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PRODUCT SECURITY INFORMATION ALERT

PSIA: PIN183105   **Date:** August 05, 2018

Subject: Possible Circumvention of ProtectBlock Feature in PSoC® 1 and Derivative Devices using External Debugger

To:

Alert Type: Minor

Description of Alert:
PSoC® 1 and derivative devices began shipping in 2002, and over time they have been successfully used in a broad spectrum of applications. Unfortunately, it has recently been discovered that a skilled hacker with physical possession of a device and specific hardware and software tools can use the device in a manner not intended, and extract the data stored in Flash in circumvention of the ProtectBlock feature. Cypress is issuing this PIN to notify our customers about the recent event.

PSoC® 1 and derivative devices offer external access and control of device resources through a debug/programming mode which uses the In-system Serial Programming Protocol (ISSP). If the designer chooses, it is possible to prevent external read and write access of Flash during this mode by using the ProtectBlock feature. However, the feature does not block access to SRAM memory. As a result, it is possible to circumvent the ProtectBlock feature by conducting system operations on Flash (such as CHECKSUM), capturing intermediate results in SRAM, and then indirectly reconstructing the Flash image.

Note that putting the device into debug/programming mode requires presenting specific commands to the ISSP pins, clocking them in, and reading results. This typically can only be done with direct physical access to the ISSP pins and using specific external hardware and software tools.

Affected PSoC® 1 and derivative device documentation will be updated to clarify the capability of ProtectBlock. Applications that do not use the ProtectBlock feature are not affected.

Other Cypress microcontroller products, including Traveo, CCG, FM and later PSoC® and derivative devices are not affected. They offer full disablement of external debug access, preventing this unintended use.

Alert Objective:
Clarify the capability of the ProtectBlock feature.

Part Numbers Affected: 908
See the attached 'Affected Parts List' file for a list of all part numbers affected by this notification.

Anticipated Impact:
For designs utilizing the ProtectBlock feature, Cypress recommends that designers consider the possibility of this unintended use case occurring and assess impact (if any) to their application.

Response Required:
This is an information only announcement. No response is required.

For additional information regarding this notification, contact your local sales representative.

Sincerely,

Cypress PCN Administration

Item	Marketing Part Number	Business Unit
1	05523-458/0001	AUTO
2	CY7C60323-LTXC	WIRED
3	CY7C60323-LTXC	WIRED
4	CY7C60323-LTXC	WIRED
5	CY7C60323-LTXCT	WIRED
6	CY7C60323-LTXCT	WIRED
7	CY7C60323-LTXCT	WIRED
8	CY7C60323-PVXC	WIRED
9	CY7C60323-PVXC	WIRED
10	CY7C60323-PVXCT	WIRED
11	CY7C60323-PVXCT	WIRED
12	CY7C60333-3X14C	WIRED
13	CY7C60333-3X14C	WIRED
14	CY7C60333-3X14C	WIRED
15	CY7C60413-16LKXC	WIRED
16	CY7C60413-16LKXC	WIRED
17	CY7C60413-16LKXC	WIRED
18	CY7C60413-16LKXC	WIRED
19	CY7C60413-16LKXCT	WIRED
20	CY7C60413-16LKXCT	WIRED
21	CY7C60413-16LKXCT	WIRED
22	CY7C60413-16LKXCT	WIRED
23	CY7C60445-32LQXC	WIRED
24	CY7C60445-32LQXC	WIRED
25	CY7C60445-32LQXCT	WIRED
26	CY7C60445-32LQXCT	WIRED
27	CY7C60445-3X14C	WIRED
28	CY7C60445-3X14C	WIRED
29	CY7C60455-3X14C	WIRED
30	CY7C60455-3X14C	WIRED
31	CY7C60455-48LTXC	WIRED
32	CY7C60455-48LTXC	WIRED
33	CY7C60455-48LTXC	WIRED
34	CY7C60455-48LTXC	WIRED
35	CY7C60455-48LTXCT	WIRED
36	CY7C60455-48LTXCT	WIRED
37	CY7C60455-48LTXCT	WIRED
38	CY7C60455-48LTXCT	WIRED
39	CY7C60456-48LTXC	WIRED
40	CY7C60456-48LTXC	WIRED
41	CY7C60456-48LTXC	WIRED
42	CY7C60456-48LTXCT	WIRED
43	CY7C60456-48LTXCT	WIRED
44	CY7C60456-48LTXCT	WIRED
45	CY7C64215-56LTXC	WIRED
46	CY7C64215-56LTXC	WIRED

47	CY7C64215-56LTXC	WIRED
48	CY7C64215-56LTXC	WIRED
49	CY7C64215-56LTXC	WIRED
50	CY7C64215-56LTXC	WIRED
51	CY7C64215-56LTXC	WIRED
52	CY7C64215-56LTXCT	WIRED
53	CY7C64215-56LTXCT	WIRED
54	CY7C64215-56LTXCT	WIRED
55	CY7C64215-56LTXCT	WIRED
56	CY7C64215-56LTXCT	WIRED
57	CY7C64215-56LTXCT	WIRED
58	CY7C64215-56LTXCT	WIRED
59	CY7C64215-56LTXI	WIRED
60	CY7C64215-56LTXI	WIRED
61	CY7C64215-56LTXI	WIRED
62	CY7C64215-56LTXI	WIRED
63	CY7C64215-56LTXI	WIRED
64	CY7C64215-56LTXI	WIRED
65	CY7C64215-56LTXIT	WIRED
66	CY7C64215-56LTXIT	WIRED
67	CY7C64215-56LTXIT	WIRED
68	CY7C64215-56LTXIT	WIRED
69	CY7C64215-56LTXIT	WIRED
70	CY7C64215-56LTXIT	WIRED
71	CY7C64315-16LKXC	WIRED
72	CY7C64315-16LKXC	WIRED
73	CY7C64315-16LKXC	WIRED
74	CY7C64315-16LKXC	WIRED
75	CY7C64315-16LKXCT	WIRED
76	CY7C64315-16LKXCT	WIRED
77	CY7C64315-16LKXCT	WIRED
78	CY7C64315-16LKXCT	WIRED
79	CY7C64315-16LKXI	WIRED
80	CY7C64315-16LKXI	WIRED
81	CY7C64315-16LKXI	WIRED
82	CY7C64315-16LKXI	WIRED
83	CY7C64315-16LKXIT	WIRED
84	CY7C64315-16LKXIT	WIRED
85	CY7C64315-16LKXIT	WIRED
86	CY7C64315-16LKXIT	WIRED
87	CY7C64315-3X14C	WIRED
88	CY7C64315-3X14C	WIRED
89	CY7C64316-16LKXC	WIRED
90	CY7C64316-16LKXC	WIRED
91	CY7C64316-16LKXC	WIRED
92	CY7C64316-16LKXC	WIRED
93	CY7C64316-16LKXCT	WIRED

94	CY7C64316-16LKXCT	WIRED
95	CY7C64316-16LKXCT	WIRED
96	CY7C64316-16LKXCT	WIRED
97	CY7C64316-WAFC	WIRED
98	CY7C64343-32LQXC	WIRED
99	CY7C64343-32LQXC	WIRED
100	CY7C64343-32LQXCT	WIRED
101	CY7C64343-32LQXCT	WIRED
102	CY7C64345-32LQXC	WIRED
103	CY7C64345-32LQXC	WIRED
104	CY7C64345-32LQXCT	WIRED
105	CY7C64345-32LQXCT	WIRED
106	CY7C64346-32LQXC	WIRED
107	CY7C64346-32LQXC	WIRED
108	CY7C64346-32LQXCT	WIRED
109	CY7C64346-32LQXCT	WIRED
110	CY7C64355-48LTXC	WIRED
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112	CY7C64355-48LTXC	WIRED
113	CY7C64355-48LTXC	WIRED
114	CY7C64355-48LTXCT	WIRED
115	CY7C64355-48LTXCT	WIRED
116	CY7C64355-48LTXCT	WIRED
117	CY7C64355-48LTXCT	WIRED
118	CY7C64356-48LTXC	WIRED
119	CY7C64356-48LTXC	WIRED
120	CY7C64356-48LTXC	WIRED
121	CY7C64356-48LTXC	WIRED
122	CY7C64356-48LTXCT	WIRED
123	CY7C64356-48LTXCT	WIRED
124	CY7C64356-48LTXCT	WIRED
125	CY7C64356-48LTXCT	WIRED
126	CY7C69356-48LTXC	WIRED
127	CY7C69356-48LTXC	WIRED
128	CY7C69356-48LTXC	WIRED
129	CY7C69356-48LTXC	WIRED
130	CY8C20045-24LKXI	MCU
131	CY8C20045-24LKXIT	MCU
132	CY8C20055-24LKXI	MCU
133	CY8C20055-24LKXIT	MCU
134	CY8C20055-24SXI	MCU
135	CY8C20055-24SXIT	MCU
136	CY8C20065-24LKXI	MCU
137	CY8C20065-24LKXIT	MCU
138	CY8C20066A-24LTXI	MCU
139	CY8C20066A-24LTXIT	MCU
140	CY8C20075-24LKXI	MCU

141	CY8C20075-24LKXIT	MCU
142	CY8C20110-LDX2I	MCU
143	CY8C20110-LDX2IT	MCU
144	CY8C20110-SX2I	MCU
145	CY8C20110-SX2IT	MCU
146	CY8C20111-SX1I	MCU
147	CY8C20111-SX1IT	MCU
148	CY8C20121-SX1I	MCU
149	CY8C20121-SX1IT	MCU
150	CY8C20134-12SXI	MCU
151	CY8C20140-LDX2I	MCU
152	CY8C20140-LDX2IT	MCU
153	CY8C20140-SX2I	MCU
154	CY8C20140-SX2IT	MCU
155	CY8C20142-SX1I	MCU
156	CY8C20142-SX1IT	MCU
157	CY8C20160-LDX2I	MCU
158	CY8C20160-LDX2IT	MCU
159	CY8C20160-SX2I	MCU
160	CY8C20160-SX2IT	MCU
161	CY8C20180-LDX2I	MCU
162	CY8C20180-LDX2IT	MCU
163	CY8C20180-SX2I	MCU
164	CY8C20180-SX2IT	MCU
165	CY8C201A0-LDX2I	MCU
166	CY8C201A0-LDX2IT	MCU
167	CY8C201A0-SX2I	MCU
168	CY8C201A0-SX2IT	MCU
169	CY8C20224-12LKXI	MCU
170	CY8C20224-12LKXIT	MCU
171	CY8C20234-12LKXI	MCU
172	CY8C20234-12LKXIT	MCU
173	CY8C20234-12SXI	MCU
174	CY8C20234-12SXIT	MCU
175	CY8C20236A-24LKXA	AUTO
176	CY8C20236A-24LKXAT	AUTO
177	CY8C20236A-24LKXI	MCU
178	CY8C20236A-24LKXIT	MCU
179	CY8C20237-24LKXI	MCU
180	CY8C20237-24LKXIT	MCU
181	CY8C20237-24SXI	MCU
182	CY8C20246A-24LKXI	MCU
183	CY8C20246A-24LKXIT	MCU
184	CY8C20246AS-24LKXI	MCU
185	CY8C20247-24LKXI	MCU
186	CY8C20247-24LKXIT	MCU
187	CY8C20247-24SXI	MCU

188	CY8C20247S-24LKXI	MCU
189	CY8C20247S-24LKXIT	MCU
190	CY8C20324-12LQXI	MCU
191	CY8C20324-12LQXIT	MCU
192	CY8C20334-12LQXI	MCU
193	CY8C20334-12LQXIT	MCU
194	CY8C20336A-24LQXI	MCU
195	CY8C20336A-24LQXIT	MCU
196	CY8C20337-24LQXI	MCU
197	CY8C20337-24LQXIT	MCU
198	CY8C20346A-24LQXI	MCU
199	CY8C20346A-24LQXIT	MCU
200	CY8C20347-24LQXI	MCU
201	CY8C20347-24LQXIT	MCU
202	CY8C20347S-24LQXI	MCU
203	CY8C20347S-24LQXIT	MCU
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205	CY8C20396A-24LQXIT	MCU
206	CY8C20424-12LQXI	MCU
207	CY8C20424-12LQXIT	MCU
208	CY8C20434-12LQXI	MCU
209	CY8C20434-12LQXIT	MCU
210	CY8C20436A-24LQXI	MCU
211	CY8C20436A-24LQXIT	MCU
212	CY8C20436AN-24LQXI	MCU
213	CY8C20436AN-24LQXIT	MCU
214	CY8C20437-24LQXI	MCU
215	CY8C20437-24LQXIT	MCU
216	CY8C20446A-24LQXI	MCU
217	CY8C20446A-24LQXIT	MCU
218	CY8C20446AS-24LQXI	MCU
219	CY8C20447-24LQXI	MCU
220	CY8C20447-24LQXIT	MCU
221	CY8C20447S-24LQXI	MCU
222	CY8C20447S-24LQXIT	MCU
223	CY8C20466A-24LQXI	MCU
224	CY8C20466A-24LQXIT	MCU
225	CY8C20466AS-24LQXI	MCU
226	CY8C20467-24LQXI	MCU
227	CY8C20467-24LQXIT	MCU
228	CY8C20467S-24LQXI	MCU
229	CY8C20467S-24LQXIT	MCU
230	CY8C20496A-24LQXI	MCU
231	CY8C20496A-24LQXIT	MCU
232	CY8C20524-12PVXI	MCU
233	CY8C20524-12PVXIT	MCU
234	CY8C20534-12PVXI	MCU

235	CY8C20534-12PVXIT	MCU
236	CY8C20536A-24PVXI	MCU
237	CY8C20536A-24PVXIT	MCU
238	CY8C20546A-24PVXI	MCU
239	CY8C20546A-24PVXIT	MCU
240	CY8C20566A-24PVXI	MCU
241	CY8C20566A-24PVXIT	MCU
242	CY8C20636A-24LQXI	MCU
243	CY8C20636A-24LQXIT	MCU
244	CY8C20636A-24LTXI	MCU
245	CY8C20636A-24LTXIT	MCU
246	CY8C20637-24LQXI	MCU
247	CY8C20637-24LQXIT	MCU
248	CY8C20646A-24LQXI	MCU
249	CY8C20646A-24LQXIT	MCU
250	CY8C20646A-24LTXI	MCU
251	CY8C20646A-24LTXIT	MCU
252	CY8C20646AS-24LQXI	MCU
253	CY8C20646AS-24LQXIT	MCU
254	CY8C20647-24LQXI	MCU
255	CY8C20647-24LQXIT	MCU
256	CY8C20647S-24LQXI	MCU
257	CY8C20647S-24LQXIT	MCU
258	CY8C20666A-24LQXI	MCU
259	CY8C20666A-24LQXIT	MCU
260	CY8C20666A-24LTXI	MCU
261	CY8C20666A-24LTXIT	MCU
262	CY8C20666AS-24LQXI	MCU
263	CY8C20666AS-24LQXIT	MCU
264	CY8C20667-24LQXI	MCU
265	CY8C20667-24LQXIT	MCU
266	CY8C20667S-24LQXI	MCU
267	CY8C20667S-24LQXIT	MCU
268	CY8C20767-24FDXCT	MCU
269	CY8C21123-24SXI	MCU
270	CY8C21123-24SXIT	MCU
271	CY8C21223-24LGXI	MCU
272	CY8C21223-24LGXIT	MCU
273	CY8C21223-24SXI	MCU
274	CY8C21223-24SXIT	MCU
275	CY8C21234-24SXI	MCU
276	CY8C21234-24SXIT	MCU
277	CY8C21234B-24SXI	MCU
278	CY8C21312-12PVXE	AUTO
279	CY8C21312-12PVXET	AUTO
280	CY8C21312-24PVXA	AUTO
281	CY8C21312-24PVXAT	AUTO

282	CY8C21323-24LQXI	MCU
283	CY8C21323-24LQXIT	MCU
284	CY8C21323-24PVXI	MCU
285	CY8C21323-24PVXIT	MCU
286	CY8C21334-12PVXE	AUTO
287	CY8C21334-12PVXET	AUTO
288	CY8C21334-24PVXA	AUTO
289	CY8C21334-24PVXAT	AUTO
290	CY8C21334-24PVXI	MCU
291	CY8C21334-24PVXIT	MCU
292	CY8C21334B-24PVXI	MCU
293	CY8C21334B-24PVXIT	MCU
294	CY8C21334W-12PVXE	AUTO
295	CY8C21334W-12PVXET	AUTO
296	CY8C21345-12PVXE	AUTO
297	CY8C21345-12PVXET	AUTO
298	CY8C21345-24PVXA	AUTO
299	CY8C21345-24PVXAT	AUTO
300	CY8C21345-24SXI	MCU
301	CY8C21345-24SXIT	MCU
302	CY8C21434-12X14I	MCU
303	CY8C21434-24LQXI	MCU
304	CY8C21434-24LQXIT	MCU
305	CY8C21434-24LTXI	MCU
306	CY8C21434-24LTXIT	MCU
307	CY8C21434B-24LTXI	MCU
308	CY8C21512-12PVXE	AUTO
309	CY8C21512-12PVXET	AUTO
310	CY8C21512-24PVXA	AUTO
311	CY8C21512-24PVXAT	AUTO
312	CY8C21534-12PVXE	AUTO
313	CY8C21534-12PVXET	AUTO
314	CY8C21534-24PVXA	AUTO
315	CY8C21534-24PVXAT	AUTO
316	CY8C21534-24PVXI	MCU
317	CY8C21534-24PVXIT	MCU
318	CY8C21534B-24PVXI	MCU
319	CY8C21534B-24PVXIT	MCU
320	CY8C21634-24LTXI	MCU
321	CY8C21634-24LTXIT	MCU
322	CY8C21634B-24LTXI	MCU
323	CY8C21645-12PVXE	AUTO
324	CY8C21645-12PVXET	AUTO
325	CY8C21645-24PVXA	AUTO
326	CY8C21645-24PVXAT	AUTO
327	CY8C22345-12PVXE	AUTO
328	CY8C22345-12PVXET	AUTO

329	CY8C22345-24PVXA	AUTO
330	CY8C22345-24PVXAT	AUTO
331	CY8C22345-24SXI	MCU
332	CY8C22345-24SXIT	MCU
333	CY8C22345H-24PVXA	AUTO
334	CY8C22345H-24PVXAT	AUTO
335	CY8C22545-24AXI	MCU
336	CY8C22545-24AXIT	MCU
337	CY8C22645-12PVXE	AUTO
338	CY8C22645-12PVXET	AUTO
339	CY8C22645-24PVXA	AUTO
340	CY8C22645-24PVXAT	AUTO
341	CY8C23433-24PVXI	MCU
342	CY8C23433-24PVXIT	MCU
343	CY8C23533-24LQXI	MCU
344	CY8C23533-24LQXIT	MCU
345	CY8C240093-24LTXI	MCU
346	CY8C24093-24LKXI	MCU
347	CY8C24123A-24PXI	MCU
348	CY8C24123A-24SXI	MCU
349	CY8C24123A-24SXIT	MCU
350	CY8C24193-24LQXI	MCU
351	CY8C24223A-12PVXE	AUTO
352	CY8C24223A-12PVXET	AUTO
353	CY8C24223A-24PVXA	AUTO
354	CY8C24223A-24PVXAT	AUTO
355	CY8C24223A-24PVXI	MCU
356	CY8C24223A-24PVXIT	MCU
357	CY8C24223A-24PXI	MCU
358	CY8C24223A-24SXI	MCU
359	CY8C24223A-24SXIT	MCU
360	CY8C24293-24LQXI	MCU
361	CY8C24393-24LQXI	MCU
362	CY8C24423A-12PVXE	AUTO
363	CY8C24423A-12PVXET	AUTO
364	CY8C24423A-24LTXI	MCU
365	CY8C24423A-24LTXIT	MCU
366	CY8C24423A-24PVXA	AUTO
367	CY8C24423A-24PVXAT	AUTO
368	CY8C24423A-24PVXI	MCU
369	CY8C24423A-24PVXIT	MCU
370	CY8C24423A-24SXI	MCU
371	CY8C24423A-24SXIT	MCU
372	CY8C24493-24LTXI	MCU
373	CY8C24533-24PVXI	MCU
374	CY8C24533-24PVXIT	MCU
375	CY8C24633-24PVXI	MCU

376	CY8C24633-24PVXIT	MCU
377	CY8C24693-24LQXI	MCU
378	CY8C24794-24LQXI	MCU
379	CY8C24794-24LQXIT	MCU
380	CY8C24794-24LTXI	MCU
381	CY8C24794-24LTXIT	MCU
382	CY8C24894-24LTXA	AUTO
383	CY8C24894-24LTXAT	AUTO
384	CY8C24894-24LTXI	MCU
385	CY8C24894-24LTXIT	MCU
386	CY8C24994-24LTXI	MCU
387	CY8C24994-24LTXIT	MCU
388	CY8C270021-12X14I	MCU
389	CY8C27143-24PXI	MCU
390	CY8C27243-24PVXI	MCU
391	CY8C27243-24PVXIT	MCU
392	CY8C27243-24SXI	MCU
393	CY8C27243-24SXIT	MCU
394	CY8C27443-24PVXI	MCU
395	CY8C27443-24PVXIT	MCU
396	CY8C27443-24SXI	MCU
397	CY8C27443-24SXIT	MCU
398	CY8C27543-24AXI	MCU
399	CY8C27543-24AXIT	MCU
400	CY8C27643-24LTXI	MCU
401	CY8C27643-24LTXIT	MCU
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403	CY8C27643-24PVXIT	MCU
404	CY8C28243-24PVXI	MCU
405	CY8C28243-24PVXIT	MCU
406	CY8C28403-24PVXI	MCU
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408	CY8C28413-24PVXI	MCU
409	CY8C28413-24PVXIT	MCU
410	CY8C28433-24PVXI	MCU
411	CY8C28433-24PVXIT	MCU
412	CY8C28445-24PVXI	MCU
413	CY8C28445-24PVXIT	MCU
414	CY8C28452-24PVXI	MCU
415	CY8C28452-24PVXIT	MCU
416	CY8C28513-24AXI	MCU
417	CY8C28513-24AXIT	MCU
418	CY8C28545-24AXI	MCU
419	CY8C28545-24AXIT	MCU
420	CY8C28623-24LTXI	MCU
421	CY8C28623-24LTXIT	MCU
422	CY8C28643-24LTXI	MCU

423	CY8C28643-24LTXIT	MCU
424	CY8C28645-24LTXI	MCU
425	CY8C28645-24LTXIT	MCU
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427	CY8C29466-12PVXET	AUTO
428	CY8C29466-24PVXA	AUTO
429	CY8C29466-24PVXAT	AUTO
430	CY8C29466-24PVXI	MCU
431	CY8C29466-24PVXIT	MCU
432	CY8C29466-24PXI	MCU
433	CY8C29466-24SXI	MCU
434	CY8C29466-24SXIT	MCU
435	CY8C29566-24AXI	MCU
436	CY8C29566-24AXIT	MCU
437	CY8C29666-24LTXI	MCU
438	CY8C29666-24LTXIT	MCU
439	CY8C29666-24PVXA	AUTO
440	CY8C29666-24PVXAT	AUTO
441	CY8C29666-24PVXI	MCU
442	CY8C29666-24PVXIT	MCU
443	CY8C29866-24AXI	MCU
444	CY8C29866-24AXIT	MCU
445	CY8C9520A-24PVXI	MCU
446	CY8C9520A-24PVXIT	MCU
447	CY8C9540A-24PVXI	MCU
448	CY8C9540A-24PVXIT	MCU
449	CY8C9560A-24AXI	MCU
450	CY8C9560A-24AXIT	MCU
451	CY8CMBR2010-24LQXI	MCU
452	CY8CMBR2010-24LQXIT	MCU
453	CY8CMBR2016-24LQXI	MCU
454	CY8CMBR2016-24LQXIT	MCU
455	CY8CMBR2044-24LKXI	MCU
456	CY8CMBR2044-24LKXIT	MCU
457	CY8CMBR2110-24LQXI	MCU
458	CY8CMBR2110-24LQXIT	MCU
459	CY8CPLC10-28PVXI	MCU
460	CY8CPLC10-28PVXIT	MCU
461	CY8CPLC20-28PVXI	MCU
462	CY8CPLC20-28PVXIT	MCU
463	CY8CPLC20-48LTXI	MCU
464	CY8CPLC20-48LTXIT	MCU
465	CY8CTMA120-56LFXAT	AUTO
466	CY8CTMA120-56LTXA	AUTO
467	CY8CTMA120-56LTXAT	AUTO
468	CY8CTMA120-56LWXA	AUTO
469	CY8CTMA120-56LWXAT	AUTO

470	CY8CTMG120-56LFXAT	AUTO
471	CY8CTMG120-56LTXA	AUTO
472	CY8CTMG120-56LTXAT	AUTO
473	CYONSFN3050A-XF07	AUTO
474	TMG200-32LQXI	MCU
475	CG6865AS	MCU
476	CG6865AST	MCU
477	CG6897DS	MCU
478	CG6897DST	MCU
479	CG7047DA	MCU
480	CG7047DAT	MCU
481	CG7072AA	MCU
482	CG7072AAT	MCU
483	CG7127AM	AUTO
484	CG7127AMT	AUTO
485	CG7153AM	MCU
486	CG7153AMT	MCU
487	CG7158DM	MCU
488	CG7158DMT	MCU
489	CG7192AM	MCU
490	CG7192AMT	MCU
491	CG7216AM	MCU
492	CG7216AMT	MCU
493	CG7246AM	MCU
494	CG7246AMT	MCU
495	CG7264AM	MCU
496	CG7264AMT	MCU
497	CG7272AA	MCU
498	CG7272AAT	MCU
499	CG7281AM	MCU
500	CG7281AMT	MCU
501	CG7297AM	MCU
502	CG7297AMT	MCU
503	CG7387AM	MCU
504	CG7387AMT	MCU
505	CG7392AM	MCU
506	CG7392AMT	MCU
507	CG7409AF	MCU
508	CG7409AFT	MCU
509	CG7496AA	MCU
510	CG7496AAT	MCU
511	CG7497AA	MCU
512	CG7497AAT	MCU
513	CG7554AA	MCU
514	CG7554AAT	MCU
515	CG7558AA	MCU
516	CG7558AAT	MCU

517	CG7594AS	WIRED
518	CG7594AS	WIRED
519	CG7594AS	WIRED
520	CG7595AS	WIRED
521	CG7595AS	WIRED
522	CG7596AS	WIRED
523	CG7596AS	WIRED
524	CG7601AA	MCU
525	CG7601AAT	MCU
526	CG7602AA	MCU
527	CG7602AAT	MCU
528	CG7605AM	MCU
529	CG7605AMT	MCU
530	CG7608AA	MCU
531	CG7608AAT	MCU
532	CG7609AA	MCU
533	CG7609AAT	MCU
534	CG7610AM	MCU
535	CG7610AMT	MCU
536	CG7643AA	MCU
537	CG7643AAT	MCU
538	CG7686AA	MCU
539	CG7686AAT	MCU
540	CG7718AM	WIRED
541	CG7718AM	WIRED
542	CG7718AMT	WIRED
543	CG7718AMT	WIRED
544	CG7720AM	MCU
545	CG7720AMT	MCU
546	CG7722AM	MCU
547	CG7722AMT	MCU
548	CG7737AA	MCU
549	CG7737AAT	MCU
550	CG7745AA	MCU
551	CG7745AAT	MCU
552	CG7750AA	MCU
553	CG7750AAT	MCU
554	CG7765AA	MCU
555	CG7765AAT	MCU
556	CG7776AM	MCU
557	CG7776AMT	MCU
558	CG7777AA	WIRED
559	CG7777AA	WIRED
560	CG7777AA	WIRED
561	CG7777AA	WIRED
562	CG7777AA	WIRED
563	CG7777AAT	WIRED

564	CG7777AAT	WIRED
565	CG7777AAT	WIRED
566	CG7777AAT	WIRED
567	CG7777AAT	WIRED
568	CG7778AA	MCU
569	CG7778AAT	MCU
570	CG7788AA	MCU
571	CG7788AAT	MCU
572	CG7806BA	AUTO
573	CG7806BAT	AUTO
574	CG7831AA	MCU
575	CG7831AAT	MCU
576	CG7850AA	WIRED
577	CG7850AA	WIRED
578	CG7850AA	WIRED
579	CG7850AA	WIRED
580	CG7850AAT	WIRED
581	CG7850AAT	WIRED
582	CG7850AAT	WIRED
583	CG7850AAT	WIRED
584	CG7860AA	MCU
585	CG7860AAT	MCU
586	CG7865AA	MCU
587	CG7865AAT	MCU
588	CG7868AA	MCU
589	CG7868AAT	MCU
590	CG7869AA	MCU
591	CG7869AAT	MCU
592	CG7870AA	MCU
593	CG7870AAT	MCU
594	CG7889AA	MCU
595	CG7889AAT	MCU
596	CG7890AA	MCU
597	CG7890AAT	MCU
598	CG7923AA	MCU
599	CG7923AAT	MCU
600	CG7954AA	MCU
601	CG7954AAT	MCU
602	CG8002BA	AUTO
603	CG8002BAT	AUTO
604	CG8062AA	MCU
605	CG8062AAT	MCU
606	CG8130AA	MCU
607	CG8130AAT	MCU
608	CG8170AA	MCU
609	CG8170AAT	MCU
610	CG8177AM	MCU

611	CG8177AMT	MCU
612	CG8183AM	MCU
613	CG8183AMT	MCU
614	CG8189AM	MCU
615	CG8189AMT	MCU
616	CG8286AA	MCU
617	CG8286AAT	MCU
618	CG8352AF	WIRED
619	CG8352AF	WIRED
620	CG8352AF	WIRED
621	CG8352AF	WIRED
622	CG8352AF	WIRED
623	CG8352AF	WIRED
624	CG8352AFT	WIRED
625	CG8352AFT	WIRED
626	CG8352AFT	WIRED
627	CG8352AFT	WIRED
628	CG8352AFT	WIRED
629	CG8352AFT	WIRED
630	CG8353AF	MCU
631	CG8353AFT	MCU
632	CG8354AF	WIRED
633	CG8354AF	WIRED
634	CG8354AF	WIRED
635	CG8354AF	WIRED
636	CG8354AF	WIRED
637	CG8354AFT	WIRED
638	CG8354AFT	WIRED
639	CG8354AFT	WIRED
640	CG8354AFT	WIRED
641	CG8354AFT	WIRED
642	CG8382AF	MCU
643	CG8382AFT	MCU
644	CG8382BF	MCU
645	CG8382BFT	MCU
646	CG8472AA	MCU
647	CG8472AAT	MCU
648	CG8475AA	MCU
649	CG8475AAT	MCU
650	CG8494AA	MCU
651	CG8494AAT	MCU
652	CG8496AA	MCU
653	CG8496AAT	MCU
654	CG8498AA	MCU
655	CG8498AAT	MCU
656	CG8500AA	MCU
657	CG8500AAT	MCU

658	CG8502AA	MCU
659	CG8502AAT	MCU
660	CG8504AA	MCU
661	CG8504AAT	MCU
662	CG8506AA	MCU
663	CG8506AAT	MCU
664	CG8508AA	MCU
665	CG8508AAT	MCU
666	CG8510AA	MCU
667	CG8510AAT	MCU
668	CG8513AA	MCU
669	CG8513AAT	MCU
670	CG8515AA	MCU
671	CG8515AAT	MCU
672	CG8520AA	MCU
673	CG8520AAT	MCU
674	CG8522AA	MCU
675	CG8522AAT	MCU
676	CG8524AA	MCU
677	CG8524AAT	MCU
678	CG8526AA	MCU
679	CG8526AAT	MCU
680	CG8529AA	MCU
681	CG8529AAT	MCU
682	CG8548AA	MCU
683	CG8548AAT	MCU
684	CG8549AA	MCU
685	CG8549AAT	MCU
686	CG8558AA	MCU
687	CG8558AAT	MCU
688	CG8566AA	MCU
689	CG8566AAT	MCU
690	CG8593AA	MCU
691	CG8593AAT	MCU
692	CG8594AA	MCU
693	CG8594AAT	MCU
694	CG8595AA	MCU
695	CG8595AAT	MCU
696	CG8596AA	MCU
697	CG8596AAT	MCU
698	CG8613AA	WIRED
699	CG8613AA	WIRED
700	CG8613AA	WIRED
701	CG8613AA	WIRED
702	CG8613AA	WIRED
703	CG8613AA	WIRED
704	CG8613AAT	WIRED

705	CG8613AAT	WIRED
706	CG8613AAT	WIRED
707	CG8613AAT	WIRED
708	CG8613AAT	WIRED
709	CG8613AAT	WIRED
710	CG8744AM	MCU
711	CG8744AMT	MCU
712	CG8757AF	WIRED
713	CG8757AF	WIRED
714	CG8757AF	WIRED
715	CG8757AF	WIRED
716	CG8757AFT	WIRED
717	CG8757AFT	WIRED
718	CG8757AFT	WIRED
719	CG8757AFT	WIRED
720	CP6759DM	MCU
721	CP6759DMT	MCU
722	CP6789AM	MCU
723	CP6789AMT	MCU
724	CP6801AT	AUTO
725	CP6801ATT	AUTO
726	CP6832AM	MCU
727	CP6832AMT	MCU
728	CP7034AT	MCU
729	CP7034ATT	MCU
730	CP7160AMT	MCU
731	CP7349AT	MCU
732	CP7349ATT	MCU
733	CP7407AT	AUTO
734	CP7407ATT	AUTO
735	CP7408AT	MCU
736	CP7408ATT	MCU
737	CP7417AT	MCU
738	CP7417ATT	MCU
739	CP7437AT	MCU
740	CP7437ATT	MCU
741	CP7463CT	MCU
742	CP7463CTT	MCU
743	CP7466AT	MCU
744	CP7466ATT	MCU
745	CP7487BT	AUTO
746	CP7487BTT	AUTO
747	CP7488BT	AUTO
748	CP7488BTT	AUTO
749	CP7488CT	AUTO
750	CP7488CTT	AUTO
751	CP7488DT	AUTO

752	CP7488DTT	AUTO
753	CP7505AT	MCU
754	CP7505ATT	MCU
755	CP7505BT	MCU
756	CP7505BTT	MCU
757	CP7520AT	MCU
758	CP7520ATT	MCU
759	CP7581AT	MCU
760	CP7581ATT	MCU
761	CP7583AT	MCU
762	CP7583ATT	MCU
763	CP7598AT	AUTO
764	CP7598ATT	AUTO
765	CP7598BT	AUTO
766	CP7658AT	MCU
767	CP7658ATT	MCU
768	CP7660AT	MCU
769	CP7660ATT	MCU
770	CP7701AT	MCU
771	CP7701ATT	MCU
772	CP7709AT	AUTO
773	CP7709ATT	AUTO
774	CP7709ET	AUTO
775	CP7709ETT	AUTO
776	CP7709FT	AUTO
777	CP7709FTT	AUTO
778	CP7709GT	AUTO
779	CP7709GTT	AUTO
780	CP7709HT	AUTO
781	CP7709HTT	AUTO
782	CP7709IT	AUTO
783	CP7709ITT	AUTO
784	CP7709KT	AUTO
785	CP7709KTT	AUTO
786	CP7709LT	AUTO
787	CP7709LTT	AUTO
788	CP7727AT	MCU
789	CP7727ATT	MCU
790	CP7741AT	MCU
791	CP7741ATT	MCU
792	CP7758AT	MCU
793	CP7758ATT	MCU
794	CP7769AT	WIRED
795	CP7769AT	WIRED
796	CP7769ATT	WIRED
797	CP7769ATT	WIRED
798	CP7861AT	MCU

799	CP7861ATT	MCU
800	CP7914BT	AUTO
801	CP7914BTT	AUTO
802	CP7915BT	AUTO
803	CP7915BTT	AUTO
804	CP7915CT	AUTO
805	CP7915CTT	AUTO
806	CP7915FT	AUTO
807	CP7915FTT	AUTO
808	CP7949AT	WIRED
809	CP7949AT	WIRED
810	CP7949AT	WIRED
811	CP7949AT	WIRED
812	CP7949AT	WIRED
813	CP7949ATT	WIRED
814	CP7949ATT	WIRED
815	CP7949ATT	WIRED
816	CP7949ATT	WIRED
817	CP7949ATT	WIRED
818	CP7950AT	WIRED
819	CP7950AT	WIRED
820	CP7950AT	WIRED
821	CP7950AT	WIRED
822	CP7950AT	WIRED
823	CP7950ATT	WIRED
824	CP7950ATT	WIRED
825	CP7950ATT	WIRED
826	CP7950ATT	WIRED
827	CP7950ATT	WIRED
828	CP7966AT	MCU
829	CP7966ATT	MCU
830	CP7988AT	MCU
831	CP7988ATT	MCU
832	CP8009AT	MCU
833	CP8009ATT	MCU
834	CP8010AT	MCU
835	CP8010ATT	MCU
836	CP8089CT	WIRED
837	CP8089CT	WIRED
838	CP8089CT	WIRED
839	CP8089CT	WIRED
840	CP8089CTT	WIRED
841	CP8089CTT	WIRED
842	CP8089CTT	WIRED
843	CP8089CTT	WIRED
844	CP8110AT	AUTO
845	CP8110ATT	AUTO

846	CP8121AT	MCU
847	CP8121ATT	MCU
848	CP8121BT	MCU
849	CP8121BTT	MCU
850	CP8122AT	AUTO
851	CP8122ATT	AUTO
852	CP8124AT	AUTO
853	CP8124ATT	AUTO
854	CP8125AT	MCU
855	CP8125ATT	MCU
856	CP8125BT	MCU
857	CP8125BTT	MCU
858	CP8146AT	MCU
859	CP8146ATT	MCU
860	CP8169AT	MCU
861	CP8169ATT	MCU
862	CP8173BT	MCU
863	CP8173BTT	MCU
864	CP8173CT	MCU
865	CP8173CTT	MCU
866	CP8174AT	MCU
867	CP8174ATT	MCU
868	CP8174BT	MCU
869	CP8174BTT	MCU
870	CP8176AT	MCU
871	CP8176ATT	MCU
872	CP8176BT	MCU
873	CP8176BTT	MCU
874	CP8186AT	AUTO
875	CP8186ATT	AUTO
876	CP8331AT	AUTO
877	CP8331ATT	AUTO
878	CP8385AT	MCU
879	CP8385ATT	MCU
880	CP8397AT	AUTO
881	CP8397ATT	AUTO
882	CP8567AT	MCU
883	CP8567ATT	MCU
884	CP8611AT	AUTO
885	CP8611ATT	AUTO
886	CS6250AM	MCU
887	CS6250AMT	MCU
888	CS6567AM	MCU
889	CS6567AMT	MCU
890	CS6651DA	MCU
891	CS6651DAT	MCU
892	CS6651HA	MCU

893	CS6651HAT	MCU
894	CS6651JA	MCU
895	CS6651JAT	MCU
896	CS7195AT	MCU
897	CS7195ATT	MCU
898	CS7412AT	AUTO
899	CS7412ATT	AUTO
900	CS7453ATT	MCU
901	CS7655AM	MCU
902	CS7655AMT	MCU
903	CS7894AM	MCU
904	CS7894AMT	MCU
905	CS7897AM	MCU
906	CS7897AMT	MCU
907	CS8720AT	AUTO
908	CS8720ATT	AUTO