

WG602 Circuit Description

16. MPU - IDT 79RC32334-150

The IDT RC32334 device is an integrated processor based on the RC32300 CPU core. This product incorporates a high-performance, low-cost 32-bit CPU core with functionality common to a large number of embedded applications. The RC32334 integrates these functions to enable the use of low-cost PC commodity market memory and I/O devices, allowing the aggressive price/performance characteristics of the CPU to be realized quickly into low-cost systems.

The RC32334 integrates a SDRAM controller, which provides direct control of system SyncDRAM running at speeds to 75MHz. The local memory and I/O controller implements direct control of external memory devices, including the boot ROM as well as other memory areas, and also implements direct control of external peripherals. In order to leverage the wide availability of low-cost peripherals for the PC market as well as to simplify the design of add-in functions, the RC32334 integrates a full 32-bit PCI bus bridge.

17. Oscillator - Y1 75MHz

It's an oscillator, which can support 75MHz to be IDT 79RC32334's reference frequency. It's 3.3V VCC Operation.

18. SDRAM - U3, U5 NT5SV4M16DT

The NT5SV4M16DT are four-bank Synchronous DRAMs organized as 1Mbit x 16 I/O x 4 Bank, respectively. These synchronous devices achieve high-speed data transfer rates of up to 200MHz by employing a pipeline chip architecture that synchronizes the output data to a system clock. The chip is fabricated with NTC's advanced 64Mbit single transistor CMOS DRAM process technology.

19. Flash memory - U2 Intel 28F320J3A, U4 AMD 29LV320T

U2 Intel 28F320J3A is High-Density Symmetrically-Blocked Architecture 128-Kbyte Erase Blocks. It's 2.7V–3.6V VCC Operation. The device organized as 2,097,152 words of 16 bits each or 4,194,304 bytes of 8 bits each.

U4 AMD 29LV320T is The Am29LV320D is a 32 megabit, 3.0 volt-only flash memory device, organized as 2,097,152 words of 16 bits each or 4,194,304 bytes of 8 bits each. Word mode data appears on DQ0–DQ15; byte mode data appears on DQ0–DQ7. The device is designed to be programmed in-system with the standard 3.0 volt VCC supply, and can also be

programmed in standard EPROM programmers.

20. Reset IC – U8 TPS3823

The TPS3823 supervisor provides circuit initialization and timing supervision. It's provided MPU, Flash Memory, Ethernet controller and MINI-PCI reset source.

21. JTAG debug port – J3

The JTAG debug port is option function. It's provided signal to ICE (In Circuit Emulation) machine at developing.

22. Crystal – Y3 25MHz

The crystal provides 25MHz reference frequency source to U12 RTL8139C Ethernet controller.

23. RJ-45 Connector – P1

The RJ-45 connector provides IEEE802.3 standard circuit in physical interface.

24. Magnetic – T1 TS6121C

The primary use of transformer (Magnetic) in this type of circuit is as an impedance matching and/or isolation device, serving as a barrier between external cables and internal digital circuitry.

25. Ethernet controller – U12 RTL8139C

The Realtek RTL8139C is a highly integrated and cost-effective single-chip Fast Ethernet controller that provides 32-bit performance, PCI bus master capability, and full compliance with IEEE 802.3u 100Base-T specifications and IEEE 802.3x Full Duplex Flow Control. It also supports Advanced Configuration Power management Interface (ACPI), PCI power management for modern operating systems that are capable of Operating System Directed Power Management (OSPM) to achieve the most efficient power management possible. The RTL8139CL is suitable for applications such as CardBus or mobile devices with a built-in network controller.

26. RS-232 Connector port – J3, J4

The RS-232 connector is option function. It's provided chat debug function at developing.

27. Power supply – U15 MC34063

The MC34063 is a monolithic control circuit containing the primary functions required

for DC-to-DC converters. These devices consist of an internal temperature compensated reference, comparator, controlled duty cycle oscillator with an active current limit circuit, driver and high current output switch. This IC was specifically designed to be incorporated in Step-Down and Step-Up and Voltage-Inverting applications with a minimum number of external components.

28. MiniPCI connector – P2

It's a MiniPCI connector, which can connect 802.11G MiniPCI wireless LAN card.

29. Oscillator – Y3 33MHz

It's an oscillator, which can support 33MHz clock to be all MiniPCI interface reference frequency. It's 3.3V VCC Operation.

30. Clock buffer – U10 W16-15G

The W16-15G Products are five-output zero delay buffers. A Phase-Locked Loop (PLL) is used to take a time-varying signal and provide five copies of that same signal out. The internal feedback to the PLL provides outputs in phase with the reference inputs.