OT-2 INTEGRATION KIT

QUICK START GUIDE

QINSTRUMENTS
A BICO COMPANY

This is a short overview over the necessary steps to use the OT-2 Integration kit. Be aware that handling of the kit could cause harm to you or your device.
QINSTRUMENTS GmbH does not take any liability for accidents, misuse, abuse or neglect.

Check requrirements

Manual: 2.3. Prerequisites

System	OT-2
App version	> 3.20.0
API version	2

Download | Install

Manual: 3.5. Install QOT python module

3.6. Install QOT labware definition files

QOT python module

https://www.qinstruments.com/service/downloads/xyz.zip
unzip package
upload all files via the jupyter notebook:
<OT-2 IP-Adress>:48888

QOT labware definition for your adapter

https://www.qinstruments.com/automation/adapter
unzip package
copy all files into the Custom Labware Definition Folder

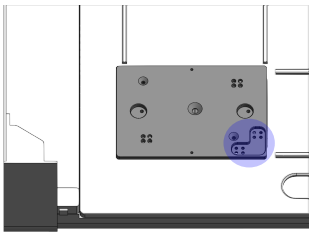
Mount option A

Manual: 3.2. Assemble QOT plate

3.4. Mount and connect QINSTRUMENTS Device

QOT adapter plate in regard to deck position

note set-up number of the adapter plate



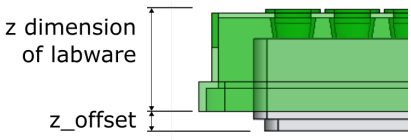
QI device on QOT adapter plate and connect the device to the OT-2 System via the QOT USB/RS232 converter

remove rubber base elements from QI device bottom
converter might need to be configured

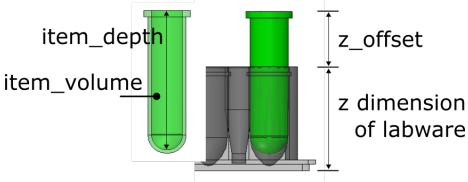
Script

Manual: 4. Operation

Standard Labware with QI adapter



QOT Labware definition with QI adapter




```
from opentrons import protocol_api
import sys
sys.path.append('/var/lib/jupyter/notebooks')
from QOT import QIDevice

def run(protocol: protocol_api.ProtocolContext):
    # create tip rack and pipette
    tip_rack = protocol.load_labware('opentrons_96_tiprack_300ul', 2)
    pipette_right = protocol.load_instrument('p300_single', 'right', tip_racks=[tip_rack])

    # init/connect to qi device and load standard labware with z_offset due to usage of adapter
    bs_3000_t = QIDevice(serial_number='8902', deck_position=1, adapter_set_up=1, protocol=protocol)
    lbw_96pcr = bs_3000_t.load_labware('biorad_96_wellplate_200ul_pcr', z_offset=3)

    # use labware and QI device
    pipette_right.aspirate(200, lbw_96pcr['A1'])
    pipette_right.dispense(200, lbw_96pcr['A5'])
    bs_3000_t.exec_cmd('setShakeTargetSpeed500')
    bs_3000_t.exec_cmd('sonwr50', blocking=True)
```