



AHEAD OF WHAT'S POSSIBLE™

Enhance Sustainable Logistics

with Automatic Data Capture

Growth in retail and logistics is creating strong demand for the sustainability of all supply-chain activities, with global parcel shipments expected to reach 220 billion in 2027. End applications such as machine vision, data capture scanning, asset tracking, and object dimensioning are central to addressing the eCommerce boom. Secure authentication and robust protection of these edge node devices is critical. In automatic data capture devices, ADI's industry leading technology in depth sensing and fast battery charging enables the collection and management of logistics data quickly and securely, bringing unparalleled levels of automation into the field.



Improved Edge Node Authentication



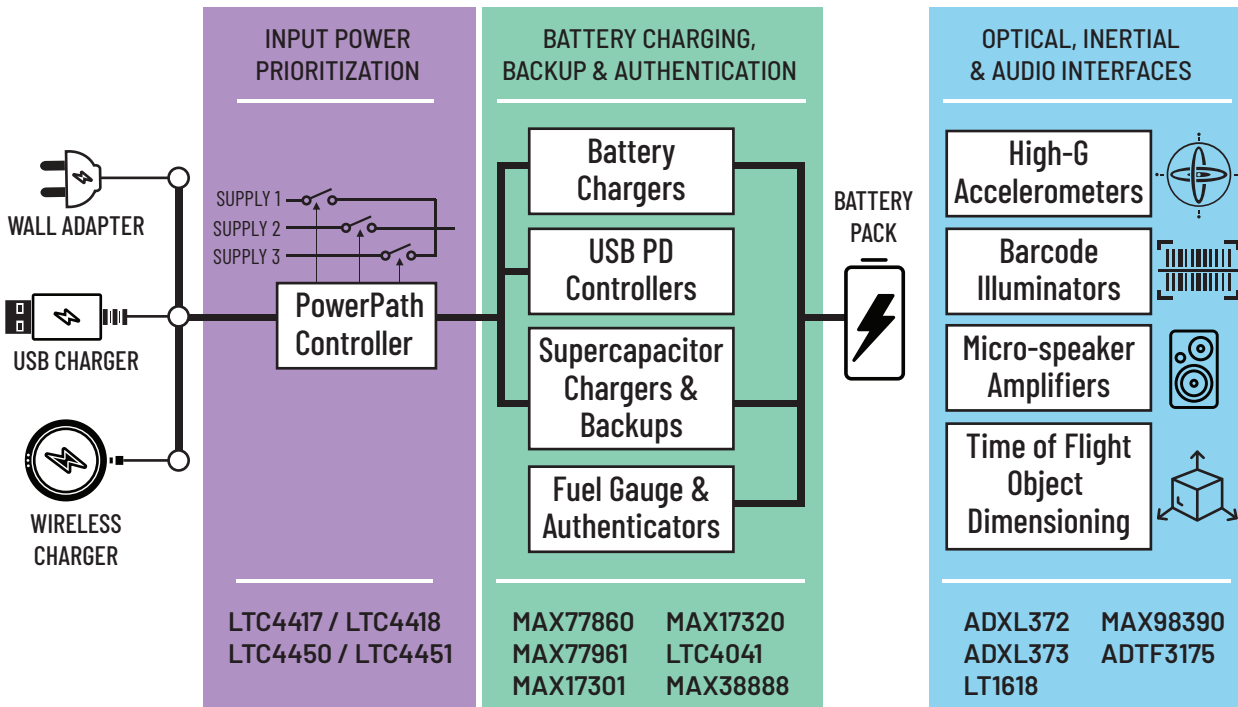
Sustainable Logistics



Superior Battery Management



Increased Warranty Protection



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Input Power Prioritization

Whether a hand-held device needs to be powered by a fast-charging USB cable, a wall adapter or a fixed charging cradle, ADI's ideal diodes and power source prioritizers enable the most energy efficient and convenient options for supply and charge. The **LTC4450/LTC4451** ideal diodes allow up to 12 A current with the lowest voltage dropout. For a prioritized input supply selection, the **LTC4417/LTC4418** connects up to three valid power supplies to a common output based on priority and validity.



Maximize Battery Life



Eliminate Wasted Energy



Optimize Power Regulation

Battery Charging, Backup & Authentication

Removable batteries play a fundamental role in mobile computers and hand-held barcode scanners. The **MAX77961/MAX77860** battery chargers are compatible with 1-cell and 2-cell batteries for maximum charging flexibility. Authentic batteries are safer and provide the best power performance. ADI's portfolio includes industry leading battery authenticators (**MAX17301** 1-cell/**MAX17320** multi-cell) with integrated fuel gauge and battery protection. While swapping out batteries on the fly, the **MAX38888** reversible buck/boost regulator and the **LTC4041** power manager with supercapacitor backup will keep the system running until a fresh battery pack is re-inserted.



Avoid counterfeit or detrimental batteries from being used in your systems with the aid of ADI's industry leading technology

MAX17301 Battery Authenticator

- ▶ Industry leading fuel gauge accuracy
- ▶ Programmable safety and protection
- ▶ Dynamic power functionality



Optical, Inertial & Audio Interfaces

Warehouses and logistic centers can be tough environments. Noise can compromise effective communications, moving machinery can cause objects to fall or be subject to accidental damage, while changing light levels requires excellent illumination for barcode scanners and displays. ADI's innovative solutions help solve all of these problems. The **MAX98390** audio amplifier with integrated Dynamic Speaker Management™ (DSM) enhances volume from the smallest speakers for maximum bass and clearer sound. The **ADXL372/ADXL373** accelerometers can detect accidental falls at up to 400 G acceleration levels. The **LT1618** boost converter helps illuminate barcodes and displays with up to 20 LEDs at once while providing programmable input/output current limits.

ADXL372 Impact Detection

- ▶ Ultra low power event monitoring
- ▶ ± 200g measurement range
- ▶ Interrupt driven wake-up and instant on modes



MAX98390 Audio Amplifier

- ▶ Integrated dynamic speaker management
- ▶ Programmable 10 V boost converter
- ▶ Patented active emissions limiting control circuitry



Box Dimensioning with Time of Flight (ToF)

The dimensions and weight of billions of parcels are measured each day while transiting through warehouses, trucks and couriers' hands. Measuring tapes are slowing down the supply chain and distribution of goods, while fixed automatic measuring systems are expensive and limited to selected locations. ADI brings real-time parcel dimensioning in hand-held computers and scanners into the field with the **ADTF3175** 1 Megapixel time of flight module. Parcels are accurately measured with a single snapshot in an instant and then ready to go.

Check out the **EVAL-ADTF3175** Time of Flight evaluation kit. A turnkey system to support rapid implementation of 3D ToF, showcasing the **ADTF3175** module with ADI's depth Image Signal Processor (**ADSD3500**)

GOODS ARE PACKAGED
IN BOXES THAT ARE
40%
LARGER THAN
THEY NEED TO BE

McKinsey

LEADING TO
INEFFICIENCIES &
SUSTAINABILITY ISSUES

