, that's regrettable. The other party is FP-RAM and FSB 60MHz (120MHz). And this time I clearly understood, but compared to stones made by other companies (it has been said before) not only floating point It means that integer arithmetic is also slow enough. The correct way to recognize it is to say that it is a chip equivalent to K6-2 / 400 (^_^ Even in this era, I often wanted to sell this as a product. Eventually XP I want to install. ★ At the end



The burden on VRM is small thanks to the CPU that eats only 10W even at the peak. Even considering that it is a low efficiency 12V power supply, a PC with considerably low power consumption can be completed. The problem is that the capacity is as low as the electric power. In particular, floating-point arithmetic is inferior even if it is considered as a clock 1/2. In that respect, how to use the user will be questioned. People who can fully utilize C3 are called "smart PC users". I don't think it's possible (^_^ However, it's an outsider CPU that is neither Intel nor AMD, so it's an exciting stone just to move it. There are many C3 onboard mothers such as those made by VIA, so if you find it at the store, you can do it. (Maybe I want it).

From the point of view of remodeling, I don't feel it is inevitable because there is no problem at this point. Is the life of the 10-year aluminum electrolysis a problem? Since it is unused, there is a high possibility that it will operate without problems for at least 4 to 5 years after it is put in. The heat generation of the VRM power MOSFET is also extremely low for 12V. If you notice something, report it at any time.

 [ECS BKV8601](#)

拍手 1

January 27, 2011 01:27

Continuation / Old Mother BKV8601 (Part 1)

 [hsdl](#)  [Comment \(2\)](#)  [Trackback \(0\)](#)

Once again, ECS (elitegroup), which means that ECS mothers are often placed in junk corners. It is sometimes said that studying the bad things of bad things often is the study to know the good things. By the way, the official name of the board is unknown. The title name will be the name of the barebone PC itself. Actually, there are multiple motherboards of the same machine.

★ Better parts than

- BKi810 1. Power saving and low temperature with
- C3 2. 1GB of memory can be loaded with PLE133
- 3. FSB133MHz with PLE133 4. IDE is UDMA33 ⇒ ATA100 5. VRM is synchronous rectification
- 6. Input capacitor Enhanced with low ESR product 7. VGA speeds up a little with PLE133 8. Sound output is too terrible for BKi810 rather than the built-in amplifier 8601 is particularly good.

If you have a BKi810 case, the form is exactly the same, so it might be a good

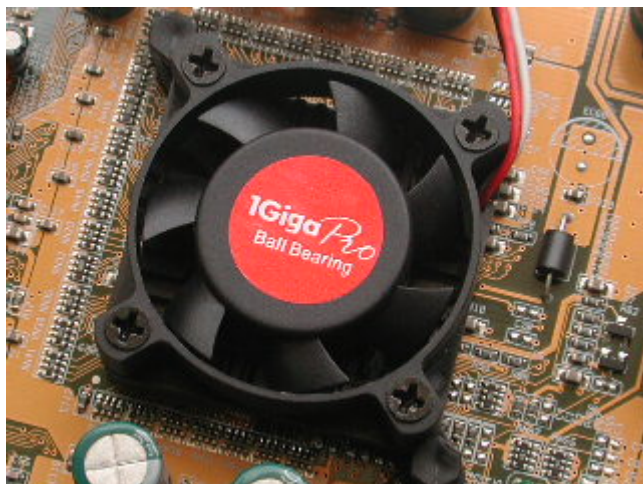


This type is rare when I search. In many cases, the Book PC also contained the ATX type M787 CLR. The board runs on the original 6-pin power supply in the example, not the ATX power supply. The normal guy was good because it doesn't have to be rare (^_^; The

chipset is PLE133, and the South is 686B, so you can use the ATA100. The speed of the IDE, especially the HDD, has the strongest effect on the experience of the device (^_^) It's important because it's a bottleneck). Also, with FSB133, the memory bandwidth is not insufficient. However, the throughput around the memory of C3 itself is extremely slow, so there may not be much benefit.

I noticed here . However, the South of Apollo PLE133 is not 686B but VT8231. Was this cheap or was it used because it was left over (^_^; But it is not V-Link so it doesn't matter.

Composite for functional changes Video output has been discontinued. The wiring is on the board, so the feature may be useful depending on the version. TV output doesn't seem to be useful for this class of PC, so it shouldn't be a problem.

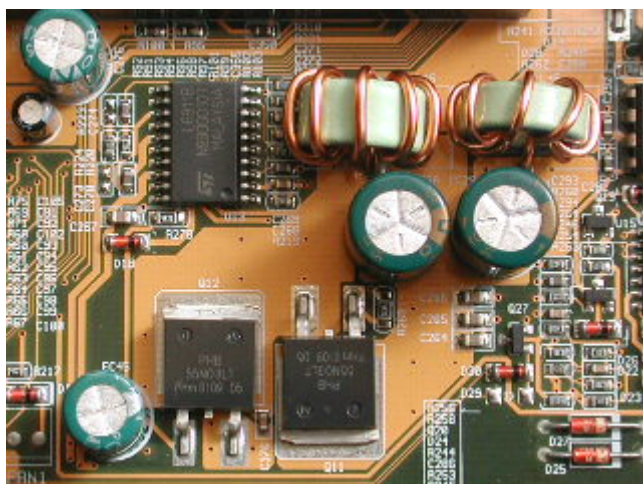


The only and biggest selling point for this mother is the onboard CPU. Although it has the exaggerated name of 1Giga Pro, it is actually just VIA's C3 (Samuel2) 667MHz. It is known that the FPU is half speed and the floating point arithmetic is surprisingly slow for the CPU clock, probably to reduce heat generation. In addition, since this mother's chipset is VGA share memory, there is a possibility that Supern alone will lose to Clapen 133 + 430HX. It's not a problem with a clock of 1/2 or something like that, but I have to say that the CPU architecture itself is flawed.

· Speaking of C3, there is also DNRH-001 (the contents are like EPIA-PD), but of course DNRH-001 is better than BKV8601 (^_^

<http://akiba-pc.watch.impress.co.jp/hotline/20110122/image/kdnrh1.html>

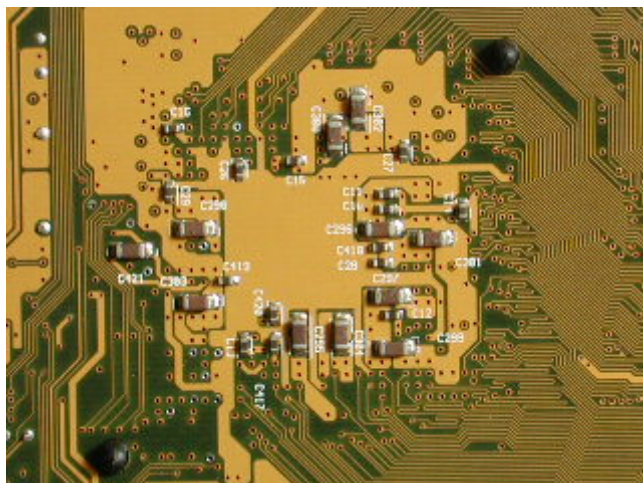
<http://pc.usy.jp/wiki/index.php?DNRH-001>



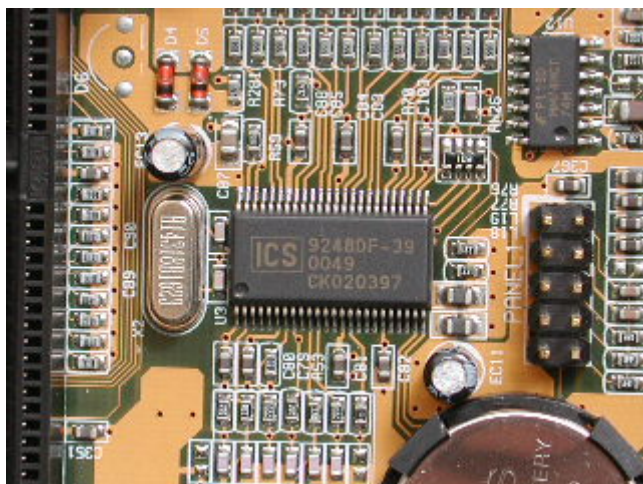
VRM has been changed to a general synchronous rectification method. Is from V7.x of BKi810, but the VRM controller is L6911B instead of HIP6004B adopted in BKi810 (V7.x). These are compatible chips including RT9224 (pin compatible and can be replaced as it is)). I'm looking forward to the comparison with the discrete VRM of KA7500B. PHB55N03LT is used for the up and down switch. It is a standard

This meander has a VRM in a strange position like 5V / 2XK. Since it bypasses the memory, the wiring is long and the resistance is large. The output inductor is T50-52B # 17 x 9 turns, but this is fine because it is a low current C3. It is a big thing that the input inductor was adopted. I wanted this to be adopted by the BKi810, which does not have a DC of 12V VRM input.

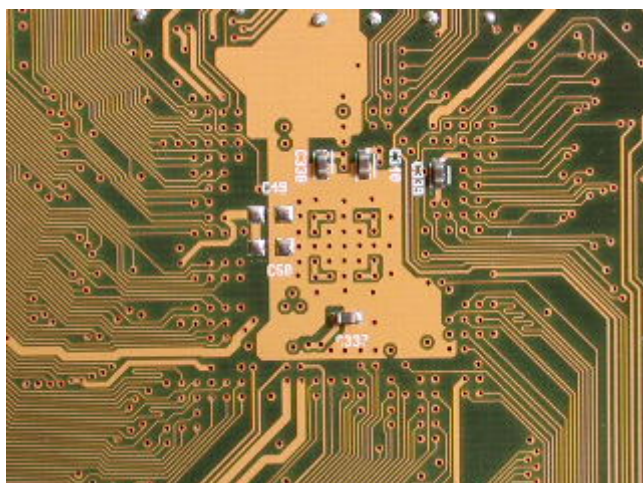
It is also a big progress that low impedance products are used for input capacitors. Moreover, it can be said that the reliability has been greatly improved with TEAPO's SC1000 μ F 16V x 2 instead of G-Luxon, which is good at ECS. The output capacitor is G-Luxon's LZ1500 μ F 6.3V x 6. With a 12V source, the steady ripple is larger than with 5V, so the number cannot be reduced. It can be seen that two 8 ϕ aluminum electrolysis are omitted, which is estimated to be LZ1000 μ F 6.3V. Since the VRM output controller stands fairly sparsely, 6 can be set up even with 12.5 ϕ . I wouldn't (probably) modify it.



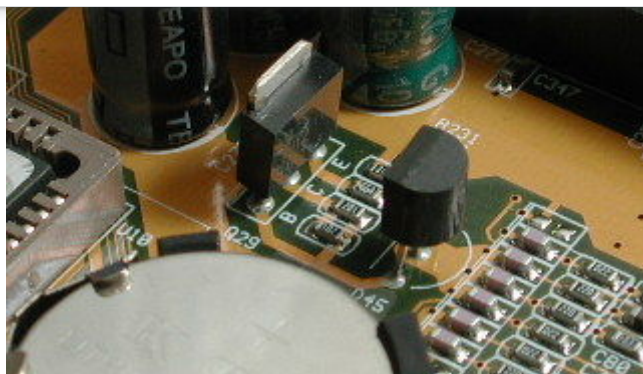
DC on the back of the CPU. Is it unstable for C3 to say that ECS, which is famous for stingy, is DC so tightly? However, since this CPU is a BGA package, it cannot be attached inside the socket, so it may be natural to attach it to the back.



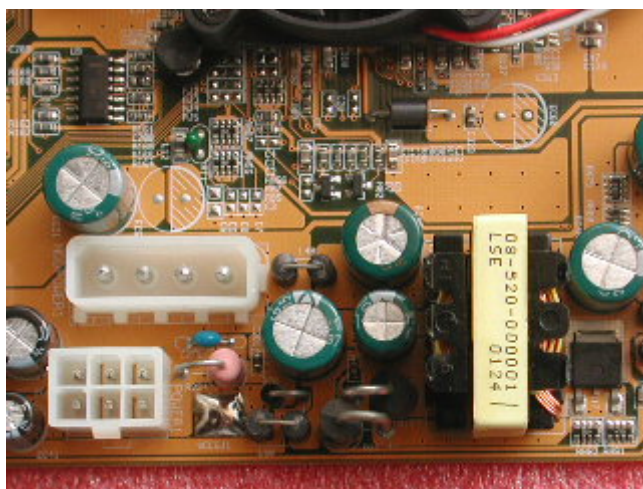
The familiar ICS 9248-39 is used as the clock generator IC. Standard stone of this era from 66 to 150MHz. The clock can be changed by software.



The north bridge is FSB 133MHz and has VGA built-in, so it is relatively strictly DC. It works without it, but if the cause is unknown, this may be the cause, so it's a big enemy. If the video with built-in chipset is not working well with high FSB, this may help. Other than that, there is no meander wiring like DDR, so it can not be said that it is a particularly difficult chip.



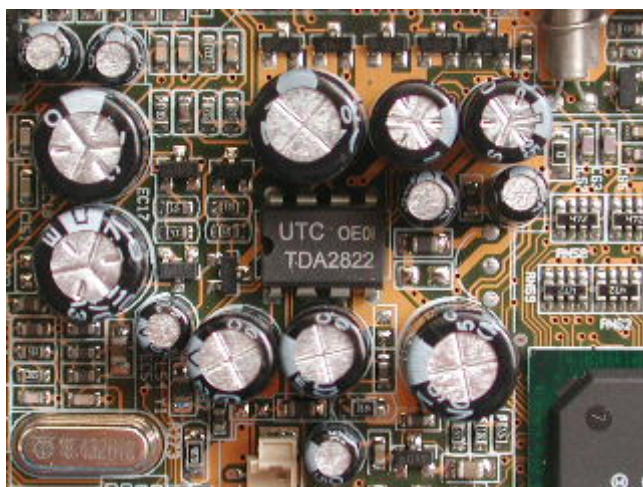
Discrete unregulated power supply using APL431 is still seen by people. As expected, it is more accurate and stable than Zener, but it is unlikely to be used as a power source for PCs. Already in this era, there is almost no price advantage over high-performance regulator ICs.



Power supplies that generate 5V and 3.3V are still alive. The compatibility with the BKi810 is maintained together with the original 6-pin 12V power supply, but it is unavoidable that the compatibility with the ATX standard will drop instead.



The LAN chip has changed from DM9102F to the general Realtek RTL8139C. The CPU usage is a little high, but there is no particular problem with stability. Much better than a product that seems to be stuck with driver updates.



The sound chip CMI8738 remains the same, but a TDA2822 output amplifier has been added to the sound output. It can be said that it is indispensable for headphones and small SP drives.

Since it is a one-sheet complete mother, it has nothing to do with the folly of PC upgrades and is clean, but the lack of a secondary IDE responds to HSDL. If two HDDs can be connected to different channels, it can be used as a machine for initializing HDDs for parallel ATA. Aside from that, if you compare it to a camera, it's a compact camera with a non-interchangeable lens.

 [ECS](#) [BKV8601](#)

拍手 2