Offset	Type	Usage	Meaning	Format
0	FLOAT3	POSITION	XYZ	
12	D3DCOLOR	COLOR	Vertex normal (xyzw)	0 to 128 = -1.0 to 0.0 128 to 255 = 0.0 to 1.0
16	D3DCOLOR	COLOR	Unknown	0 to 255 = 0.0 to 1.0
20	SHORT2N	TEXCOORD	Channel 0 uv	0 to 32768 = 0.0 to 1.0
24	SHORT2N	TEXCOORD	Channel 1 uv	0 to 32768 = 0.0 to 1.0
28	D3DCOLOR	BLENDWEIGHT	Blendweight	0 to 255 = 0.0 to 1.0

Vertex normal XYZW correspond to RGBA.
UVs have to be transformed: u' = 0.5+u/2, v' = 0.5-v/2

Type 0x2 shaders:

vertex shader

```
    vs_3_0
    def c14, 2, -1, 1, 0
    dcl_position v0
    dcl_blendweight1 v1
    dcl_texcoord v2
    dcl_texcoord1 v3
    dcl_color v4
    dcl_color1 v5
    dcl_position o0
    dcl_texcoord o1
    dcl_texcoord1 o2.xyz
    dcl_texcoord2 o3.xyz
    dcl_texcoord3 o4.xyz
    dcl_texcoord4 o5.xyz
    dcl_texcoord5 o6.xyz
    dcl_texcoord6 o7
    dcl_texcoord8 o8
    dcl_texcoord9 o9.xy
    mad r0.xyz, v4.zyxw, c14.x, c14.y
    dp3 o6.x, r0, c0
    dp3 o6.y, r0, c1
    dp3 o6.z, r0, c2
    mov r0.w, c14.z
    mad r1, v0.xyzx, c14.zzzw, c14.wwwz
    dp4 r0.x, r1, c0
    dp4 r0.z, r1, c2
    dp4 r0.y, r1, c1
    dp4 o0.x, r0, c3
    dp4 o0.y, r0, c4
    dp4 o0.z, r0, c5
    dp4 o0.w, r0, c6
    dp4 r0.w, r0, c10
    mad_sat r0.w, r0.w, c8.x, c8.y
    mad r1.xyz, v5.zyxw, c14.x, c14.y
    dp3 o4.x, r1, c0
    dp3 o4.y, r1, c1
    dp3 o4.z, r1, c2
    mad r1.xyz, v1.zyxw, c14.x, c14.y
    dp3 o5.x, r1, c0
    dp3 o5.y, r1, c1
    dp3 o5.z, r1, c2
    mad r1.x, r0.y, c8.z, c8.w
    add r1.y, -r0.w, c14.z
    mul_sat r1.x, r1.x, r1.y
    add_sat o8.w, r0.w, -r1.x
    mad o1.zw, v3.xyxy, c12.xyxy, c12
    mad r1.xy, v2, c11, c11.zwzw
    mul o9.xy, r1, c13
    mov o1.xy, r1
    add r1.xyz, r0, -c7
    mov o3.xyz, r0
    dp3 r0.x, r1, r1
    rsq r0.x, r0.x
    mul o2.xyz, r1, r0.x
    mov o7, c14.zzww
    mov o8.xyz, c9

// approximately 38 instruction slots used
```

pixel shader

```
    ps_3_0
    def c10, 2, -1, 1, 0.5
    def c11, 0, 32, 0, 0
    dcl_texcoord v0.xy
    dcl_texcoord1 v1.xyz
    dcl_texcoord2 v2.xyz
    dcl_texcoord3 v3.xyz
    dcl_texcoord4 v4.xyz
    dcl_texcoord5 v5.xyz
    dcl_texcoord8 v6
    dcl_texcoord9 v7.xy
    dcl_2d s0
    dcl_2d s1
    add r0.xyz, c2, -v2
    dp3 r0.w, r0, r0
    mov r1.z, c10.z
    mad r1.x, r0.w, -c2.w, r1.z
    rsq r0.w, r0.w
    max r2.x, r1.x, c11.x
    add_sat r1.x, r2.x, r2.x
    mul r1.xyw, r1.x, c3.xyzz
    mul r2.xyz, r1.xyww, c8
    nrm r3.xyz, v1
    mad r4.xyz, r0, r0.w, -r3
    mul r0.xyz, r0, r0.w
```

```
nrm r5.xyz, r4
texld r4, v7, s1
mad r4.xy, r4.wyzw, c10.x, c10.y
mul r6.xyz, r4.y, v4
mad r6.xyz, r4.x, v3, r6
dp2add r0.w, r4, -r4, c10.z
rsq r0.w, r0.w
rcp r0.w, r0.w
mad r4.xyz, r0.w, v5, r6
dp3_sat r0.w, r4, r5
pow_sat r2.w, r0.w, c11.y
mul r2.xyz, r2, r2.w
mul r5.xyz, r2, c3.w
add r6.xyz, c0, -v2
dp3 r0.w, r6, r6
rsq r2.w, r0.w
mad r0.w, r0.w, -c0.w, r1.z
max r3.w, r0.w, c11.x
add_sat r0.w, r3.w, r3.w
mul r7.xyz, r0.w, c1
mad r8.xyz, r6, r2.w, -r3
mul r6.xyz, r6, r2.w
dp3_sat r0.w, r4, r6
mul r6.xyz, r7, r0.w
mul r7.xyz, r7, c8
nrm r9.xyz, r8
dp3_sat r0.w, r4, r9
pow_sat r2.w, r0.w, c11.y
mul r7.xyz, r7, r2.w
mad r5.xyz, r7, c1.w, r5
add r8.xyz, c4, -v2
dp3 r0.w, r8, r8
rsq r2.w, r0.w
mad r0.w, r0.w, -c4.w, r1.z
max r3.w, r0.w, c11.x
add_sat r0.w, r3.w, r3.w
mul r9.xyz, r0.w, c5
mad r3.xyz, r8, r2.w, -r3
mul r8.xyz, r8, r2.w
dp3_sat r0.w, r4, r8
mul r8.xyz, r9, r0.w
mul r9.xyz, r9, c8
nrm r10.xyz, r3
dp3_sat r0.w, r4, r10
pow_sat r2.w, r0.w, c11.y
mul r3.xyz, r9, r2.w
mad r5.xyz, r3, c5.w, r5
add r0.w, r1.z, -c3.w
mul r2.xyz, r2, r0.w
add r2.w, r1.z, -c1.w
mad r2.xyz, r7, r2.w, r2
add r1.z, r1.z, -c5.w
mad r2.xyz, r3, r1.z, r2
add r2.xyz, r2, r2
mad r2.xyz, r5, c10.x, r2
dp3_sat r0.x, r4, r0
mad r0.y, r4.y, c10.w, c10.w
mul r1.xyw, r1, r0.x
```

```
    mul r0.xzw, r0.w, r1.xyyw
    mul r1.xyw, r1, c3.w
    mad r1.xyw, r6.xyzz, c1.w, r1
    mad r0.xzw, r6.xyyz, r2.w, r0
    mad r0.xzw, r8.xyyz, r1.z, r0
    mad r1.xyz, r8, c5.w, r1.xyww
    add r0.xzw, r0, r0
    mad r0.xzw, r1.xyyz, c10.x, r0
    mov r1.xyz, c7
    add r1.xyz, -r1, c6
    mad r1.xyz, r0.y, r1, c7
    add r0.xyz, r0.xzww, r1
    mov r0.w, c8.w
    mad r0.xyz, c9, r0.w, r0
    texld r1, v0, s0
    mad r0.xyz, r1, r0, r2
    mov oC0.w, r1.w
    add r0.xyz, r0, -v6
    mad oC0.xyz, v6.w, r0, v6

// approximately 104 instruction slots used (2 texture, 102 arithmetic)
```