

## Spectrograph Falcon (SBC)

SBC, Single Board Computer == Falcon, in the BS & RS. But, SBC is an un-truth, because there is more than one board, three to be exact. Just the serial and USB interfaces take up one board, and I think there is a separate board for the memory chip.

I started digging around for M270 FO head parts and came across a Falcon SBC.

In photos #1:5 the silver plate @ bottom is the heat sink, and the two copper tubes sticking out of the heat sink are the heat pipes that connect said heat sink to the external cooling fins.



Photo 1: two copper tubes sticking out of the heat sink are the heat pipes that connect said heat sink to the external cooling fins.



Photo 2:

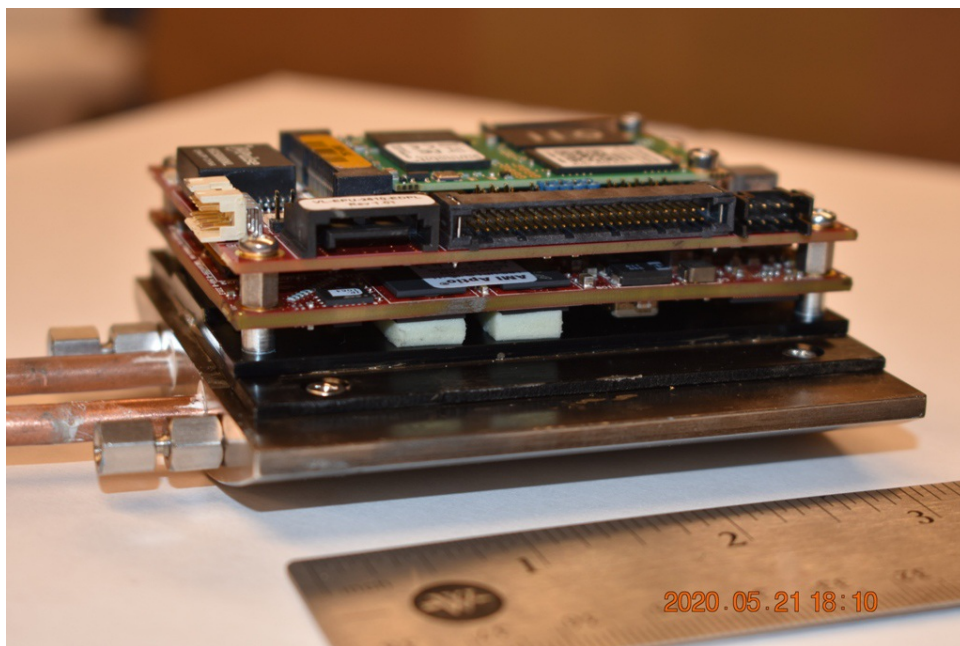


Photo 3:

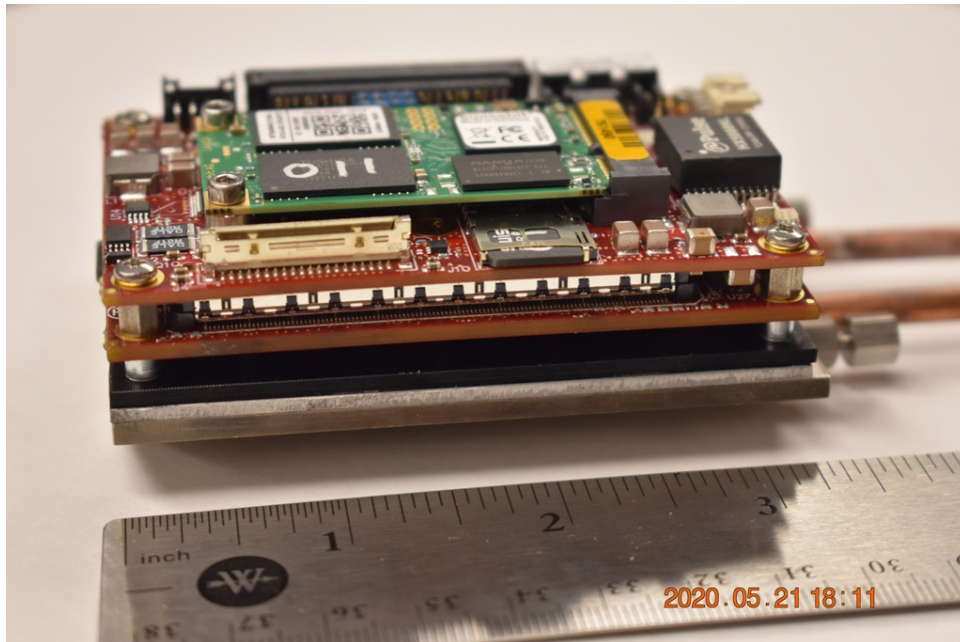


Photo 4:

The second board is near the middle of photo #04 is a memory chip, which has a hand-written serial number, so iBet this is where Art's operating system resides.

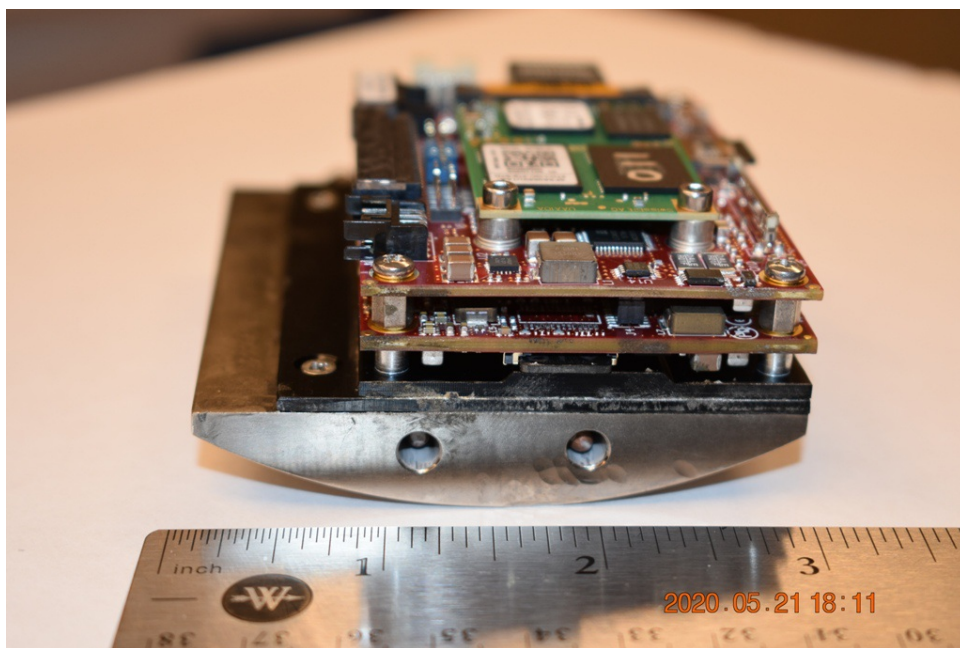


Photo 5:



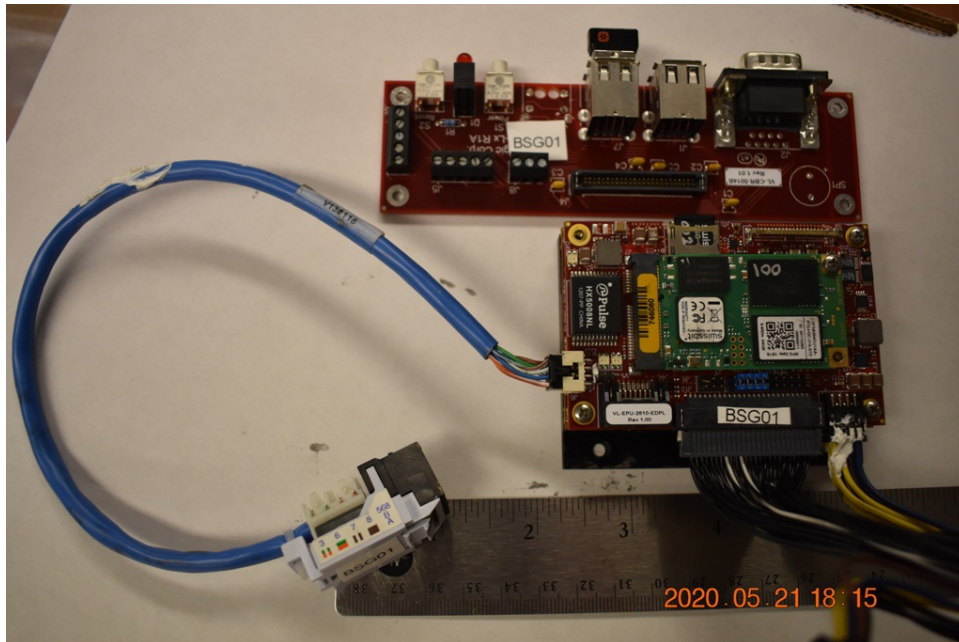


Photo 6:

The #06 photo shows serial/USB board at top, and there is a Enet RJ45 connector attached to the SBC, and the big black connector at bottom connect the SBC & USB boards, and the connector at bottom right is for power.

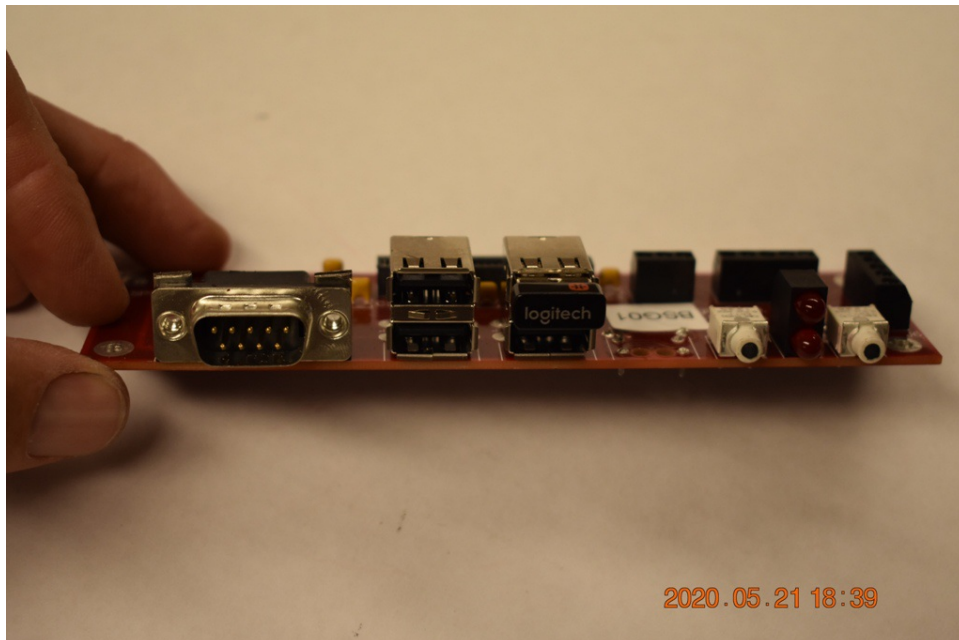


Photo 7: In the #07 photo the Logitech chip in one of the 4x USB ports is a wireless keyboard/mouse receiver.

Email from Mike on 5/21/2020, 7:09 PM

Ooooh, that's an EASY one - yay!

SBC, Single Board Computer == Falcon, in the BS & RS ( and SBC == Rabbit in the OM ).

But, SBC is an un-truth, because there is more than one board. Just the serial and USB interfaces take up one board, and iThink there is a separate board for the disc drive (?).

Looking at Mark's wiring diagram, the upper-right name-box says "A5- Falcon temperature", but below this box, the third one down is "FALCON HEATSINK", which connects to the U3,U4 connector at pins 40,40, called AN5 to the left of U3.

And, in your .pdf aux doc, pg.16 top figure for "Channel 005" shows the thermistor in the heat sink (the silver curved-top piece) which is bolted to the SBC/Falcon boards.

(See following email this turns out to be wrong which Mike confirmed in next email)

However...

iAlso have the attached photo from RS04 repairs on 14-May-2020

<attached: 20200514-01\_RS4-repair.JPG>

which shows the the SBC/Falcon thermistor connected at the bottom of the serial/USB board - where the therm is at the end of the two twisted blue wires with the white shrink tube at the end, screwed down just below that 9pin male "D" serial port - ...so, maybe Mark changed the placement of this therm? I.E. moved it from the heat sink to the computer board(s)?

I'll go have a look to see if iCan confirm/deny this...

And iWill have a look at your new pages.

MF

Email from Mike on 5/21/2020, 8:20 PM

Good. iShall look at your .pdf!

First,

Cancel what iSaid below r.e. the 14-May photo.

iTook that photo bcs Mark tole me it was the Falcon therm, but iMust have mis-understood. Looking at the RS04 just now, the 14-May photo is of the External Heat Sink themistor - it just looks like it's at the serial/USB board from this angle.

So that 14-May photo for the RS04 is the same therm as in your (old) aux .pdf doc pg.12 top photo = Channel 003, for the BS03.

On the RS04, this therm is on the other-side of the Ext heat sink - so RS position is off by 180 degrees from the BS position.

There is still a therm in the SBC heat sink on the RS04,

same as your pg.13 Channel 005.

Sorry, MF

Email from Mike on 5/21/2020, 9:43 PM

iLike photos too. iThink they are great documentators.

Speaking of...

iStarted digging around for M270 FO head parts and came across a Falcon SBC.

<attached: 20200521\_Flacon-SBC\_XX.JPG>

It looks there are three boards involved.

The second board is not a disc drive -

near the middle of photo #04 is a memory chip, which has a hand-written serial number, so iBet this is where Art's operating system resides.

In photos #1:5 the silver plate @ bottom is the heat sink,  
and the two copper tubes sticking out of the heat sink are the heat pipes  
that connect said heat sink to the external cooling fins.

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there is a Enet RJ45 connector attached to the SBC, and  
the big black connector at bottom connect the SBC & USB boards,  
and the connector at bottom right is for power.

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is a wireless keyboard/mouse receiver.

MF