THE ROLE OF THE KP580VM80A MICROPROCESSOR IN DATA PROCESSING

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Abstract. Nowadays, there is probably no area where the computer has not reached. Hush what is the basis of these computers. Of course, if we include the KP580VM80A microprocessor among these devices, it will not be a mistake. The KR580VM80A chip is a functionally complete single-chip microprocessor with persistent instruction system used as a central processor in data processing and control devices.

Keywords: KR580VM80A, 6 micro n-MDS, frequency, ALU, Buffers and registers.

Ma’lumotlarni qayta ishlashda KP580VM80A mikroprotsessorining o’rni

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Annotatsiya. Hozirgi kunda kompyuter yetib bormagan soha bo’lmasa kerak. Hush bu kompyuterlarni asosi nimalardan iborat. Albatta KP580VM80A mikroprotsessorini bu qurilmalar qatoriga qo‘shsak xato bo’lmaydi. KR580VM80A mikrosxemasi ma'lumotlarni qayta ishlash va boshqarish qurilmalarida markaziy protsessor sifatida qo‘llaniladigan, doimiy ko‘rsatmalar tizimiga ega bo‘lgan funksional jihatdan to‘liq bitta chipli mikroprotsessordir.

Kalit so‘zlar: KR580VM80A, 6 mikro n-MDS, chastota, ALU, Buferlar va registrlar.

Spetsifikatsiyaga muvofiq soat signallarini yaratish uchun tashqi mikrosxemadan foydalanish tavsiya etildi KR580GF24 , lekin aslida protsessor soat impulslarining shakli va holati uchun muhim emas. Ko‘pgina mahalliy uy kompyuterlarida KR580GF24 ishlatilmaydi, chunki uning bo'linish koeffitsienti 9 ga teng bo'lganligi sababli u sinxron grafik mashinalar uchun mos emas. KR580GF24- ni eng qadimgi maishiy shaxsiy kompyuterlardan biri “IRISHE” da qo‘llash protsessor va video kontrollerning sinxron ishlashiga imkon bermadi va kompyuterning ishlashini sezilarli darajada sekinlashishiga olib keldi, shuning uchun kelajakda KR580GF24 ishlab chiqarildi[1]. Grafik kompyuterlarda ishlatilmaydi, har doim uni past integral hisoblagichlar yoki registrlarga asoslangan

sxema bilan almashtiradi (bo‘linish koeffitsienti 8ga teng). 8080A prototipi singari, protsessorga uchta quvvat manbai kerak edi: −5V, +12V va +5V. Shuningdek, KR580VM80A +5V kuchlanishli bitta +5V manbadan g‘ayritabiiy rejimda ishlashi mumkinligi haqida xabar chop etildi. +12V o‘rniga beriladi, -5V o‘rniga “tuproq” va soat chastotasini 1,4-1,5 MGs ga tushiradi[2].

Protsessor 8080A ning to‘liq kloni emas, bu texnologiyadagi farq bilan bog‘liq. Mahalliy kristal kattaroqdir, bu yuqori darajali havsizlik tizimini yaratish imkoniyatini yuzaga keltiradi. Savdoda ishlab chiqarilgan sanoat iste‘molchi Vektor-06T kompyuterida ham protsessor 3 MGs chastotada ishlaydi, bu ruxsat etilgan maksimal qiymatdan 20% yuqori. KR580VM80A (8080 prototipi kabi) 12 ta hujjatsiz buyruqlarga ega. #08, #10, #18, #20, #28, #30, #38 kodlari NOP operatsiyasining analoglari; opcode #CB JMP ga o'xshash; #DD, #ED, #FD opkodlari CALL ning analoglari; opcode #D9 RETga o'xshaydi. Radio 86RK kompyuterida uzilishni yoqish chiqishi ovoz ishlab chiqarish uchun bir bitli chiqish porti sifatida ishlatilgan.

SYNC signali tomonidan chiqarilgan “protsessor holati so'zida” stek operatsiyasi bayrog'ining mavjudligi stek uchun alohida xotira bankini ajratish

imkonini beradi, ammo bu juda kam qo'llaniladi. “UT-88” havaskor kompyuterida bu xususiyat elektron diskni tashkil qilish uchun ishlatiladi[3].

Dasturchilar maksimal ishlash talab qilinadigan xotira bloklarini nusxalash va to'ldirish/tozalash protseduralarida stekdan noan‘anaviy foydalanishni topdilar. Bu ekranni aylantirish, tozalash va to'ldirishni ~25% ga tezlashtirish imkonini berdi, bu grafik mashinalar uchun muhim. Misol uchun, Corvette PC8010/PC8020 kompyuterining grafik ekrani 48KB hajmga ega - bunday hajmni tozalash va o'zgartirish protsessorga juda ko'p vaqtni oladi[4].

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