

Table 5: ISD2500 Address Space

Dec.	Binary										ISD2560 (Seconds)	ISD2575 (Seconds)	ISD2590 (Seconds)	ISD25120 (Seconds)
	A9	A8	A7	A6	A5	A4	A3	A2	A1	A0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	1	1	0	0	1	0	5.0	6.25	7.5	10.0
100	0	0	0	1	1	0	0	1	0	0	10.0	12.5	15.0	20.0
250	0	0	1	1	1	1	1	0	1	0	25.0	31.25	37.5	50.0
300	0	1	0	0	1	0	1	1	0	0	30.0	37.5	45.0	60.0
400	0	1	1	0	0	1	0	0	0	0	40.0	50.0	60.0	80.0
500	0	1	1	1	1	1	0	1	0	0	50.0	62.5	75.0	100.0
599	1	0	0	1	0	1	0	1	1	1	59.9	74.875	89.85	119.8

600	1	0	0	1	0	1	1	0	0	0
through	Unused address space. An ISD2500 device addressed in this region will default to an overflow condition.									
767	1	0	1	1	1	1	1	1	1	1

768	1	1	0	0	0	0	0	0	0	0
through	This address space used by the ISD2500 Operational Modes.									
1023	1	1	1	1	1	1	1	1	1	1

Many product designs use small, inexpensive microcontroller chips and do not have sufficient port pins to handle the ISD device for full addressing. This need not be a serious obstacle. Most of these same applications do not need 100 ms. resolution of the address space. They can operate with less resolution. For each degree of resolution that is not used, one less port pin is needed. The following table (a simple binary count) illustrates this principle using an ISD1016A or ISD1416 as the example.

Table 6 indicates that by grounding the four least significant address bits, A0–A3, one can still address messages with a 1.6 second resolution using only four port or latch outputs. This would provide ten different 1.6-second message segments in an ISD1016A (ten 2-second messages in an ISD1020A) and might make it possible to use a smaller, less expensive microcontroller.