

117TH CONGRESS
1ST SESSION

S. 1419

To require the Secretary of Defense to support and provide incentives for domestic manufacturing of printed circuit boards, to identify national security risks in printed circuit boards imported from certain foreign countries, and for other purposes.

IN THE SENATE OF THE UNITED STATES

APRIL 28, 2021

Mr. HAWLEY introduced the following bill; which was read twice and referred to the Committee on Armed Services

A BILL

To require the Secretary of Defense to support and provide incentives for domestic manufacturing of printed circuit boards, to identify national security risks in printed circuit boards imported from certain foreign countries, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Protecting Critical
5 Boards and Electronics Through Transparency and En-
6 during Reinvestment Act of 2021” or the “PCBETTER
7 Act of 2021”.

1 **SEC. 2. ESTABLISHMENT OF ELECTRONICS SUPPLY CHAIN**
2 **FUND AND ASSISTANCE AND INCENTIVES**
3 **FOR DOMESTIC MANUFACTURING OF PRINT-**
4 **ED CIRCUIT BOARDS.**

5 (a) ESTABLISHMENT OF ELECTRONICS SUPPLY
6 CHAIN FUND.—There is established in the Treasury of
7 the United States a trust fund to be known as the “Elec-
8 tronics Supply Chain Fund” (in this section the “Fund”).

9 (b) CONTENTS OF FUND.—

10 (1) IN GENERAL.—The Fund shall consist of
11 such amounts as may be appropriated for deposit in
12 the Fund.

13 (2) AVAILABILITY.—

14 (A) IN GENERAL.—Amounts deposited in
15 the Fund shall remain available through the
16 end of the tenth fiscal year beginning after the
17 date on which funds are first appropriated to
18 the Fund.

19 (B) REMAINDER TO TREASURY.—Any
20 amounts remaining in the Fund after the date
21 specified in subparagraph (A) shall be deposited
22 in the general fund of the Treasury.

23 (c) USE OF FUND.—Amounts deposited in the Fund
24 shall be available to the Secretary of Defense—

25 (1) to fund the construction, expansion, or mod-
26 ernization of facilities to develop or manufacture

1 semiconductors, microelectronics, advanced elec-
2 tronic packaging, and printed circuit boards;

3 (2) to carry out subsection (d); and

4 (3) to carry out section 4(a).

5 (d) SPECIFIC ACTIVITIES REQUIRED.—Using
6 amounts from the Fund, the Secretary of Defense, in con-
7 sultation with the Secretary of Commerce, the Secretary
8 of Homeland Security, the Director of National Intel-
9 ligence, and such other officials as the Secretary of De-
10 fense considers appropriate, shall—

11 (1) promote and deploy technology, including
12 microelectronics, printed circuit boards, semiconduc-
13 tors, and related technologies so as to create a com-
14 mercially competitive electronics industry in the
15 United States capable of meeting United States na-
16 tional security needs;

17 (2) establish production and manufacturing
18 sites for the technologies described in paragraph (1);
19 and

20 (3) establish security standards necessary for
21 the implementation of—

22 (A) this Act;

23 (B) section 889 of the John S. McCain
24 National Defense Authorization Act for Fiscal

1 Year 2019 (Public Law 115–232; 132 Stat.
2 1917);

3 (C) section 224 of the National Defense
4 Authorization Act for Fiscal Year 2020 (Public
5 Law 116–92; 10 U.S.C. 2302 note); and

6 (D) section 841 of the William M. (Mac)
7 Thornberry National Defense Authorization Act
8 for Fiscal Year 2021 (Public Law 116–283).

9 (e) PRINTED CIRCUIT BOARD MANUFACTURING AS
10 QUALIFYING CAPABILITY.—The Secretary of Defense
11 shall consider printed circuit board manufacturing as a
12 qualifying capability when making funds available for the
13 construction, expansion, or modernization of domestic de-
14 velopment or manufacturing capabilities for semiconduc-
15 tors or electronic packaging.

16 **SEC. 3. REQUIREMENT THAT CERTAIN PROVIDERS OF SYS-**
17 **TEMS TO DEPARTMENT OF DEFENSE DIS-**
18 **CLOSE THE SOURCE OF PRINTED CIRCUIT**
19 **BOARDS WHEN SOURCED FROM CERTAIN**
20 **COUNTRIES.**

21 (a) DISCLOSURE.—The Secretary of Defense shall re-
22 quire any provider of a covered system to provide to the
23 Department of Defense, along with delivery of the covered
24 system, a list of the printed circuit boards in the covered

1 system that includes, for each printed circuit board, an
2 attestation of whether—

3 (1) the printed circuit board was partially or
4 fully manufactured and assembled in a covered na-
5 tion;

6 (2) the printed circuit board was fully manufac-
7 tured and assembled outside of a covered nation; or

8 (3) the provider cannot determine where the
9 printed circuit board was manufactured and assem-
10 bled.

11 (b) REGULATIONS.—Not later than 90 days after the
12 date of the enactment of this Act, the Secretary shall pro-
13 mulgate such regulations as are necessary to carry out this
14 section.

15 (c) DEFINITIONS.—In this section:

16 (1) The term “covered nation” includes the fol-
17 lowing:

18 (A) The People’s Republic of China.

19 (B) The Russian Federation.

20 (C) The Democratic People’s Republic of
21 North Korea.

22 (D) The Islamic Republic of Iran.

23 (2) The term “covered system” means any
24 item, including commercial items and commercially
25 available off-the-shelf items, notwithstanding section

1 3452 of title 10, United States Code, as redesign-
2 nated by section 1821(a)(1) of the William M. (Mac)
3 Thornberry National Defense Authorization Act for
4 Fiscal Year 2021 (Public Law 116–283), or sections
5 1906 and 1907 of title 41, United States Code,
6 that—

7 (A) has an electronic component;

8 (B) is provided to the Department of De-
9 fense under a contract that exceeds the sim-
10 plified acquisition threshold; and

11 (C) transmits or stores information includ-
12 ing—

13 (i) telecommunications;

14 (ii) data communications and storage,
15 including servers, switches, and networking
16 systems, but excluding personal data stor-
17 age devices, personal computers, desktop
18 computers, tablets, and handheld equip-
19 ment;

20 (iii) information technology security
21 systems; and

22 (iv) any other system that the Sec-
23 retary determines should be covered.

24 (3) The term “manufactured and assembled”,
25 with respect to a printed circuit board, includes all

1 actions from the printing of the printed circuit board
2 from raw materials to the integration of the com-
3 pleted printed circuit board in an end item or com-
4 ponent of an end item.

5 **SEC. 4. DEPARTMENT OF DEFENSE TESTING OF VULNER-**
6 **ABILITY OF SYSTEMS WITH PRINTED CIRCUIT**
7 **BOARDS FROM CERTAIN COUNTRIES AND RE-**
8 **MEDIATION AND PREVENTION OF SUCH**
9 **VULNERABILITIES.**

10 (a) TESTING.—

11 (1) PROGRAM ESTABLISHMENT REQUIRED.—

12 Not later than one year after the date of the enact-
13 ment of this Act, the Secretary of Defense shall es-
14 tablish a program to test systems owned or operated
15 by the Department of Defense for vulnerabilities to
16 foreign interference, sabotage, espionage, and attack.

17 (2) REQUIRED TESTING FOR CERTAIN SYS-

18 TEMS.—Through the program established under
19 paragraph (1), the Secretary shall test each system
20 of the Department that contains at least one printed
21 circuit board for which a disclosure was made pursu-
22 ant to section 3(a) and an attestation was made
23 with respect to paragraph (1) or (3) of such section.

24 (3) METHODS.—The Secretary shall ensure
25 that the program established under paragraph (1)

1 uses, to the maximum extent practicable, best-in-
2 breed testing and detection methods used by com-
3 mercial industry, including—

- 4 (A) penetration testing;
- 5 (B) red teaming; and
- 6 (C) inventory auditing.

7 (b) REMEDIATION.—

8 (1) DESIGNATION.—Whenever informed of a
9 vulnerability in a system under the program estab-
10 lished under subsection (a)(1), the Secretary shall
11 designate a senior official of the Department to re-
12 mediate the vulnerability as soon as practicable.

13 (2) REQUIREMENTS.—Remediation under para-
14 graph (1) shall include those measures that the des-
15 ignated official determines necessary to lower the
16 risk to acceptable levels, including—

17 (A) adding hardware or software to isolate
18 and contain any malicious printed circuit board;

19 (B) destruction, deactivation, or replace-
20 ment of the system containing the vulnerability;

21 or

22 (C) physical modification of the system
23 containing the vulnerability through the inser-
24 tion of a trusted printed circuit board or other

1 hardware that does not contain known
2 vulnerabilities.

3 (3) ASSIGNMENT OF COSTS.—

4 (A) DETERMINATION.—Whenever a vul-
5 nerability is found in a system from a con-
6 tractor through the program established under
7 subsection (a)(1), the Secretary of Defense
8 shall determine whether the contractor should
9 reasonably have discovered the vulnerability
10 prior to delivery of the system to the Depart-
11 ment.

12 (B) PAYMENT BY CONTRACTOR.—If, pur-
13 suant to subparagraph (A), the Secretary deter-
14 mines that a contractor should reasonably have
15 discovered the vulnerability prior to delivery to
16 the Department, the Secretary may withhold
17 future payments to the contractor in an amount
18 not to exceed the amount expended by the De-
19 partment on remediation of the affected system.

20 (C) PRESUMPTION.—

21 (i) IN GENERAL.—If the Secretary de-
22 termines that a vulnerability identified
23 through the program established under
24 subsection (a)(1) is the result of any print-
25 ed circuit board that the contractor im-

1 ported from the People’s Republic of China
2 after December 31, 2021, the Secretary
3 shall presume that the contractor reason-
4 ably should have discovered the vulner-
5 ability prior to delivery to the Department.

6 (ii) REBUTTAL ALLOWED.—The con-
7 tractor may rebut a presumption under
8 clause (i) with a showing of technical im-
9 possibility.

10 (c) PREVENTION.—Not later than one year after the
11 date of the enactment of this Act, the Secretary shall pro-
12 mulgate such regulations as the Secretary considers nec-
13 essary to require contractors selling goods or services to
14 the Department that include printed circuit boards to un-
15 dertake such due diligence as the Secretary considers ap-
16 propriate to prevent the occurrence of vulnerabilities in
17 such goods and services, including—

18 (1) certification of the ownership, management,
19 and security of subcontractors;

20 (2) conducting penetration testing, red teaming
21 exercises, and other simulated attacks against the
22 good or service; and

23 (3) compliance with the Cybersecurity Maturity
24 Model Certification, or successor model certification.

25 (d) ANNUAL REPORTS.—

1 (1) IN GENERAL.—Not later than December 31
2 of each year, the Secretary of Defense shall submit
3 to the congressional defense committees a report on
4 the activities carried out under this section during
5 the preceding fiscal year.

6 (2) CONTENTS.—Each report submitted under
7 paragraph (1) shall include, for the period covered
8 by the report, the following:

9 (A) The number of systems tested for
10 vulnerabilities.

11 (B) The number of systems identified as
12 having a vulnerability.

13 (C) The number of systems that the De-
14 partment has yet to test under this section.

15 (D) The identity of any contractors that
16 have been identified as failing to reasonably dis-
17 cover a vulnerability in a good or service pro-
18 vided to the Department of Defense.

19 (E) Such other information as the Sec-
20 retary considers appropriate.

21 (e) CONGRESSIONAL DEFENSE COMMITTEES DE-
22 FINED.—In this section, the term “congressional defense
23 committees” has the meaning given that term in section
24 101(a) of title 10, United States Code.

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