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**FIGURE 1.8** The logic board of Apple iPhone Xs Max in Figure 1.7. The large integrated circuit in the middle is the Apple A12 chip, which contains two large ARM processor cores and four little ARM processor cores that run at 2.5 GHz, as well as 2 GiB of main memory inside the package. Figure 1.9 shows a photograph of the processor chip inside the A12 package. A similar-sized chip on a symmetric board attached to the back is the 64 GiB flash memory chip for nonvolatile storage. The other chips on the board include power management integrated controller and audio amplifier chips.