

INFORMATION NOTIFICATION

VULNERABILITY REPORT ON RX65N GROUP

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IOT PRODUCT MARKETING DEPARTMENT 2
IOT PLATFORM BUSINESS DIVISION
IOT AND INFRASTRUCTURE BUSINESS UNIT
RENESAS ELECTRONICS CORPORATION

IPM2-AA-21-0271-1

INFORMATION NOTIFICATION

Information Notification

Renesas is committed to provide to its customers the necessary information to assess any security vulnerability impact.

The established Product Security Incident Response Team (PSIRT) is responsible for addressing any emerging security issues, interface as single point of contact to third parties reporting security incidents, perform the necessary investigations, provide feedback, and suggest possible countermeasures.

Description:

A vulnerability of the RX65N has been reported whereby ID-protected on-chip flash memory contents can be read by means of a voltage fault injection attack. The attack requires physical access to the target device and modification of the circuit board to operate the outside of recommended conditions; specifically, removing any power pins capacitors on the PCB board assembly, and performing targeted voltage glitches on the microcontroller VCL pin. This vulnerability is identified as CVE-2021-43327.

Affected Products:

Fault injection attacks were considered out of scope when the current RX Family MCU products were originally released, as was standard for general purpose MCUs. The vulnerability analysis results from this issue are being used to consider how Renesas can enhance the robustness of future RX Family MCU products against such attacks.

Mitigation:

Since physical access to the target device is required, preventing physical access or detecting and responding to enclosure breaches are countermeasures for this fault injection attack. To reduce the potential consequences of this type of attack, some RX Family products include Trusted Secure IP and Trusted Secure IP Lite, which support secure storage of cryptographic keys.



Do not disclose this document to the third party without prior consent of Renesas Electronics.

Affected part numbers

R5F565N4ADFB#30
R5F565N4ADFP#10
R5F565N4ADFP#30
R5F565N7ADFP#10
R5F565N7ADFP#30
R5F565N9ADFB#YB1
R5F565N9ADFP#10
R5F565N9ADFP#30
R5F565N9ADFP#YB1
R5F565N9ADFP#YE1
R5F565N9ADFP#YK1
R5F565N9ADLJ#20
R5F565N9ADLJ#YB1
R5F565N9ADLK#20
R5F565N9ADLK#YB1
R5F565N9EDFB#10
R5F565N9EDFB#30
R5F565N9EDFB#YB1
R5F565N9EDFP#10
R5F565N9EDFP#YB1
R5F565NCDDBG#20
R5F565NCDDFB#10
R5F565NCDDFB#30
R5F565NCDDFC#30
R5F565NCDDFP#10
R5F565NCDDFP#30
R5F565NCDDL#20
R5F565NCDDL#YB1
R5F565NCDDLK#20
R5F565NCHDBG#20
R5F565NCHDFP#10
R5F565NEDDBG#20
R5F565NEDDBG#YJ1
R5F565NEDDFB#10
R5F565NEDDFB#30
R5F565NEDDFB#YJ1
R5F565NEDDFC#30
R5F565NEDDFC#YB1
R5F565NEDDFC#YJ1
R5F565NEDDFC#YK1
R5F565NEDDFP#10
R5F565NEDDFP#30
R5F565NEDDFP#YB1
R5F565NEDDFP#YJ1
R5F565NEDDL#20
R5F565NEDDL#YJ1

R5F565NEDDLJ#20
R5F565NEDDLJ#YJ1
R5F565NEDDLK#20
R5F565NEDDLK#YJ1
R5F565NEHDBG#20
R5F565NEHDBG#YJ1
R5F565NEHDFB#10
R5F565NEHDFB#30
R5F565NEHDFB#YJ1
R5F565NEHDFC#30
R5F565NEHDFC#YB1
R5F565NEHDFC#YJ1
R5F565NEHDFC#YK1
R5F565NEHDFP#10
R5F565NEHDFP#30
R5F565NEHDLK#20
R5F565NEHDLK#YJ1
R5F565NEHDLJ#20
R5F565NEHDLJ#YJ1
R5F565NEHDLK#20
R5F565NEHDLK#YJ1
R5F565NEHGFP#10
R5F565NEHGFP#30
R5F56514ADFB#10
R5F56514ADFB#30
R5F56514ADFP#10
R5F56514ADFP#30
R5F56514ADLJ#20
R5F56514ADLK#20
R5F56514AGFP#30
R5F56514BDBP#20
R5F56514BDFB#10
R5F56514BDFB#30
R5F56514BDFM#30
R5F56514BGFM#30
R5F56514BGFM#YB1
R5F56514EDFP#30
R5F56514FDFM#30
R5F56517ADFP#10
R5F56517ADFP#30
R5F56517BDFB#30
R5F56519ADFB#30
R5F56519ADFP#10
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R5F56519ADFP#YK1
R5F56519AGFP#30

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R5F5651CHDLK#20
R5F5651EDDBG#20
R5F5651EDDBP#20
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R5F5651EDDFB#30
R5F5651EDDFC#30
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R5F5651EDDLK#20
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R5F5651EHDFM#30
R5F5651EHDFP#10
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R5F5651EHDLC#20
R5F5651EHDLK#20
R5F5651EHGFM#10
R5F5651EHGFM#30
R5F5651EHGFP#10
R5F565N7AGFB#30
R5F565N9ADFB#30

R5F565N9EDFP#30
R5F565NCHDFP#30