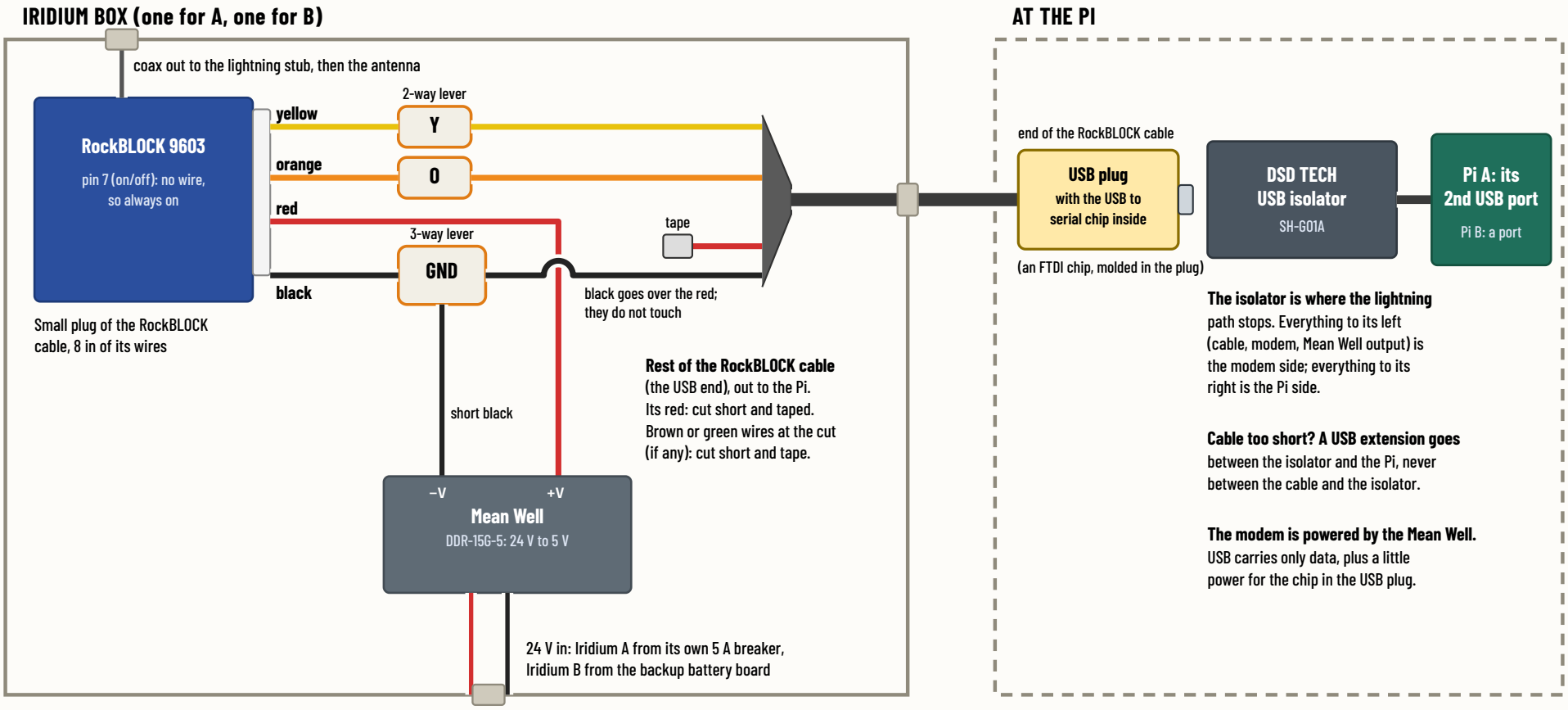
IRIDIUM TO PI WIRING

Each RockBLOCK talks to its Pi over its own USB cable, through a USB isolator at the Pi end. The red wire of the cable is moved to the Mean Well, so the modem never takes power from USB. Same for Iridium A (Pi A) and Iridium B (Pi B).

DRAWN
2026-10-15, rev 3

WHERE WRITTEN
Pending Amendments, Iridium to Pi wiring

SHEET
US letter, landscape



Every join in the Iridium box

WIRE FROM THE SMALL PLUG	GOES TO
yellow	2-way lever connector Y, with the yellow of the rest of the cable
orange	2-way lever connector O, with the orange of the rest of the cable
black	3-way GND lever connector, with the black of the rest of the cable and a short black wire to the Mean Well –V
red	the Mean Well +V screw

The red of the rest of the cable: cut short, taped, not connected to anything. The Mean Well's +Vin and –Vin take the 24 V pair: Iridium A from its own 5 A breaker on the main bus board, Iridium B from the backup battery board.

At the Pi

The cable's USB plug goes into the DSD TECH USB isolator. The isolator plugs into Pi A's second USB port (Iridium A; Mike, 2026-10-20, so a hung hub cannot cut it off) or a USB port on Pi B (Iridium B). The cable reaches the Pi A box or the Pi B box through a split gland, like the battery watchman's USB lead, because the plug will not pass a plain gland.

Steps

1. Cut the RockBLOCK cable 8 in from the small plug. Keep both pieces.
2. Strip the four wires on each side of the cut 1/2 in. Twist each and fold it back on itself so it is thicker. If brown or green wires show on the USB side, cut them short and tape them.
3. Push the long piece's cut end in through a gland of the Iridium box.
4. Join yellow to yellow and orange to orange in two 2-way lever connectors. Black, black and a short black wire in one 3-way. Short black wire to the Mean Well –V screw. Small plug's red to the Mean Well +V screw. Long piece's red: cut short and tape.
5. Plug the small plug into the RockBLOCK.
6. At the Pi: USB plug into the isolator, isolator into Pi A's second USB port (A) or Pi B.

Good to know

1. The USB plug on the end of the RockBLOCK cable has a USB to serial chip molded inside it. That chip turns the modem's serial data into USB; no other converter is needed.
2. The modem runs on the Mean Well, so the isolator's 400 mA limit does not matter: it only powers the chip in the USB plug.
3. Never put the USB plug straight into the Pi or the hub without the isolator: that ties the Pi to the lightning copper through the antenna cable's shield.
4. Parts: one DSD TECH isolator on hand; one to buy for Iridium B.
5. The cable's length is not known; FTDI's standard cable is about 6 ft (Claude's reading). If it is short, a USB extension goes on the Pi side of the isolator.
6. Software: the modem shows up as a USB serial port; it talks at 19,200 baud.