

## Expansion kit for DS10U to install a LTE/4G card

The Shuttle XPC accessory WWN03 allows the Shuttle XPC slim Barebone DS10U to be upgraded with an LTE/4G function for mobile network. The LTE card will occupy the 2.5" bay, so you have to use an M.2 SSD as mass storage device. The required LTE/4G card in M.2-3042 format and an activated Nano SIM card is not included in the scope of delivery. The existing WLAN function of DS10U can still be used then.

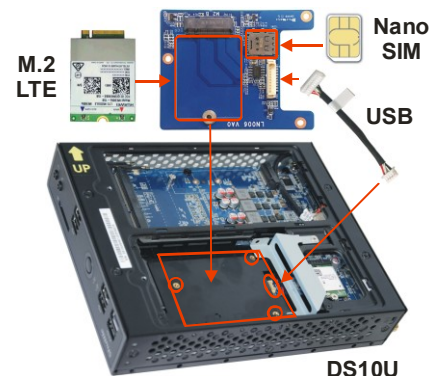
### Feature Highlights

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contents              | <ul style="list-style-type: none"> <li>• Daughterboard LN006 with USB cable</li> <li>• Fastening screw for M.2/LTE card (two-parts: bolt with screw)</li> <li>• 3x screw to install LN006 in a 2.5" bay</li> <li>• 2x LTE/4G antennas</li> <li>• 2x antenna cables with toothed lock washer and screw nut</li> <li>• Quick installation guide</li> </ul>                                                                                                                                                                                                            |
| Adapter card          | <ul style="list-style-type: none"> <li>• USB connector to connect to the mainboard</li> <li>• M.2 socket supports one LTE/4G module M.2-3042 Key B</li> <li>• Supports one SIM card in Nano format</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |
| Two external antennas | <p>LTE/4G dipole omnidirectional antenna<br/>Multi-band: supports EU frequency bands (800, 1800, 2600 MHz) for GSM/UMTS/LTE and the following frequency ranges: 704~960, 1428~1575, 1720~2170, 2400~2690 MHz<br/>Colour: black, Length overall: 135.7 mm<br/>Dimensions of the antenna body: 114.8 x 20.1 mm<br/>Impedance: 50 Ohm<br/>Voltage Standing Wave Ratio (VSWR): &lt;= 3.0<br/>Radiation: Omni, Gain: 2 dBi, Polarisation: vertical<br/>Connector: SMA</p>                                                                                                |
| Two antenna cables    | <p>RF cable lengths: 20 cm<br/>Connectors:<br/>1) SMA Pigtail female<br/>2) I-PEX MHF 4</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Compatibility         | <p><u>The WWN03 can be used for</u><br/>- Shuttle XPC slim DS10U<br/><u>Additional components are required for operation:</u><br/>- LTE/4G module M.2-3042 Key B<br/>- SIM card in Nano format<br/><u>Successfully tested LTE/4G modules:</u><br/>- Sierra EM7455 (CAT 6, for EMEA, North America)<br/>- Sierra EM7430 (CAT 6, for APAC)<br/>- Huawei ME906S (CAT 4, for EMEA, Australia, NZL)<br/>- Quectel EM06-E (CAT 6, for EMEA, Australia, Brazil)<br/><u>WWN03 is not compatible</u> to LTE cards with PCIe interface e.g. Fibocom L850-GL-00 LTE module</p> |

## Shuttle XPC accessory WWN03 Expansion kit for LTE/4G module and Nano SIM card



Shuttle XPC accessory WWN03



DS10U

The 2.5" bay will be occupied by the WWN03 kit and you have to use a M.2 SSD card. The LTE module and SIM card is not included.



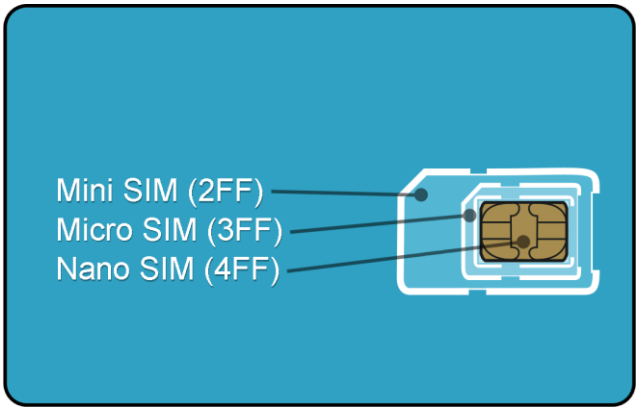
**Note:** If the DS10U is operated in vertical position with the stand, you cannot install an antenna at the bottom side. This means only 3 antennas can be used for WLAN and LTE in total (either LTE or WLAN will have to work with one antenna only).

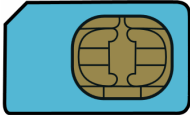


Images for illustration purposes only.

Compatible SIM cards

The SIM card is used to identify your mobile phone in a mobile network. SIM cards have been shrunk over the years: The Mini standard has been superseded by Micro and Nano. The Shuttle XPC accessory WWN03 only supports Nano format. A new SIM card usually comes perforated in three sizes (Mini, Micro and Nano) and simply requires the desired format to be pressed out.

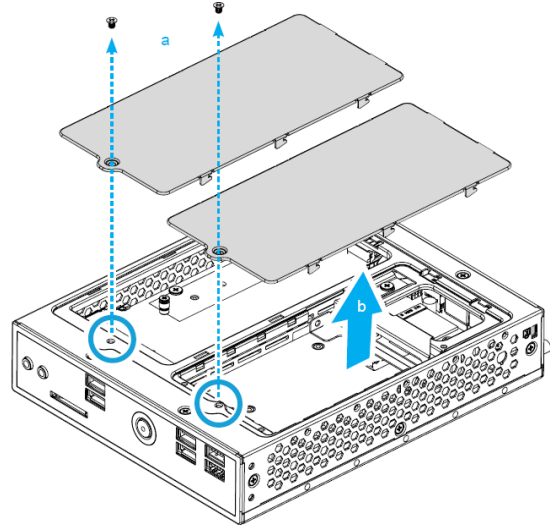


| SIM format                       | Image                                                                               | Supported by WWN03? |
|----------------------------------|-------------------------------------------------------------------------------------|---------------------|
| <b>Mini SIM</b><br>25 x 15 mm    |  | No                  |
| <b>Micro SIM</b><br>15 x 12 mm   |  | No                  |
| <b>Nano SIM</b><br>12.3 x 8.8 mm |  | Yes                 |

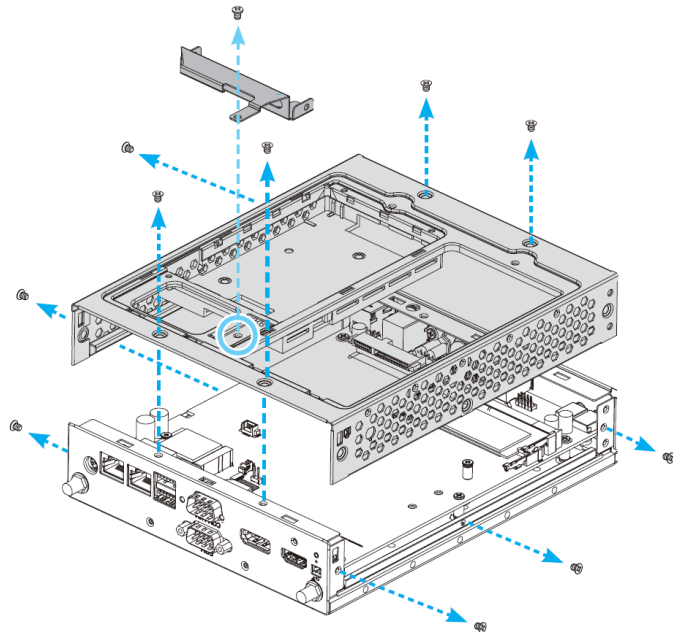
## Quick Guide to install the Accessory WVN03 into the XPC DS01U

**Due to safety reasons, please turn off your computer completely first and unplug it from the power supply.**

**(1)** Unscrew the two screws of the chassis cover. Slide the cover backwards and upwards.

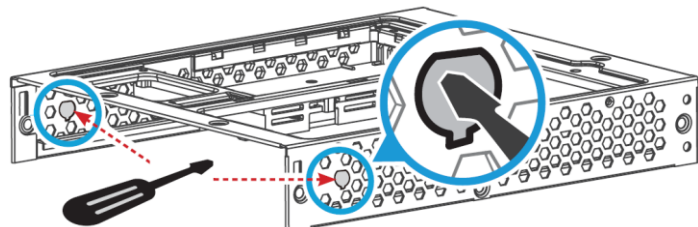


**(2)** Unfasten the rack mount screw and remove the rack, then unscrew the ten screws of the middle frame and remove it.

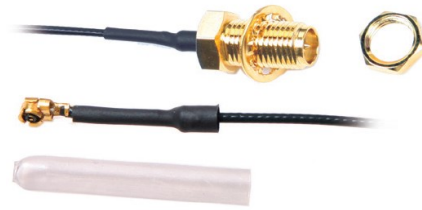


**(3)** Use a 6mm screwdriver to puncture the perforated hole in the middle frame from the outside in. Once the screwdriver passes through the perforation, carefully remove the metal tag.

**Caution:** If the metal tag still does not detach, carefully bend it by pushing down from the inside of the middle frame.

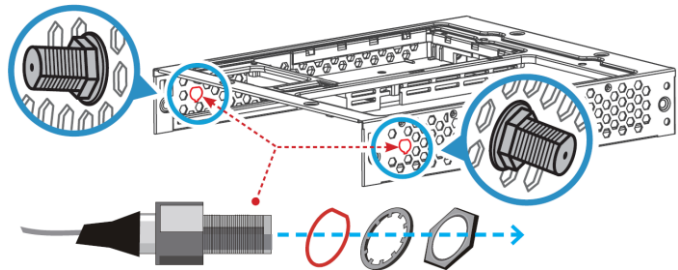


(4) Take out the two antenna cable connectors and remove the locks and protective sleeves.

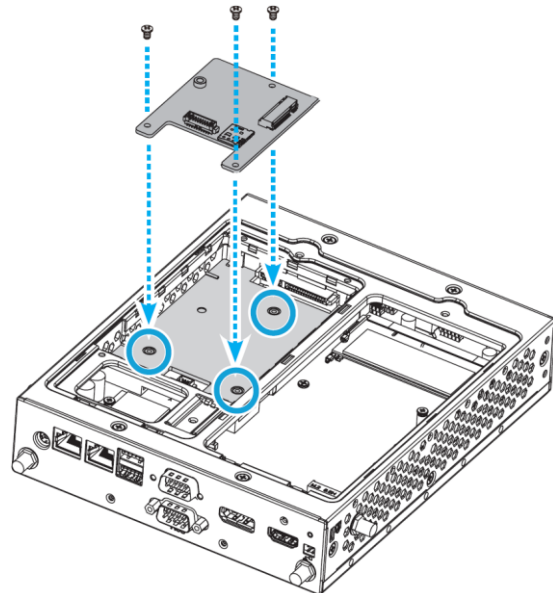


(5) Then install the antenna cable connectors through the appropriate opening in the middle frame and use the lock to affix the antenna from the outside.

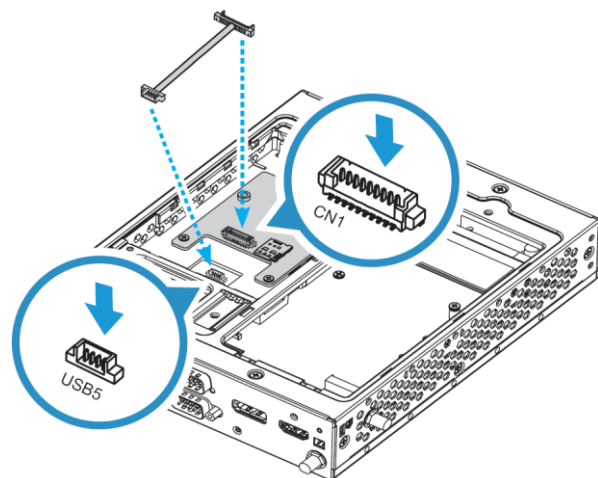
**Caution:** When leading the cable connector through the opening, check the socket alignment and only push horizontally. DO NOT turn or twist the cable. Should any difficulties occur, make sure the surface is clean. Finally, check the alignment again and carefully apply more force.



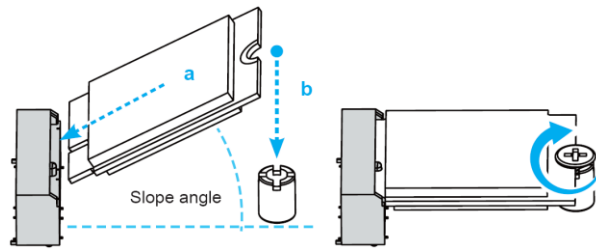
(6) Replace the middle frame, then fasten the ten screws. As shown, place the daughterboard (LN006) in the chassis and fasten the three screws.



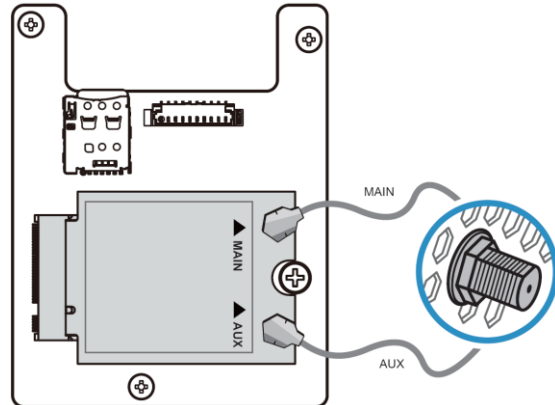
(7) Then connect the USB cable.



**(8)** Please install an LTE module (M.2-3042 Key B card) in the relevant slot on the daughterboard, then tighten the screw with bolt firmly.



**(9)** As shown, connect the two antenna cables to "MAIN" and "AUX" on your LTE module.



**(10) Note:** If the DS10U is operated in vertical position with the stand, you cannot install an antenna at the bottom side. This means only 3 antennas can be used for WLAN and LTE in total (either LTE or WLAN will have to work with one antenna only).



**(11)** Replace the case cover and fasten its screws.

Screw the antennas into position as pictured. Make sure they are aligned vertically to achieve the best possible signal reception.

