

Hello, everybody! Mikha'el here to give you all another Mega Man calc after so long. This will be an update to [an ancient calc I made ages ago](#). Figured I'd give it an update with more updated values and in a situation that is... very interesting.

So! As per usual. Zero's Tag Assist move (which is canon) will be calculated as [the laser moves down and freezes on screen](#). However, here's the situation that makes it interesting: you can do the same thing in Optic Sunflower's rematch in the Gateway stage which is in a space station! Why does this matter? Well because a Reploid who literally uses Optic Sunflower's DNA data (he literally turns into him) can fart out that same orbital laser meaning he probably has control over that satellite shown in Optic Sunflower's boss battle. Given the guy literally copies his DNA Data (New Gen Reploid Copy Chip lore go brr), I think it's safe to say that the orbital laser comes from Earth and travels to the Gateway space station.

So! We just calculate the speed of the laser, the apparent speed during the Tag Assist move of it, and the speed of Zero swinging his sword. Simple stuff.

For Zero's speed of swinging his sword (I'll have to do the px again since we got an actual height for Zero)...



1266px = [1.75 meters](#)

1415px = 1.956 meters

[It seems Zero swings his saber about over 225 degrees in about 0.06 seconds as he is about to free his teammate.](#)

Distance: $2 \times \pi \times 1.956 \text{ meters} \times (225/360) = 7.6811940380270445 \text{ meters}$

Apparent Speed: $7.6811940380270445 \text{ meters} / 0.06 \text{ seconds} = 128.019900633784075 \text{ m/s}$

For the apparent speed of the laser, we just assume the snail's speed which [VSBW](#) labels at [0.00275 m/s](#).

Now we just have to calculate the distance of the space station from Earth. An easy way to do this is by ang sizing the distance of the space station to the Moon and then subtract that calculated distance from the Earth-Moon distance of 384400000 meters.

Here we go!



$$3474800 \text{ meters} * 5655 / [2843 * 2 * \tan(70\text{deg}/2)] = 4,935,473.05 \text{ meters}$$

$$384400000 \text{ meters} - 4935473.05 \text{ meters} = 379464526.95 \text{ meters}$$

The laser gets here in about 3/60 seconds since it should cover that same timeframe.

$$379464526.95 \text{ meters} / (3/60) \text{ seconds} = 7589290538 \text{ m/s or } 25.315c \text{ (FTL+)}$$

Time for calculating Zero's actual speed!

$$\text{Speed: } (7589290538 \text{ m/s} / 0.00275 \text{ m/s}) * 128.019900633784075 \text{ m/s} = 353301898383882.794 \text{ m/s or } 1.178488 \text{ Millions C (Massively FTL+)}$$

Cool beans. Now I shall calculate the speed of the teleporters. We know from the Mega Man X8 manual that the other Maverick Hunter that comes in for the Tag Assist is [on standby](#). But the thing is we don't know where they are when on standby. Or so I'd say if we didn't know how teleporters/transfer systems work in Mega Man X/Zero. [According to an interview in the Remastered Tracks Rockman Zero Telos, the teleporters/transfer systems work by using satellites in orbit](#). Meaning? It means that these satellites are the Maverick Hunters' most likely place where they remain on standby. Granted, we don't know which satellites in particular are used so....

What I'm gonna do is try to make a low-end and high-end for the teleporters. The low-end will assume that the satellite they remain in for standby is orbiting the Moon. And the high-end will assume that the satellite is orbiting the Earth.

For the low-end, I will just use the distance from the space station Gateway to the Moon calculated before. Also, it takes around 0.0333333333 second from the moment you call the Maverick Hunter and their teleporter beam appears on screen. So!

$4935473.05 \text{ meters} / 0.0333333333 \text{ seconds} = 148064191.5148064191514806 \text{ m/s}$

Teleporter speed: $(7589290538 \text{ m/s} / 0.00275 \text{ m/s}) * 148064191.5148064191514806 \text{ m/s} = 408618970065432815915.634 \text{ m/s}$ or 1.363 Trillions C (**Massively FTL+**)

Niiiiice! Now for the high-end it shall be simple.

I'll just use the distance calculated above for the laser's travel distance since satellites usually orbit the Earth at altitudes above 100km at least.

Speed: $(379464526.95 \text{ meters} / 0.0333333 \text{ seconds}) * (7589290538 \text{ m/s} / 0.00275 \text{ m/s}) = 31416757350084051892415.52878 \text{ m/s}$ or 104.795 Trillions C (**Massively FTL+**)

Crazyyyyyyyyyyyyyyyyy!!!!!!!!!!!!!! Trillions C for a high-end is looking good with just games.
List of results for this calculation:

- Zero Tag Assist Speed: 1.178488 Millions C (**Massively FTL+**)
- Teleporter Speed:
 - Low-end: 1.363 Trillions C (**Massively FTL+**)
 - High-end: 104.795 Trillions C (**Massively FTL+**)

For reference, the previous calc got Thousands C as a bare minimum, and the high-end got Billions C. So this is nice. Millions-Trillions C Mega Man X via these calcs.