CLAIMS

1. A video camera power backup apparatus comprising:

a Power over Ethernet (PoE) adapter to receive and connect to a Direct Current (DC) PoE power line originating at a PoE source and further adapted to output: (i) an internal power line carrying power received through the PoE power line and (ii) a data line carrying data received from the PoE source;

a PoE output adapter connected to said internal power line and to said data line and adapted to provide a PoE output line to the video camera, wherein the PoE output line carries data received through said data line and power received through said internal power line;

a power-line monitoring circuit to detect an inoperable electrical power condition (IEPC) in the PoE power line;

a rechargeable backup power source adapted to provide electrical power to the PoE output line upon detection of the IEPC in the PoE power line; and

a charger connected to said internal power line and said backup power source and adapted to charge said backup power source using power from said internal power line.

2. The apparatus according to claim 1, wherein an IEPC includes one or more conditions from the group consisting of: (1) a power down, and (2) a power drop.

3. The apparatus according to claim 1, further comprising a video packet sink emulator adapted to emulate a video packet sink of the video camera.

4. The apparatus according to claim 3, wherein detection of an IEPC triggers said video packet sink emulator to emulate the video packet sink.

5. The apparatus according to claim 3, wherein said sink emulator includes a digital data storage medium.

6. The apparatus according to claim 3, wherein said sink emulator includes a connectivity fault detector.

7. The apparatus according to claim 1, wherein the backup power source is rechargeable battery and power from the PoE line is used to charge said rechargeable battery.

8. The apparatus according to claim 1, further comprising an auxiliary backup power source acting as an alternative backup source to provide electrical power to the camera upon detection of an IEPC.

9. A video monitoring system comprising: one or more video cameras;
a video packet sink to receive video packets from each of said one or more video cameras; and
a video camera power backup apparatus residing between one or more of said video cameras and said video packet sink, said power backup apparatuses comprising:
   (1) a Power over Ethernet (PoE) adapter to receive and connect to a Direct Current (DC) PoE power line originating at a PoE source and further adapted to output: (i) an internal power line carrying power received through the PoE power line and (ii) a data line carrying data received from the PoE source;
   (2) a PoE output adapter connected to said internal power line and to said data line and adapted to provide a PoE output line to said video cameras, wherein the PoE output line carries data received through said data line and power received through said internal power line;
   (3) a power-line monitoring circuit to detect an inoperable electrical power condition (IEPC) in the PoE power line;
   (4) a rechargeable backup power source adapted to provide electrical power to the PoE output line upon detection of an IEPC in the PoE power line;
   (5) a charger connected to said internal power line and said backup power source and adapted to charge said backup power source using power from said internal power line; and

(6) a video packet sink emulator adapted to emulate said video packet sink upon detecting a connectivity fault between an associated video camera and said video packet sink.

10. The system according to claim 9, wherein an IEPC includes one or more conditions from the group consisting of: (1) power down, and (2) power drop.

11. The system according to claim 9, wherein detection of power-loss on the PoE indicates a connectivity fault between the video camera and the video packet sink.

12. The system according to claim 9, wherein detection of an IEPC triggers said video packet sink emulator to emulate the video packet sink.

13. The system according to claim 9, wherein said sink emulator includes a digital data storage medium.

14. The system according to claim 9, wherein said sink emulator includes a connectivity fault detector.

15. An edge device power backup apparatus comprising: a Power over Ethernet (PoE) adapter to receive and connect to a Direct Current (DC) PoE power line originating at a PoE source and further adapted to output: (i) an internal power line carrying power received through the PoE power line and (ii) a data line carrying data received from the PoE power source;

a PoE output adapter connected to said internal power line and to said data line and adapted to provide a PoE output line to the edge device, wherein the PoE output line carries data received through said data line and power received through said internal power line;

a power monitoring circuit to detect an inoperable electrical power condition (IEPC) in the PoE power line;
a rechargeable backup power source adapted to provide electrical power, via said PoE output line, to the PoE edge device, upon detection of the IEPC; and a charger connected to said internal power line and said backup power source and

adapted to charge said backup power source using power from said internal power line.

16. The apparatus according to claim 15, further comprising a packet sink emulator adapted to emulate a packet sink of the edge device upon detection of an IEPC.

17. The apparatus according to claim 15, wherein an IEPC includes one or more conditions from the group consisting of: (1) power down, and (2) power drop.

18. The apparatus according to claim 16, wherein detection of power-loss on the PoE indicates a connectivity fault between the edge device and the edge device packet sink.

19. The apparatus according to claim 16, wherein detection of power-loss on the PoE triggers said packet sink emulator to emulate the packet sink.

20. The apparatus according to claim 16, wherein said sink emulator includes a digital data storage medium.

21. An edge device power backup apparatus comprising: a Power over Ethernet (PoE) adapter to receive and connect to a Direct Current (DC) PoE power line originating at a PoE source and further adapted to output: (i) an internal power line carrying power received through the PoE power line and (ii) a data line carrying data received from the PoE power source;

a PoE output adapter connected to said internal power line and to said data line and adapted to provide a PoE output line to the edge device, wherein the PoE output line carries data received through said data line and power received through said internal power line;

a power monitoring circuit to detect an inoperable electrical power condition (IEPC) in the PoE power line;

a rechargeable backup power source adapted to provide electrical power, via said PoE output line, upon detection of the IEPC;

a battery voltage booster to repetitively boost the voltage of said backup power source; and

an electronic OR logic gate to switch from the internal power line to boosted power of said backup power source, upon detection of an IEPC.