

This PDF is generated from: <https://www.aitesigns.co.za/Sun-31-Mar-2019-4405.html>

Title: Inverter DC boost

Generated on: 2026-08-21 21:14:49

Copyright (C) 2026 AITESIGNS SOLAR. All rights reserved.

For the latest updates and more information, visit our website: <https://www.aitesigns.co.za>

Boost converters are a type of DC-DC switching converter that efficiently increase (step-up) the input voltage to a higher output voltage. By storing energy in an inductor during the switch-on ...

A boost converter is a DC to DC converter with an output voltage greater than the source voltage. A boost converter is sometimes called a step-up converter since it "steps up" the source voltage.

Learn how to design and calculate Boost DC/DC converters with this comprehensive guide. Get insights on Boost Converter Block Diagram.

How A Boost Converter WorksBoost Converter ConfigurationModes of OperationCalculating, Inductance, Current, Voltage and Duty Cycle in A Boost ConverterA Practical Boost Converter Circuit Design Using IC 555Important ParametersConstruction StepsAdding A FeedbackA boost converter may be primarily operated in two modes: the continuous mode, and the discontinuous mode. In continuous mode, the inductor current is never allowed to reach zero during its discharging process (while the transistor is switched OFF). This happens when the ON/OFF time of the transistor is dimensioned in such a way that the inductor i...See more on [homemade-circuits](#)

.b_overlay
.btn.rounded{position:absolute;cursor:pointer;z-index:1;-moz-user-select:none;-khtml-user-select:none;-webkit-user-select:none;-o-user-select:none;-ms-user-select:none;user-select:none}.b_overlay
.btn.rounded,.b_overlay .btn.rounded .bg,.b_overlay .btn.rounded .cr,.b_overlay .btn.rounded .cr>div,.b_overlay .btn.rounded .vcac>div{border-radius:50%}.b_overlay .btn.rounded .vcac{height:0}.b_overlay .btn.rounded{height:32px;width:32px;top:50%;margin-top:-16px}.b_overlay .btn.rounded .bg,.b_overlay .btn.rounded:hover .bg{opacity:0}.b_overlay .btn.rtl.rounded .cr{direction:ltr}.b_overlay .btn.hidden.rounded .cr,.b_overlay .btn.disabled.rounded .cr{visibility:hidden}.b_overlay .btn.rounded .cr>div{border:1px solid #ecec;box-shadow:0 2px 3px 0 rgba(0,0,0,.1);height:30px;width:30px;overflow:hidden;background-image:none;background-color:#fff}.b_overlay .btn.rounded .cr>div:hover{box-shadow:0 2px 4px 1px rgba(0,0,0,.14)}.b_overlay .btn.rounded

```
.cr>div:after{bottom:5px;background-color:#fff;transform-origin:-430px
0;display:inline-block;transform:scale(.5);position:relative}.b_overlay
.btn.rounded
.cr>div:hover:after{transform-origin:-514px 0}.b_overlay .btn.ltr.rounded .cr>div:after{right:5px}.b_overlay
.btn.rtl.rounded .cr>div:after{left:5px}.b_overlay .btn.prev.ltr.rounded .cr,.b_overlay .btn.next.rtl.rounded
.cr{transform:scaleX(-1)}body .b_overlay .btn.rounded.next{right:-12px}body .b_overlay
.btn.rounded.prev{left:-13px}.ra_car_container .b_overlay .btn.prev.ltr.rounded .cr>div,.ra_car_container
.b_overlay .btn.next.rtl.rounded .cr>div{transform:unset}.ra_car_container .b_overlay .btn.rounded
.cr>div{background-position:0;border:unset}.ra_car_container .b_overlay .btn.rounded
.cr>div:after{content:unset}@media screen and (forced-colors:active){.b_overlay .btn.rounded.hidden
*,.b_overlay .btn.rounded.disabled *{background:none}.b_overlay .btn.rounded.hidden,.b_overlay
.btn.rounded.disabled{background:none}}.b_overlay .btn.rounded
.cr>div:after{content:url(/rp/EX_mgILPdYtFnI-37m1pZn5YKII.png))}#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_title,#b_content .pa_carousel_mlo .pa_item.pa_vCard .pa_caption,#b_content
.pa_carousel_mlo .pa_item.pa_vCard .b_finalText,#b_content .pa_carousel .pa_item.pa_vCard
.pa_title,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption,#b_content .pa_carousel .pa_item.pa_vCard
.b_finalText,#b_content .pa_grid .pa_item.pa_vCard .pa_title,#b_content .pa_grid .pa_item.pa_vCard
.pa_caption,#b_content .pa_grid .pa_item.pa_vCard .b_finalText{padding:0
var(--smtc-padding-ctrl-horizontal-default)}#b_content .pa_carousel_mlo .pa_item.pa_vCard .cico,#b_content
.pa_carousel .pa_item.pa_vCard .cico,#b_content .pa_grid .pa_item.pa_vCard
.cico{margin-bottom:var(--smtc-gap-between-content-small)}#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_title,#b_content .pa_carousel .pa_item.pa_vCard .pa_title,#b_content .pa_grid
.pa_item.pa_vCard
.pa_title{font:var(--bing-smtc-text-global-body3);color:var(--smtc-ctrl-link-foreground-brand-rest)}#b_content
.pa_carousel_mlo .pa_item.pa_vCard .pa_caption,#b_content .pa_carousel .pa_item.pa_vCard
.pa_caption,#b_content .pa_grid .pa_item.pa_vCard
.pa_caption{margin-top:var(--smtc-gap-between-content-x-small);padding-bottom:var(--smtc-gap-between-co
ntent-x-small);font:var(--bing-smtc-text-global-caption1)!important}#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_caption .pa_price,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption
.pa_price,#b_content .pa_grid .pa_item.pa_vCard .pa_caption
.pa_price{margin-bottom:var(--smtc-gap-between-content-xx-small)}#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_caption .pa_price .prc_clr_grn,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption
.pa_price .prc_clr_grn,#b_content .pa_grid .pa_item.pa_vCard .pa_caption .pa_price
.prc_clr_grn{color:var(--smtc-status-success-tint-foreground)}#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_caption .pa_price strong,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption
.pa_price strong,#b_content .pa_grid .pa_item.pa_vCard .pa_caption .pa_price
strong{color:var(--smtc-foreground-content-neutral-primary)}#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_caption .pa_price .original_price,#b_content .pa_carousel .pa_item.pa_vCard
.pa_caption .pa_price .original_price,#b_content .pa_grid .pa_item.pa_vCard .pa_caption .pa_price
.original_price{font:var(--bing-smtc-text-global-caption1);padding-left:var(--smtc-gap-between-content-x-sma
ll)}#b_content .pa_carousel_mlo .pa_item.pa_vCard .pa_caption .pa_installmentDesc,#b_content
```

```
.pa_carousel_mlo .pa_item.pa_vCard .pa_caption .pa_unitprice,#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_caption .vertical_converted_price,#b_content .pa_carousel_mlo .pa_item.pa_vCard
.pa_caption .pa_shippingcost,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption
.pa_installmentDesc,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption .pa_unitprice,#b_content
.pa_carousel .pa_item.pa_vCard .pa_caption .vertical_converted_price,#b_content .pa_carousel
.pa_item.pa_vCard .pa_caption .pa_shippingcost,#b_content .pa_grid .pa_item.pa_vCard .pa_caption
.pa_installmentDesc,#b_content .pa_grid .pa_item.pa_vCard .pa_caption .pa_unitprice,#b_content .pa_grid
.pa_item.pa_vCard .pa_caption .vertical_converted_price,#b_content .pa_grid .pa_item.pa_vCard .pa_caption
.pa_shippingcost{font:var(--bing-smtc-text-global-caption1);margin-bottom:var(--smtc-gap-between-content-
xx-small);color:var(--bing-smtc-foreground-content-neutral-secondary-alt)}#b_content .pa_carousel_mlo
.pa_item.pa_vCard .pa_caption .b_attribution,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption
.b_attribution,#b_content .pa_grid .pa_item.pa_vCard .pa_caption
.b_attribution{margin-bottom:var(--smtc-gap-between-content-xx-small);color:var(--bing-smtc-foreground-co
ntent-neutral-secondary-alt);border-bottom:0;font:var(--bing-smtc-text-global-caption1)}#b_content
.pa_carousel_mlo .pa_item.pa_vCard .pa_caption .b_attribution cite,#b_content .pa_carousel
.pa_item.pa_vCard .pa_caption .b_attribution cite,#b_content .pa_grid .pa_item.pa_vCard .pa_caption
.b_attribution
cite{font:var(--bing-smtc-text-global-caption1);color:var(--bing-smtc-foreground-content-neutral-secondary-al
t);opacity:unset}#b_content .pa_carousel_mlo .pa_item.pa_vCard .pa_caption .b_secondaryText,#b_content
.pa_carousel .pa_item.pa_vCard .pa_caption .b_secondaryText,#b_content .pa_grid .pa_item.pa_vCard
.pa_caption
.b_secondaryText{font:var(--bing-smtc-text-global-caption1);color:var(--bing-smtc-foreground-content-neutra
l-secondary-alt)}#b_content .pa_carousel_mlo .pa_item.pa_vCard .pa_caption .b_secondaryText
.pa_rebateText,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption .b_secondaryText
.pa_rebateText,#b_content .pa_grid .pa_item.pa_vCard .pa_caption .b_secondaryText
.pa_rebateText{font:var(--bing-smtc-text-global-caption1);color:var(--bing-smtc-foreground-content-neutral-s
econdary-alt)}#b_content .pa_carousel_mlo .pa_item.pa_vCard .pa_caption .b_secondaryText .pa_promo
a,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption .b_secondaryText .pa_promo a,#b_content .pa_grid
.pa_item.pa_vCard .pa_caption .b_secondaryText .pa_promo
a{color:var(--smtc-ctrl-link-foreground-brand-rest)}#b_content .pa_carousel_mlo .pa_item.pa_vCard
.pa_caption .b_secondaryText .pa_rating a,#b_content .pa_carousel .pa_item.pa_vCard .pa_caption
.b_secondaryText .pa_rating a,#b_content .pa_grid .pa_item.pa_vCard .pa_caption .b_secondaryText
.pa_rating a{color:var(--bing-smtc-foreground-content-neutral-secondary-alt)}#b_content .pa_carousel_mlo
.b_overlay .btn .cr{height:24px;width:20px;padding:var(--smtc-padding-ctrl-lg-text-top)
var(--smtc-padding-ctrl-sm-horizontal-default);background-color:var(--bing-smtc-foreground-ctrl-on-image-s
witchable-rest);border-radius:var(--smtc-corner-ctrl-lg-rest);box-shadow:var(--acf-elevation-3)}#b_content
.pa_carousel_mlo .b_overlay .btn
.cr>div{width:8px;height:8px;background-color:transparent;border-color:var(--smtc-foreground-content-neutr
al-primary);border-style:solid;border-width:2px 2px 0
0;transform:rotate(45deg);border-radius:0;top:var(--smtc-padding-ctrl-text-top);left:var(--smtc-padding-ctrl-s
```

```
m-text-top);position:relative;box-shadow:none;margin:0}#b_content .pa_carousel_mlo .b_overlay .btn
.cr>div::after{content:"";display:none}#b_content .pa_carousel_mlo .b_overlay
.btn.next{margin-right:6px}#b_content .pa_carousel_mlo .b_slideexp
.b_hoverFading{background:linear-gradient(90deg,var(--bing-smtc-background-ctrl-fade-on-primary-stop-0)
0%,var(--smtc-background-card-on-primary-default-rest) 60%);right:0}#b_content .pa_carousel_mlo
.b_slidesContainer{width:100%}html[dir="rtl"] #b_content .pa_carousel_mlo .b_overlay .btn
.cr>div{transform:rotate(135deg);left:calc(-1*var(--smtc-padding-ctrl-sm-text-top))}html[dir="rtl"]
#b_content .pa_carousel_mlo .b_slideexp
.b_hoverFading{background:linear-gradient(270deg,var(--bing-smtc-background-ctrl-fade-on-primary-stop-0)
0%,var(--smtc-background-card-on-primary-default-rest) 60%)}#b_content .pa_carousel_mlo
.slide,#b_content .pa_carousel .slide,#b_content .pa_grid
.pa_item{border-radius:var(--smtc-corner-card-rest)!important}#b_pole
.pa_carousel_mlo{margin-right:0}.pa_item.pa_vCard{word-wrap:break-word;line-height:20px;overflow:hidd
en}.pa_item.pa_vCard p strong,.pa_item.pa_vCard .pa_price strong{color:#111}.pa_item.pa_vCard
.pa_deal{text-decoration:line-through}#b_content .pa_item.pa_vCard
.b_attribution{font-size:14px;padding-bottom:0;line-height:20px}#b_content .pa_item.pa_vCard
p,#b_rrat_cont .pa_item.pa_vCard p{line-height:20px}#b_content .pa_item.pa_vCard
.pa_title{line-height:20px;overflow:hidden}.pa_item.pa_vCard
.b_footnote{line-height:17px;padding-bottom:0}.pa_item.pa_vCard
.pa_caption{padding-bottom:8px}.pa_item.pa_vCard .pa_caption,.pa_item.pa_vCard
.pa_title{padding-left:4px;padding-right:4px}.pa_item.pa_vCard
.b_finalText{position:absolute;width:100%;box-sizing:border-box;left:0;padding:0 4px 0
4px;bottom:8px}.pa_item.pa_vCard
.cico{display:block;padding-bottom:0;margin-bottom:8px;margin-left:auto;margin-right:auto;border-radius:0}
.pa_item.pa_vCard .pa_img{position:relative}.pa_item.pa_vCard .pa_price: hover,.pa_item.pa_vCard
.b_attribution: hover,.pa_item.pa_vCard .b_footnote: hover{cursor:pointer}.pa_carousel .slide{box-shadow:0 0
0 1px rgba(0,0,0,.1)!important}.pa_carousel .slide.see_more{box-shadow:0 0 0
0 rgba(0,0,0,0)!important}.pa_targ .pa_tgt_icon{display:inline-block;margin:3px 2px 0
0;width:12px;height:12px}.pa_targ
.pa_shipping_icon{background-image:url("
wAAAAMCAYAAABWdVznAAAA1UIEQVR4AY1S0Q2CMBC9Fj74ZATZQEduAzcQvwlQJ9ANbCAkf
OIkjuAKjNBvEqjviJhKjOkITdt37/Ve7iryPFdCiAsRxfQjrLXnuq71cg9Bvg3DkLRt26/JSqnNNE1PHD8CKor
C0p/gPC92wndJHiGlTOckRMXYs6C17rF1sFeGPgLTvESVFUlfqGXJTFmCuhAyu3lkuM4XpumuTsYZV
l2ZiZPAokHElvMYhdFETl9T4HtFwycDkM8yCAITquq5r27kzcgG35AOJbm7wFLyrH0hTH3BREqamOtXf
Q1AAAAAEIFTkSuQmCC"))}.b_dark .pa_targ
.pa_shipping_icon{background-image:url("
wAAAANCAYAAACdKY9CAAAACXBIWXMAAAAsTAAALEwEAmpwYAAAAAXNSR0IArs4c6QAA
AARnQU1BAACxjwv8YQUAAADXSURBVHgBjZHBdYJAEV3Re6WsCVI4MINKzF2oBVQgnaAVqB
UwJEDECyBEvZMAuv/BBIkYnYSMsObmZ0/u7Kua9X3/VGsWNU2jzAMm+l/g+LMGKNW6pXrus8vUpa
lEX+M+aq4jzP1TBB2BknJdYNvu+f6IuiiKwaKAlOSyljW0kCxW+4yGrpebXlgLfYdV3Ht9CO46Se5+kZG/
```

JkjClJI8G73mNsNMYCPhnZnYxNgzRsfga8BkEglxIWjEvfJpAR4OMpDQpPv9gkiScd0J0ifGGHyxqjfQCw/
XdSIXPndwAAAABJRU5ErkJggg==").pa_targ

.pa_pricedrop_icon{background-image:url("").b_dark.pa_targ

.pa_pricedrop_icon{background-image:url("')}.pa_targ

.pa_topview_icon{background-image:url("').b_dark.pa_targ

.pa_topview_icon{background-image:url("").pa_targ

.pa_condition_icon{background-image:url(" TzBew+jKa0FQRd2wzZ2FjaidjZBEMTGsQ8QvIPd27EwK5vFTDfzz//PflCiYowfiYS97lxXGUQkqOqd936/Pc8AxuPxZkopBw6ANQAz+01UvQU2/gwhhK2U0ruIVM65SZ7nXwDe+55z7rGu69HixVcRGWbApYhURVGcL/2qeg0Mp9Pp8+LiE3CVichhSumky1CW5U67TyndZF12pgvAlfBNOecSIARmgEEjeO97McbPrkFVj4BZZmanInIPXDSgwLBZDCGsi8jIzCaquivtLbjjHNjuhH+b2ayu6+OqquZZWxGRAfBgZv2yLF/+Y1mCLYrizcz6QLUK/gcay2Kj1EE/gwAAAABJRU5ErkJggg==").b_dark.pa_targ

.pa_condition_icon{background-image:url("

wAAAAOCAYAAAAbvf3sAAAACXBIWXMAAAAsTAAALEwEAmpwYAAAAAXNSR0IArs4c6QAAAA
RnQU1BAACxjwv8YQUAAADwSURBVHgBrVHbDYJAEOR4/GMH2IEXCALL2IFUoCVoBcYKKEE70D
8SAjk6kBL85+VMAGYukS82gWV3Z4e5OcNYK/I8V1mW7fS++W+h67rYNM27vmTzpZTy2rZN8MmhO
2PEEtL2Vw9gJYR4WZa1DYYJA8MEfJHoV8n6Q+EzT1LMBvqI++75/05gTzPZhGJasSeg4TiKw2YN5I6X8
GAsBJS4I3jz0IILlwsldB7HDl2hpTqyaZoD0sOGnHhw6EIw6ju1T6UAfMIZjnVdSzFlKYri3fe9p5FTcglwH
EVRZU8nZKbvtHJ0R4/ZTRNEMC011oovCux/EdBOneMAAAAASUVORK5CYII=")).pa_targ
.rms_img,.pa_targ_text{vertical-align:top}.pa_hov_border
.pa_targ_longtext{font-size:12px;line-height:14px}#slideexp13_768AE3 .slide { width: 140px; margin-right:
16px; }#slideexp13_768AE3c .b_slidebar .slide { border-radius: 6px; }#slideexp13_768AE3 .slide:last-child {
margin-right: 1px; }#slideexp13_768AE3c { margin: -4px; } #slideexp13_768AE3c .b_viewport { padding:
4px 1px 4px 1px; margin: 0 3px; } #slideexp13_768AE3c .b_slidebar .slide { box-shadow: 0 0 0 1px rgba(0,
0, 0, 0.05); -webkit-box-shadow: 0 0 0 1px rgba(0, 0, 0, 0.05); } #slideexp13_768AE3c .b_slidebar
.slide.see_more { box-shadow: 0 0 0 0px rgba(0, 0, 0, 0.00); -webkit-box-shadow: 0 0 0 0px rgba(0, 0, 0,
0.00); } #slideexp13_768AE3c .b_slidebar .slide.see_more .carousel_seemore { border: 0px;
}#slideexp13_768AE3c .b_slidebar .slide.see_more:hover { box-shadow: 0 0 0 0px rgba(0, 0, 0, 0.00);
-webkit-box-shadow: 0 0 0 0px rgba(0, 0, 0, 0.00); }Sponsored

A unique DC/DC converter called an inverting buck-boost (IBB) can be used to provide this negative rail from a positive supply, all with a common ground connection. Almost any ordinary ...

The inverting buck/boost converter topology is an often mysterious and misunderstood category of DC-DC converters. This document attempts to remove any misconception around the circuit ...

In the Boost converter, the supplied fixed DC input is boosted (or increased) to adjustable DC output voltage i.e. output voltage of the boost converter is always greater than ...

To understand the working of a boost converter, it is mandatory that you know how inductors, MOSFETs, diodes and capacitors work. With that knowledge, we can go through ...

Boost Inverter: This boost circuit board can be used as pure sine wave, modified sine and front boost inverter for single silicon machine, four silicon machine.

The inverting buck/boost converter topology is an often mysterious and misunderstood category of DC-DC converters. This document attempts to ...

Boost Inverter: This boost circuit board can be used as ...

This model presents a solar PV system employing an MPPT-based solar charge controller, a DC-DC boost converter, and a single-phase inverter. The system is designed to ...

Web: <https://www.aitesigns.co.za>

