# NGDR-07C-NGDR-07-FF650R17IE4

## 01 / Assembly identity and engineering boundary

### Supplied configuration

ABB NGDR-07C-NGDR-07-FF650R17IE4 is supplied with the NGDR driver board and FF650R17IE4 power module for converter power-stage service.

### Distinct component roles

| | |
|---|---|
| NGDR driver board | Gate-control pulse amplification |
| FF650R17IE4 | Power switching in a half-bridge arrangement |

Supply together does not establish suitability for every converter using an NGDR board.

### Semiconductor snapshot

| | |
|---|---|
| Power-module topology | Half-bridge |
| Module collector-emitter voltage | 1700 V |
| Module nominal collector current | 650 A |
| Power-module package | PrimePACK 2 |
| Power-module technology | IGBT4 - E4 |

The listed electrical ratings describe the power module, not the complete drive or driver supply.

**Product and installation enquiries**

sales13@apterpower.com | +86 18030235313

Apply manufacturer instructions and approved site procedures.

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## 02 / Interfaces and technical interpretation

### Gate-control interface

Preserve the installed control-pulse path, gate/emitter connections and protection circuit. Compare the board and power-module identities together.

### Thermal interface

The mounting surface, thermal interface and cooling arrangement form part of the approved converter configuration. Check their condition when replacing the assembly.

### Component-level facts

| | |
|---|---|
| Supplied board reference | NGDR-07C / NGDR-07 |
| Supplied power module | FF650R17IE4 |
| Power-module manufacturer | Infineon Technologies |
| NGDR family function | IGBT gate-control pulse amplification |
| Module VCE(sat), typical at Tvj = 25 deg C | 2 V |
| Power-module qualification | Industrial |

Use the applicable converter instructions for installed configuration and operating limits.

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# 03 / Application context

## Motor-drive power stages

Use the assembly within an approved converter power stage for motor control. Match the switching device, gate interface and existing drive configuration before energization.

## High-power converter service

The FF650R17IE4 half-bridge module provides a 1700 V, 650 A component reference. Evaluate voltage transients, load duty and cooling at the converter level.

## Auxiliary inverter maintenance

For an applicable auxiliary inverter, retain the installed gate-pulse distribution and protection path. Confirm the complete board-and-module arrangement against its service documentation.

## Wind-converter power switching

The power module can form part of a wind-converter design. Match the actual converter topology, switching conditions and thermal arrangement; the application context is not a universal compatibility claim.

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# 04 / Installation and service decisions

## Match both component identities

Check NGDR-07C / NGDR-07 and FF650R17IE4 together with the installed converter records. Do not replace either component solely because the connector or package appears similar.

## Isolate stored energy

Disconnect the relevant supplies, follow the drive discharge procedure and verify the absence of hazardous voltage before touching the DC link or power terminals.

## Preserve the gate circuit

Record the gate and emitter connections, control harnesses and protection path. Restore the approved arrangement and do not infer driver supply limits from the IGBT voltage rating.

## Restore the thermal path

Inspect the mounting surface, cooling arrangement and thermal interface. Use the applicable module and converter instructions for fastening and thermal-interface preparation.

## Protect interfaces during handling

Use ESD-safe handling, keep connectors clean and prevent mechanical stress on the board, terminals and module connections. Check insulation and clearance before closing the converter.

## Commission under the approved procedure

Verify wiring, cooling, protection and diagnostic status before the controlled functional test. Use the installed drive acceptance limits rather than treating module maximum ratings as operating setpoints.

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## 05 / Unit verification and references

### Physical and identity review

Request current driver-board, semiconductor-label, gate-connection and mounting views. Confirm both component identities and any additional revision markings.

### Lifecycle and replacement

The current manufacturing and support phase of the complete offered reference is unconfirmed. Obtain current manufacturer guidance for the complete configuration; seller availability is a separate matter.

### Technical basis

ABB ACA 6xx hardware manual, 3AFY 63700118 R0125, revision E; Infineon FF650R17IE4 product information.

### Other ABB drive references

ABB NDCU-33CX 3AUA0000052751

ABB RINT-5521C 3AUA0000016016E

ABB SDCS-COM-5 3BSE006567R1

Navigation only. These references do not establish interchangeability or inclusion with this assembly.

### Release criterion

Match the complete configuration and retain accepted electrical, protection and thermal checks with the service record.

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