Quantization API Reference

torch.quantization

This module contains Eager mode quantization APIs.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 9)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.quantization
```

Top level APIs

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 14)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    quantize
    quantize_dynamic
    quantize_qat
    prepare
    prepare_qat
    convert
```

Preparing model for quantization

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 29)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    fuse_modules
    QuantStub
    DeQuantStub
    QuantWrapper
    add_quant_dequant
```

Utility functions

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 43)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    add_observer_
    swap_module
    propagate_qconfig_
    default_eval_fn
    get_observer_dict
```

torch.quantization.quantize_fx

This module contains FX graph mode quantization APIs (prototype).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 59)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.quantization.quantize_fx
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 61)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    prepare_fx
    prepare_qat_fx
    convert_fx
    fuse_fx
```

torch (quantization related functions)

This describes the quantization related functions of the *torch* namespace.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 76)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 78)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    quantize_per_tensor
    quantize_per_channel
    dequantize
```

torch.Tensor (quantization related methods)

Quantized Tensors support a limited subset of data manipulation methods of the regular full-precision tensor.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 93)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.Tensor
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 95)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    view
    as_strided
    expand
    flatten
    select
    ne
    eq
    ge
    le
    gt
    lt
    copy_
    clone
    dequantize
    equal
    int_repr
    max
    mean
    min
    q_scale
    q_zero_point
    q_per_channel_scales
    q_per_channel_zero_points
    q_per_channel_axis
    resize_
    sort
    topk
```

torch.quantization.observer

This module contains observers which are used to collect statistics about the values observed during calibration (PTQ) or training (QAT).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 135)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.quantization.observer
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 137)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    ObserverBase
    MinMaxObserver
    MovingAverageMinMaxObserver
    PerChannelMinMaxObserver
    MovingAveragePerChannelMinMaxObserver
    HistogramObserver
    PlaceholderObserver
    RecordingObserver
    NoopObserver
    get_observer_state_dict
    load_observer_state_dict
    default_observer
    default_placeholder_observer
    default_debug_observer
    default_weight_observer
    default_histogram_observer
    default_per_channel_weight_observer
    default_dynamic_quant_observer
    default_float_qparams_observer
```

torch.quantization.fake_quantize

This module implements modules which are used to perform fake quantization during QAT.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 168)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.quantization.fake_quantize
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 170)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    FakeQuantizeBase
    FakeQuantize
    FixedQParamsFakeQuantize
    FusedMovingAvgObsFakeQuantize
    default_fake_quant
    default_weight_fake_quant
    default_per_channel_weight_fake_quant
    default_histogram_fake_quant
    default_fused_act_fake_quant
    default_fused_wt_fake_quant
    default_fused_per_channel_wt_fake_quant
    disable_fake_quant
    enable_fake_quant
    disable_observer
    enable_observer
```

torch.quantization.qconfig

This module defines *QConfig* objects which are used to configure quantization settings for individual ops.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 197)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.quantization.qconfig
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 199)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    QConfig
    default_qconfig
    default_debug_qconfig
    default_per_channel_qconfig
    default_dynamic_qconfig
    float16_dynamic_qconfig
    float16_static_qconfig
    per_channel_dynamic_qconfig
    float_qparams_weight_only_qconfig
    default_qat_qconfig
    default_weight_only_qconfig
    default_activation_only_qconfig
    default_qat_qconfig_v2
```

torch.nn.intrinsic

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 220)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 221)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic.modules
```

This module implements the combined (fused) modules conv + relu which can then be quantized.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 226)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.intrinsic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 228)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    ConvReLU1d
    ConvReLU2d
    ConvReLU3d
    LinearReLU
    ConvBn1d
    ConvBn2d
    ConvBn3d
    ConvBnReLU1d
    ConvBnReLU2d
    ConvBnReLU3d
    BNReLU2d
    BNReLU3d
```

torch.nn.intrinsic.qat

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 248)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic.qat
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 249)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic.qat.modules
```

This module implements the versions of those fused operations needed for quantization aware training.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 255)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.intrinsic.qat
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 257)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    LinearReLU
    ConvBn1d
    ConvBnReLU1d
    ConvBn2d
    ConvBnReLU2d
    ConvReLU2d
    ConvBn3d
    ConvBnReLU3d
    ConvReLU3d
    update_bn_stats
    freeze_bn_stats
```

torch.nn.intrinsic.quantized

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 276)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic.quantized
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 277)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic.quantized.modules
```

This module implements the quantized implementations of fused operations like conv + relu. No BatchNorm variants as it's usually folded into convolution for inference.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 284)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.intrinsic.quantized
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 286)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    BNReLU2d
    BNReLU3d
    ConvReLU1d
```

```
    ConvReLU2d
    ConvReLU3d
    LinearReLU
```

torch.nn.intrinsic.quantized.dynamic

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 300)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic.quantized.dynamic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 301)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.intrinsic.quantized.dynamic.modules
```

This module implements the quantized dynamic implementations of fused operations like linear + relu.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 306)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.intrinsic.quantized.dynamic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 308)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    LinearReLU
```

torch.nn.qat

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 317)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.qat
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 318)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.qat.modules
```

This module implements versions of the key nn modules **Conv2d()** and **Linear()** which run in FP32 but with rounding applied to simulate the effect of INT8 quantization.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 324)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.qat
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 326)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    Conv2d
    Conv3d
    Linear
```

torch.nn.qat.dynamic

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 337)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.qat.dynamic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 338)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.qat.dynamic.modules
```

This module implements versions of the key nn modules such as **Linear()** which run in FP32 but with rounding applied to simulate the effect of INT8 quantization and will be dynamically quantized during inference.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 344)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.qat.dynamic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 346)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    Linear
```

torch.nn.quantized

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 355)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.quantized
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 356)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.quantized.modules
```

This module implements the quantized versions of the nn layers such as ~`torch.nn.Conv2d` and *torch.nn.ReLU*.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 361)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.quantized
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 363)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    ReLU6
    Hardswish
    ELU
    LeakyReLU
    Sigmoid
    BatchNorm2d
    BatchNorm3d
    Conv1d
    Conv2d
    Conv3d
    ConvTranspose1d
    ConvTranspose2d
    ConvTranspose3d
    Embedding
    EmbeddingBag
    FloatFunctional
    FXFloatFunctional
    QFunctional
    Linear
    LayerNorm
    GroupNorm
    InstanceNorm1d
    InstanceNorm2d
    InstanceNorm3d
```

torch.nn.quantized.functional

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 395)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.quantized.functional
```

This module implements the quantized versions of the functional layers such as ~`torch.nn.functional.conv2d` and *torch.nn.functional.relu*. Note: :meth:`~torch.nn.functional.relu` supports quantized inputs.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 397); *backlink*

Unknown interpreted text role "meth".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 401)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.quantized.functional
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 403)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    avg_pool2d
    avg_pool3d
    adaptive_avg_pool2d
    adaptive_avg_pool3d
    conv1d
    conv2d
    conv3d
    interpolate
    linear
    max_pool1d
    max_pool2d
    celu
    leaky_relu
    hardtanh
    hardswish
    threshold
    elu
    hardsigmoid
    clamp
    upsample
    upsample_bilinear
    upsample_nearest
```

torch.nn.quantized.dynamic

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 433)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.quantized.dynamic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 434)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.quantized.dynamic.modules
```

Dynamically quantized :class:`~torch.nn.Linear`, :class:`~torch.nn.LSTM`, :class:`~torch.nn.LSTMCell`, :class:`~torch.nn.GRUCell`, and :class:`~torch.nn.RNNCell`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 436); *backlink*

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 436); *backlink*

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 436); *backlink*

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 436); *backlink*

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 436); *backlink*

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 440)

Unknown directive type "currentmodule".

```
.. currentmodule:: torch.nn.quantized.dynamic
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 442)

Unknown directive type "autosummary".

```
.. autosummary::
    :toctree: generated
    :nosignatures:
    :template: classtemplate.rst

    Linear
    LSTM
    GRU
    RNNCell
    LSTMCell
    GRUCell
```

Quantized dtypes and quantization schemes

Note that operator implementations currently only support per channel quantization for weights of the **conv** and **linear** operators. Furthermore, the input data is mapped linearly to the the quantized data and vice versa as follows:

Quantization:

$$Q_{out} = \text{clamp}(x_{input}/s + z, Q_{min}, Q_{max})$$

Dequantization:

$$x_{out} = (Q_{input} - z)*s$$

where clamp(.) is the same as :func:`~torch.clamp` while the scale s and zero point z are then computed as decribed in :class:`~torch.ao.quantization.observer.MinMaxObserver`, specifically:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 472); *backlink*

Unknown interpreted text role "func".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 472); *backlink*

Unknown interpreted text role "class".

if Symmetric:

$$s = 2\max(|x_{\min}|, x_{\max}) / (Q_{\max} - Q_{\min})$$

$$z = \begin{cases} 0 & \text{if dtype is qint8} \\ 128 & \text{otherwise} \end{cases}$$

Otherwise:

$$s = (x_{\max} - x_{\min}) / (Q_{\max} - Q_{\min})$$

$$z = Q_{\min} - \text{round}(x_{\min} / s)$$

where $[x_{\min}, x_{\max}]$ denotes the range of the input data while $Q_{\min}$ and $Q_{\max}$ are respectively the minimum and maximum values of the quantized dtype.

Note that the choice of s and z implies that zero is represented with no quantization error whenever zero is within the range of the input data or symmetric quantization is being used.

Additional data types and quantization schemes can be implemented through the custom operator mechanism.

- :attr:`torch.qscheme` â€" Type to describe the quantization scheme of a tensor. Supported types:

  System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 501); *backlink*

  Unknown interpreted text role "attr".

  - :attr:`torch.per_tensor_affine` â€" per tensor, asymmetric

    System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 504); *backlink*

    Unknown interpreted text role "attr".

  - :attr:`torch.per_channel_affine` â€" per channel, asymmetric

    System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 505); *backlink*

    Unknown interpreted text role "attr".

  - :attr:`torch.per_tensor_symmetric` â€" per tensor, symmetric

    System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 506); *backlink*

    Unknown interpreted text role "attr".

  - :attr:`torch.per_channel_symmetric` â€" per channel, symmetric

    System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 507); *backlink*

    Unknown interpreted text role "attr".

- `torch.dtype` â€" Type to describe the data. Supported types:
  - :attr:`torch.quint8` â€" 8-bit unsigned integer

    System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 511); *backlink*

Unknown interpreted text role "attr".

- :attr:`torch.qint8` â€” 8-bit signed integer

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 512); *backlink*

Unknown interpreted text role "attr".

- :attr:`torch.qint32` â€” 32-bit signed integer

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 513); *backlink*

Unknown interpreted text role "attr".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 517)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.quantizable
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\pytorch-master\docs\source\(pytorch-master)(docs)(source)quantization-support.rst, line 518)

Unknown directive type "automodule".

```
.. automodule:: torch.nn.quantizable.modules
```