fir.c

```
void firFilter(short *x, int f, short *y, int N, int M, QScale)

{int i, j, sum;

        for (j = 0; j < M; j++) {

                sum = 0;

                for (i = 0; i < N, i++)

                        sum += x[i + j] * filterCoeff[f][i];

                y[j] = sum >> QScale;

                y[j] &= 0xfffe;

        }

}
```

In the above fir.c code,

M = Number of output samples.
N = Number of coefficients in filter.
sum += x[i + j] * filterCoeff[f][i]; = Multiply and accumulate (MAC) or sum of products (SOP) or convolution.
y[j] = sum >> QScale; = Scale the filter output.
y[j] &= 0xfffe; = Tailor filter output. 16 bit to 14 bit.