5.7 MIPI—In Utilities

**USE CASES**

**In Smart Chargers:**
- I3C to provide a shared, two-wire low-power interface to connect sensors and simple UI components such as LED and switches
- A-PHY as a long reach (≤15m), reliable physical interface to connect sensors on solar panels / wind turbines to main control unit

**In Home Batteries:**
- I3C to provide a shared, two-wire interface to connect sensors and simple UI components, such as LEDs and switches
- RFFE within communications module, linking device to smart grid

**In Energy Harvesting Devices:**
- I3C over A-PHY to provide a shared, two-wire interface to connect sensors and simple UI components, such as LEDs and switches
- A-PHY as a long-reach (≤15m), ultra-reliable physical interface to connect sensors on solar panels/wind turbines to the main control unit

**In Energy Monitoring and Control:**
- I3C to provide a shared, two-wire low-power interface to connect simple UI components such as LEDs and buttons
- DSI-2 over C/D-PHY to drive a high-resolution display, providing a rich user experience and, using “Smart Region of Interest,” to reduce power consumption when device is in standby mode

**In Water, Gas and Electricity Meters:**
- I3C to provide a shared, two-wire low-power interface to connect sensors and simple UI components such as dot matrix displays, LEDs, buzzers and buttons; in-band interrupts enable active sleep mode, waking the application processor only when required (critical for battery powered meters)
- RFFE within the device’s radio communications module, linking the meter to the smart grid and controlling critical RF front-end components, such as power amplifiers, filters, switches and antenna tuners