# CO-OPS Engineering Bulletin 23-004

**Engineering Change:** Upgrade the operating systems of the XPERT2, XPERT Dark 2, and 9210B dataloggers to version 4.0.0.20 as instructed by CIL/SIL

**Systems Affected:** XPERT2, XPERT Dark 2, and 9210B dataloggers for new installations and as designated by CIL/SIL

**Originating Team:** Measurement Systems Manager

**Approval Date:** 26 May 2023

**Background:** The operating system version 4.0.0.20 for the XPERT family of dataloggers has a limited release status. This operating system is to be installed on systems being issued by the instrument labs for new installations and on field systems as designated by CIL/SIL personnel. This version of the operating system is compatible with the XPERT2, XPERT Dark 2, and 9210B dataloggers used by CO-OPS in its network of environmental monitoring systems.

This version of the operating system addresses the issue where Iridium Short Burst Data (SBD) modems not synchronized to the Iridium network prior to early-May 2021 began utilizing the incorrect Iridium time epoch and setting the system time to May 2014. This version also addresses the issue where the time stamp for U1 data could be off 1-2 minutes for certain configurations. Improvements with this version of the operating system include a redundant system time sync from the IP modem and a Satlink.sll that includes the U1 PORTS tag polling enhancement.

**Action Required:** Upgrade the XPERT2, XPERT Dark 2, and 9210B dataloggers to operating system version 4.0.0.20 for new installations and as directed by CIL/SIL personnel. *(Upgrades to this version of the operating system should be performed with XTerm File version 3.12.0.1 or higher with a Date created of 11/5/2019 or later)*

**Estimated Time To Complete:** 30 minutes per unit

**References:**
CO-OPS SOP 3.2.3.5 (E1) Standing Project Instructions for Coastal and Great Lakes Water Level Stations
CO-OPS 4.3.1.2 (B1) Sutron Xpert2 Operations and Maintenance Manual
CO-OPS Engineering Bulletin 21-001 (I40) Update Iridium Epoch